

SEARCH FOR REGIONAL CONTENTS
IN THE
CONTEMPORARY URBAN RESIDENCES
OF
DHAKA CITY



By
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A thesis submitted to the Department of Architecture in partial
fulfilment of the requirements for the degree of Masters of
Architecture

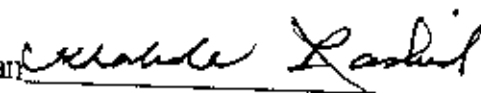
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On this day, the 27th July, 1997, the undersigned hereby recommended to the Academic Council that the thesis entitled "**Search for Regional Contents in Contemporary Residences in Dhaka**" submitted by **Nazma Shabtu**, Roll no. 9212F Session 1990-91-92 is acceptable in partial fulfilment of the requirements for the degree of Masters of Architecture.

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• Abstract

The research 'Search for Regional Contents in the Contemporary Residences in Dhaka City,' includes three basic key words, namely the **regional contents**, the **contemporary residences** and **Dhaka city**. As specified by the critics, the architecture of a region stems from certain determinants ----- the response to its **culture**, **climate** and **local resources**. These are identified as the **regional contents** which when incorporated precisely, provides the architecture of a region a sense of belonging to the soil. The critics have also established that **these responses are to be transformed into the built forms which incorporate the changing social order of the present context**. The **contemporary urban residences**—one of the main thrust of the study is the outcome of a series of transformation and adaptation. They are the resultants of various urban forces generated at different time and phases of growth of the city. As regionalism always propagates for contextual architecture, hence, a contemporary urban residence cannot be judged independently irrespective of the place in which it exists. As the capital of Bangladesh --- a third world developing country with a rich socio cultural and architectural heritage, the context of Dhaka can be analysed from two point of views. First, the city context in which the built environment is shaped by a number of diversified forces like the socio-cultural values, economics, political aspirations as well as historical connotations. Secondly, as part of the global scene, the city is exposed to the continuous influences from the dominant cultures. The present pace of cultural import is so rapid that it does not provide enough time to absorb them as part of the local culture. This has an adverse effect on the architecture which makes it superficial and a mere product of commercial enterprise. Eventually it is resulting into identity crisis. To overcome this, it is important to create architecture with a sense of individuality in the global arena. A house is the most personalised institution that speaks for identity and this can be achieved by incorporating regional contents in them in the present context.

As far as the contemporary residences of Dhaka city concerns, the situation is rather chaotic and the desired built environment is absent. The regional determinants, when perceived and carried out with their inherent meaning and principles, can tie the built forms into a coherent entity and may elevate the contemporary scene. The study is a quest for exploring regional contents in the contemporary residences of Dhaka city. The objectives are to identify the variables of regional architecture, to explore the possibility

of incorporating these features in the contemporary scene and finally to detect the regional contents that are present in the contemporary residences. The task has been carried out in two phases: through literature survey and the field survey. The first forms the necessary background studies to explain the key words in the title of the research. The theoretical considerations and the particular setting of the region are discussed to explain the regional contents. The evolution of architecture in the region, the traditional architecture, the history of Dhaka city as well as the transformation of urban houses to anticipate the present scene are determined. In the field survey, selected contemporary residences that cautiously dealt with regional aspects are examined in respect to the regional determinants. A connection between the traditional houses, early urban houses and that of the studied houses is made in the light of regional contents incorporated in them. Inferences drawn on the basis of this connection which narrates the way in which the studied residences comply with the regional contents in the present context. This reveals that certain aspects of each determinant are present in each case. However their appearance vary in the changed context. This in turn has provided an understanding of implementing regional contents in the contemporary urban residences.



Chapter One:

STATEMENTS ON THE RESEARCH

1.1 Regionalism Defined

1.2 Context of Study

1.3 Research objectives

1.4 Methodology

1.5. Application

References.

• ABSTRACT

The thesis 'Search for Regional Contents in the Contemporary Residences in Dhaka City,' includes three key words---the **regional contents**, the **contemporary urban residential architecture** and **Dhaka city**. The architecture of a region stems from certain determinants ----the responses to its **culture**, **climate** and **local resources**. These are identified as the **regional contents** which when incorporated appropriately, provides the architecture of a region a sense of belonging to the soil. Also, discussing regionalism in architecture, the critics have established that **these responses are to be transformed into the built forms which incorporate the changing social order of the present context**. The **contemporary urban residences**---one of the main thrusts of the study is the outcome of a series of transformation and adaptation. They are the resultants of various urban forces generated at different time and phases of growth of the city. As regionalism always propagates for contextual architecture, hence, a contemporary urban residence cannot be judged independently irrespective of the place in which it exists. Dhaka, the capital and Bangladesh being a third world developing country with a rich socio cultural and architectural heritage, the context of the city can be analysed from two point of views. First, the city context and secondly, the global context. The contemporary urban residences in Dhaka city seem to encounter identity crisis. To overcome this, it is important to create architecture with a sense of individuality in the global arena. A house being the most personalised institution speaks of identity and this can be achieved by accepting regional contents in them.

∕ The contemporary residences of Dhaka city result into a situation which is rather chaotic and the desired built environment is absent. The regional determinants, when perceived and carried out in accordance with its inherent principles, can tie the built forms into a coherent entity and may elevate the contemporary scene. The study, in its quest for exploring regional contents in the contemporary residences¹ of Dhaka city, involves a thorough literature survey and the field survey. The theoretical considerations and the particular setting of the region are discussed to explain the regional contents. Also the evolution of architecture in the region, the traditional architecture, the history of Dhaka city as well as the transformation of urban houses to anticipate the present scene are determined. In the field survey, selected contemporary residences that cautiously dealt with regional aspects are examined in respect to the regional determinants. A connection between the traditional houses, early urban houses and that of the studied houses is made in the light of regional contents

incorporated in them. This revealed that certain aspects of each determinant are present in each case. However their appearance vary in different context. Inferences are drawn on the basis of this connection narrate the way in which the studied residences comply with the regional contents in the present context which in turn provides an understanding of implementing regional contents in the contemporary urban residences. ♪

Chapter One

STATEMENTS ON THE RESEARCH

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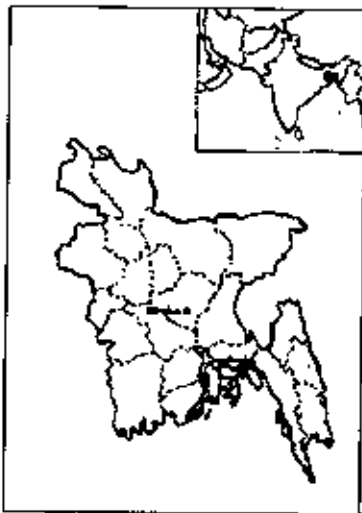
1.1 Regionalism Defined

Regionalism is a proceed of regional contents and as such, a certain style in architecture which stresses upon intrinsic responses to a particular context with its **culture, climate and response to the local conditions**. In B.V. Doshi's words, 'regional architecture, at its physical level, embodies centuries of learning with regard to orientation, climate, building materials and construction techniques. At the spiritual level, the built form conveys total harmony with the life style in all its daily as well as its seasonal rituals, unifying the socio-cultural and religious aspirations of the individuals and the community.'¹

The proposed study intends to consider regionalism as :

- a. **Response of architecture to a particular place, culture and climate and**
- b. **Transformation of these responses into built forms that are appropriate to incorporate the changing social order of the present.**

1.2 Context of Study



Bangladesh is the heir to a very rich socio-cultural and architectural heritage, the reminiscence of great civilisation of the region, which in December, 1971, gained its independence. Dhaka, being the capital of the country, experiences a great momentum in the overall development activities. The rapid urbanisation has made it as one of the fastest growing and densely populated city of the world. It has very recently been declared as the eighteenth among the largest megalopolises of the world.² The inhabitants

• **Fig.1.1: The Physical Profile**
of the city are only the first or second generation of urbanites and to them urban complexities are a rather new phenomenon. The built environment is shaped by a number of diversified forces. Of them, economics is most predominant one—— has a profound influence on the urban situation. Others are social norms, religious values, political aspirations as well as historical connotation. In the recent past, the lifestyle of the people has experienced a tremendous change to go along with the complexities associated with urban life. **Architecture is embedded with the immense responsibility to incorporate these complexities.**

Regional architecture basically involves being aware and conscious of the tradition and to transform it into the present context. Bangladesh, being a third world country and Dhaka being the capital of the country, the present context of Dhaka can be judged from two view points. First, it is the context of the city, in which an urban house is the outcome of certain forces like the socio-cultural values, economics, politics, religious believes as well as historical inferences. And secondly, to be a part of the present world, we have to accept the continuous influence from the horizon of the global scene. The contemporary third world economics is influenced by cultural neo-colonialism and we are always subject to the imposed ideas and forces of the dominant cultures. Throughout the history, inputs of alien culture have been accommodated in the local society being imposed by the foreign rulers. With time it has become a part of the culture. The present pace of cultural import from the dominant cultures are so rapid that the society is not getting enough time to absorb them. The attempt of mimicry has made our architecture superficial and a mere product of commercial enterprise. It is within this context an architect of Bangladesh has to work. The transfer of technology is only a matter of economic consideration, but it is never possible to transfer culture that grows out of its own specific roots. Thus the search for identity in the global scene is like the search for survival.³ And the architect has to search for the determinants that give buildings an individuality in the global arena. He has to accumulate all the forces of urban life, both in the context of the city as well as that of the global scene to fulfil his endeavour of creation. In the process, it is necessary to develop a new cultural pride in which creative solutions can emerge despite the restrains of poverty and lack of superficial technology.⁴ Architecture has to address the contextual issues and satisfy the varying demands. 'Bringing together the conflicting needs and resolving diverse influences with clarity in a bold statement is to accomplish good architecture'⁵

Bangladesh is experiencing architecture by the local professionals since 1966. The independence in 1971, accelerated the growth of the city and during the 1980's the growth gained a tremendous speed. From the very beginning, individual efforts by the architects were there to be responsive towards the context. However, this effort could not contribute much to create the desired built environment. And, the rampant development in the urban areas of Bangladesh raises questions:

- a. Are we in the track of shaping a congenial built environment or
- b. Are we simply turning our cities into hovels?

The contemporary residential architecture in Dhaka city is the focus of the study. The city has maximum pressure of development and experiences tremendous construction activities. Once a seat of tradition and culture, it is now changing into a warren and ungainly mixed used quarter. The diversified scene of the residential development is a testimony of the fact. It seems that the residences at different part of the city are unable to incorporate the complexities as well as transitions of urban life in them and are failing to constitute a consistent built environment as a whole. For example, in older part of Dhaka, due to redevelopment, once beautiful, historically as well as architecturally significant buildings are now being replaced to make room for new structures, most of which lacks definition. In newer part of the city, buildings of all sorts are coming up. They vary so much from one another, even within a particular area, that the situation has become somewhat chaotic. It does not imply that an entire city should have similar structures, but a city should have **unity amidst diversity** in a broader sense.

Thus the present architectural scene in Bangladesh, it is necessary to investigate,

- what is unique about our forms of building,
 - what forms are intrinsic to us and,
 - what that means for the contemporary architectural scene in Bangladesh.¹⁶ **The problem is how the changes may be incorporated without losing the identity ?**
- So, it is also important to relate architecture with tradition, modernity and context.

Contents of regional architecture, if perceived and carried out in accordance with its inherent principles, can tie the built forms of varied nature into a coherent entity. The outward appearance of a building is not the main concern of this concept, rather it has more interest in its innate qualities. Regionalism with its contents identifies many of the most relevant patterns which deal with climate, local materials and context. The spatial arrangement with due respect to the usage in compliance with the lifestyle of the people result into a successful architecture. Regionalism stresses to create architecture in this inspiration. So, it may not be wrong to assume that acceptance of the regional idiom, social input and environmental determinants can elevate the contemporary architectural environment. In the neighbouring countries, there are some positive attempts that may be considered as somewhat ideal example of regional architecture. But, in Bangladesh, examples of the kind are rare. The study is a quest for exploring regional contents in the contemporary residential architecture of Dhaka city.

1.4. Research objectives

The research objectives are :

- To explore the possibility of incorporating features of regional architecture in the contemporary scene in the residential architectural development in Dhaka, in terms of their compatibility with urban lifestyle and built environment.
- To identify the characters that defines the residential architecture of Bangladesh in the light of regional contents, particularly the designed residences in Dhaka city. And finally to detect the regional contents that are present in the contemporary scene.

1.5. Methodology

The research consists of the following phases:

Phase I Literature Survey

- Through literature survey, the spirit in which the term regionalism and its contents are considered has been established
- Since this study is one of the initial instances of research in the field of regional architecture in Bangladesh and that this research intends to provides a base work in the field, a detailed comprehensive background study in the context of Bangladesh is carried out. The endeavour forms a necessary part of the research and is placed in chapter three, four, five and six. Chapter three describes the setting of the region which is necessary to relate the concept of regional architecture. Chapter four includes the evolution of architecture in the region while chapter five describes the various aspects of the indigenous architecture of the region in detail. The discussion in these two chapters make one anticipate the contemporary scene. Residential architecture in Dhaka city, as the main thrust of the study, has been discussed in chapter six which include the history of the Dhaka city with its society and subsequent development of houses particularly that of early urban houses. This chapter also comprise the transformation of the urban house from its rural counter part and what is meant by a contemporary urban house. With all these information gathered, it may now be possible to go for the final part of the research which search for the regional determinant in the contemporary urban houses in Dhaka city.

Phase II Field Survey

In the present scene of architectural development in the city is rather chaotic and undesired, it is difficult to extract the examples which has positive and sensitive responses towards the regional determinants. The residences that are selected as case studies distinctly vary from the general scene and have significant architectural importance. They are selected on the basis of the researcher's intuition and a reconnaissance survey. Although few in numbers, they are the examples which have cautiously dealt with the regional aspects.

- **Case Studies:**

Prior to the beginning of going through the case studies, discussion on the research topic has been made with the practising architects. The architects selected for discussion follow the following criteria.

Seniority and/or,
Professional excellence and/or,
Interest in regional architecture

The regional contents in the present context and other related issues are discussed particularly with those architects whose designed houses are selected as the case studies. Along with the discussion, drawings of the designed residences by the selected architects are studied and analysed. On site reconnaissance survey is carried out at this stage.

For case study, buildings of the following categories are selected:

- a. One unit house or duplex/ triplex.
- b. Multi-storied flats and apartments.

The selected houses are studied in the light of regional determinants namely **culture, climate and response to local resources i.e. use of local material and technology.** In reference to the background studies in the previous chapters, a correlation between these regional contents with the case studies are established. Inferences are drawn in chapter eight, on the basis of connection between the indigenous, early urban houses and that of the contemporary houses in the light of regional contents that are incorporated in them. Only those aspects of the determinants are emphasised, whose significance levels are higher and suitable in the present context. The findings narrates

how do these contemporary residences incorporate regional contents in them or how do they comply with these determinants. The information compiled provides an understanding of implementing the regional features in contemporary residential architecture.

1.5. Application

The research aims to achieve the following applications:

- The research is intended to be a base work in the field of regional architecture in Bangladesh. Therefore, it may offer a scope for further study. This might also guide the professionals as well as researchers in their constant search for the architecture appropriate for the soil.
- The research also intends to increase awareness about regional identity among the practising architects as well as clients.

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Chapter Two

**REGIONALISM AND REGIONAL CONTENTS——THE THEORETICAL
BACKGROUND**

2.1 Definition

2.2 Interpretation of Regional Architecture:

2.2.1 Regional Architecture and Vernacular Architecture

2.2.2 Regionalism and Modernism

2.3 Conclusion

References

Chapter Two:

**REGIONALISM AND REGIONAL CONTENTS——THE THEORETICAL
BACKGROUND**

2.1 Definition

2.2 Interpretation of Regional Architecture:

2.2.1 Regional Architecture and Vernacular Architecture

2.2.2 Regionalism and Modernism

2.3 Conclusion

References.

2.1 Definition:

" Architecture should always be simultaneously both old and new for it comes into being at the intersection of three major forces. The first represents technology and economics, the second, culture and history and the third, the aspiration of people. The third force is perhaps the important of all. In Asia, we live in societies of great cultural heritage, societies which wear their past as easily and naturally as a woman drapes her sari. Yet, in understanding and accepting this past, let us never forget the existing conditions of so many of the people and their struggle to shape a better future. Only a decadent architecture looks obsessively backwards (I have seen the past and it works!). At its most vitals, architecture is an agent of change "

The statement above by Charles Correa supports the fact that, architecture, to be competent and conceived sensitively, has to have intrinsic response to its time and place. The idea of regional architecture synchronises the same mood.

Regionalism is an attitude which is related to a region. Prior to considering this term further, it is necessary to have a clear idea about what is meant by a region. As specified by architect Suha Ozkan, a geographical region defines many aspects of a society both culturally and environmentally. Culture includes aspects of life and prevalent mode of expression whereas natural environment includes climate and topography. Hence, a region, if defined properly, represents all these in a very complex amalgamate.² The definition above makes it obvious that the **architecture of a region stems from its cultural and environmental determinants**. It identifies certain unique features through ages defined by the tradition and indigenous resources of a particular area. "These features when enriched by regional assets and modified by climatic elements, turn to be regional in character."³ Thus, '**Regionalism**' is a certain style in architecture which aims to find unique responses to a particular place, culture and climate. Regionalism intends to explore continuities with local tradition. While traditionalism reacts at the loss of continuity, regionalism is an outlook which has predilection for the compatibility between people, their artifacts and nature.

But if interpreted only as the representative of culture, tradition or context, it will narrow down the significance of regionalism which actually has a much broader limit. Regionalism essentially delineates the ever changing social order of a region which is best expressed in the words of William Curtis, 'Regionalism, at its worst, may degenerate into a skin-deep, instant history, in which ersatz images of the vernacular combine with pastiches national, historical prototypes. At its best, regionalism

penetrates the generating principles and symbolic substructures of the past and then transforms these into forms that are right for the changing social order of the present. It is a matter of sensing beneath the surface, the memories, myths and aspirations that gave a society coherence and energy and then, providing these with an authentic expression in architectural arrangements, which results into buildings of a certain timeless character, which fuse old and new, regional and universal.⁴ Curtis has also mentioned that regionalism is not a marginal phenomenon, rather, if approached from a sound philosophical basis, it is a bang in the middle of the present cultural transformations in the third world countries. **The ultimate test is the form of the building, the quality that it has,** something that is elusive, difficult and leaps beyond ideological categories in the realm of art. A kind of architecture that is neither old or new but something true

Similarly, Italian architect Marcello Piacentini, perceives regionalism basically as resolving the debate between impersonal, international, standardised architecture and localised vernacular architecture.⁵

2.2 Interpretation of Regional Architecture

To interpret regional architecture, it is necessary to have clear understanding about two important key words namely vernacular architecture and modernism as well as to establish their connection with this concept.

2.2.1 Regional Architecture and Vernacular Architecture

The vernacular modes of buildings constitute an essential part of the regional trend. The term vernacular in architecture is an adjective that refers to an indigenous type of growth. Bernard Rudofsky, in his book "Architecture without architects" coined the term as "non-predegreed".⁶ His proposed synonyms were like vernacular, anonymous, indigenous and rural.

The vernacular trend tends to incorporate **local techniques, local materials and local environments:** its tradition, climate, economy as well as the related symbolic sensitivities. The rural vernacular indicates something apart from academic aspirations, which is designed by the craftsmen, not by an architect, thus it represents the dwelling of the farmer or the craftsman. 'Vernacular architecture, particularly the

construction of home and hearth accounts for the bulk of building activity in the country. Being largely outside the ambit of the professional designer, this popular or folk architecture is closely related to the way of life of the resident community.⁷

According to Amos Rapoport, vernacular architecture is a part of folk tradition. 'The folk tradition, on the one hand, is the direct and unselfconscious translation into physical form of a culture, its needs and values—as well as the desires, dreams and passions of a people. The folk tradition is much more closely related to the culture of the majority and life as it is really lived.'⁸

The vernacular architecture rarely accepts innovation from outside the region and the word 'timeless' is much applicable in its descriptions, 'the building tradition known to the common man and carried on through generations is still very alive and with all its constraints has withstood the passage of time.'⁹ The vernacular house is governed by an accepted model of building types, rules and hierarchy of functions, which leads to an accepted settlement pattern. The construction technique is simple and unobtrusive. Despite being functionally circumstantial, it is an expression of an inner meaning of the people, it seeks to achieve the state of balance with the nature rather than to dominate it

By mid 70's, the vernacular trend was distinguished as important source in which the basic component of design developed and matured over the centuries. However, 'the relevant guidance of vernacularism is limited, unless a reinterpretation is made or what has existed is stretched' As such vernacularism forms a part of regional architecture.¹⁰

Regionalism emphasises on continuing the local tradition . The approach of regionalism towards tradition is somewhat analytic It 'refuses to accept that a tradition is a fixed set of devices and images. It sees the past as a series of superimposed layers of inventions from the earliest nomadic forms, through villages and towns, to later imperial and colonial frameworks.'¹¹ The trend deals tradition in a dynamic process of rethinking some of it's kernel ideas The problem of containing a tradition is not a fossilised reproduction of old forms. Rather, it is a question of penetrating the underlying, generating principles of the past, realising where they are relevant and irrelevant and then transforming them into present circumstances.¹²

2.2.2 Regionalism and Modernism

While regionalism is the out come of regional contents like culture, climate and response to local resource, modernism propagates for rationalism. As the main theme of modernism, rationalism has been expressed in modern architecture in two ways. Through functionalism and through abstract rectilinear shapes. Functionalism intends to create an architecture ' that fulfils its direct utilitarian purpose and no others. This definition serve to deny the legitimacy of any ornament or references to past historical styles"¹³ The aesthetics of abstract rectilinear shape has an equal influence on modern architecture. "Like functionalism, this aesthetics served to dissociate modern architecture from the styles of the past. It is also intended to symbolise the regulatory and repetitiveness of modern industrialised materials and construction techniques"¹⁴ Modern architects believed that the tools of rationalism has made possible a scientific and universal architecture beyond all past styles, based on mathematics and the immutable law of nature.

Modern architecture sought to cut architecture off from the past through rectilinear shapes that would produce buildings not recognisable in terms of previous architectural styles. This eventually led to the creation of the trend known as 'International Style', which may be considered as a debased version of modern architecture. During 1950's and 1960's, this trend was being extensively practised in which architecture was reduced to boxes of skin and bones 'It seemed as if the concrete frame and the air conditioner were together conspiring to demolish local identity from architecture altogether'.¹⁵

Architecture can be interpreted in the light of two parameters. **One is the concrete qualities of buildings in the light of forms, functions and structure. The other treats building as a statement with respect to context and identity i.e. culture and hence abstract in nature** The second parameter actually anchors architecture for it's absence makes architecture floating. Concerning the first parameter no conflict arises. **But it is the second parameter as for which, the concept of modern architecture may be questioned.** A conscious architect should have the concern and awareness about these dual purposes of building and therefore must have commitments to their creations in this regard.

The trend regionalism evolved as a rejection to the glib reproduction of buildings in the international styles and also as a reaction against the simplistic models of

modernisation. But it needs to be clarified that **the regional architects have not questioned the concrete demands of modern architecture.** These include respect for inherent qualities of building material, expression of structure and functional justification of forms that constitute a building. These 'demands do not contradict much in essence, with anything done by an architect who wishes to adopt a rational approach.'¹⁶ To achieve the goals of regionalism, modernism provides tools and techniques to cope with the problem and the categories of aesthetics by means of which the achievement can be addressed. Therefore the polarity lies between , 'internationalism which demands a global reference a for its existence and regionalism, which seeks meaning and context under specific local conditions '¹⁷

The concept of regionalism in modern architecture is well expressed in the theory by Manfredo Tafuri and Francesco dal Co. According to the theory, the history of modern architecture is 'Janus -Faced', which defines the two facets of modern history that deal with the problem of identity. 'On one side, it is the record of an increasing objective loss of identity ' and on the other, ' it reveals a series of subjective efforts made to recover that lost identity.....'¹⁸ This other side has been represented in the regional movement in architecture which attempts to establish identity, to find out the features of identification, to come up with distinct regional features apart from the homogenising effects of the international style. To achieve this, Manfredo Tafuri and Francesco dal co, has stressed to the need to transform the *abstract work* into the *concrete work*, 'of using and moulding modern techniques of buildings into distinct regional patterns, of giving a regional flavour to functions which now transcends rational or regional boundaries.'¹⁹

To evolve an indigenous modern style in Asia, a great deal of experimentation is required for a number of issues need to be considered such as traditional styles of pre colonial heritage, nationalistic aspirations, modernism, international styles and so forth. The international style tended to break away regional identity throughout the world. However, attempts to re-establish the identity are also evident. The architecture in the neighbouring countries of Bangladesh, particularly in that of India and Sri Lanka, has its acquaintance with contemporary thoughts and ideas particularly that with modernism, however **a regional consciousness is present in these neighbouring countries and their architectural history has added another dimension in this regard.**



The direct search of a regional style may result into a narrow perspective on architectural creativity. Therefore India's thoughtful architects are attempting to revive Indian architectural values in a more subtle manner. In their effort to retrieve their identity, they 'are alert to the hazards of pastiche; they have made a conscious determination not to regard the architectural heritage as a store of traditional motifs which can be attached to modern buildings to Indianize them. They are insistent that tradition must be interpreted, it must be integrated with, not sprinkled over, modernism.'²⁰

As for example, Charles Correa approaches his architecture as 'form follows climate' in which priority to the macro environment determines many aspects of the built form. A contemporary existence to the traditional understanding of space and its cultural implication is explicit in the works of Raj Rewal.²¹ The works of B.V. Doshi is quite an ideal which combines the reformist ethos of the modern movement with a far more ancient spiritual tradition.²² The other contemporaries like Anant Raj, Achyut Kanvinda, Uttam Jain, Satish Grover and many more, have their concern in this regard. In Sri Lanka, architect Geoffrey Bawa is fully aware and appreciative of international developments and of what modern architecture has to offer, but has firm roots in his country's tradition.²³ This concern for identity is rather universal which is reflected in the titles of a number of recent articles by some of these practising architects: Raj Rewal has written on, "The Relevance of Tradition in Indian architecture" and Ram Sharma on "Roots and Relevance". Charles Correa contrasts 'transfers' (the literal quotation of historical forms) with transformations (the assimilation of them), and he has a horror in grave digging.²⁴ Architect Uttam Jain, is equally assertive, 'My dependence on Indian traditional architecture is derivative rather than imitative. It is a response to culture, climate, people, materials, historical spaces and not to literal built forms----- Pastiche has no room in my belief.'²⁵

These architects have made significant contribution in architecture by confronting, questioning, assimilating and sometimes, even rejecting modern architecture in the light of tradition. By having a transparent understanding of the traditional space, these professionals actually elevated the quality of the architectural environment. They are diligently working to achieve the appropriate relationship of architecture to tradition and modernity with respect to context. Thus their works will always be a source of inspiration .

2.3 Conclusion:

On the basis of above discussions, it may be summarised that the regional contents represent the deep rooted idioms of the tradition and context, while vernacular architecture reflects the concern to the local conditions: the facets of modern architecture represents the horizon of the global scene. Thus it is now possible to examine the architecture of this region both in the light of regional, vernacular as well as modern thoughts. As the first step of this notion, comprehensive idea about the setting of this region is important and hence discussed in the next chapter.

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Chapter Three

BANGLADESH AS A REGION ——— ITS SETTING

3.1 Introduction

3.2 Location

3.3 Topography and Climate

3.4 The Political Framework of Bangladesh

3.5 The Ethnic Background and the Social Setting

3.6 Religious Influence

3.7 Conclusion

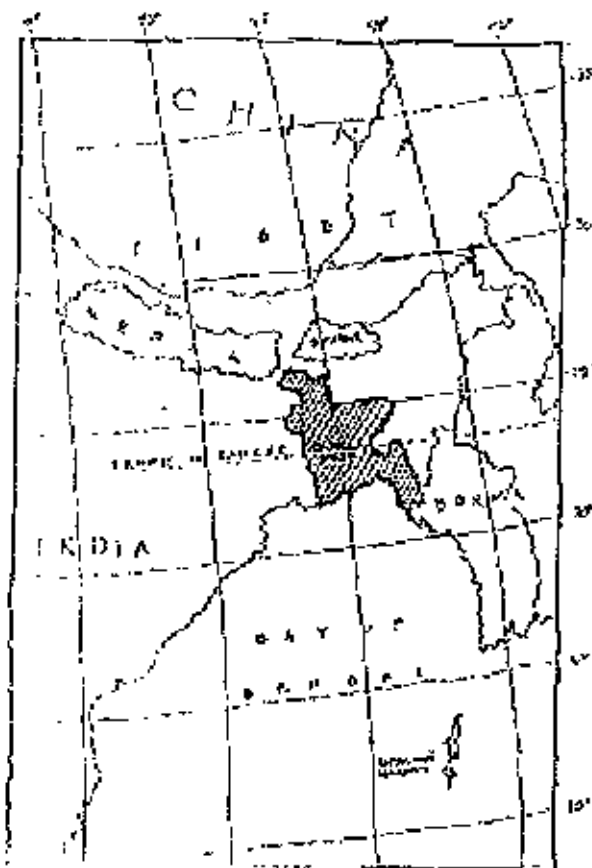
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3.1 Introduction:

A region represents both the cultural as well as the environmental aspects in a complex amalgamate. Present Bangladesh had been a part of the Greater Bengal which possesses certain uniqueness in its culture, history and environment. Prior to discuss the evolution of architecture of Bangladesh, it is necessary to have a clear idea about the background of the country and also the influences that constitutes the setting.

3.2 Location :

Bangladesh is situated in the north eastern side of the South Asian sub-continent. Being the largest deltaic flat plain of the world, the geography of the country lies between 20° 34' N and 26° 38' N latitude and between 88° 01' and 92° 41' E longitudes --the tropic of cancer running through the midpoint of the country. The reasons for the flatness may be because the areas as far as 150 km inland is only 9 km above the sea, the slope of the land is less than 8 cm per km.



• Fig.3.1. Bangladesh: Political Boundary

Spreading between the eastern Himalayas and the Bay of Bengal, the country shares the borders of India in its three sides, on the north, the west and the east---except a little portion of Burma on the south (Fig 3.1). It is strategically located between two geo-cultural matrices. 'On the one hand, it has always been considered part of a western orbit, formed by larger Indian culture, but also extending towards Persia, Arabia and ultimately Europe. This aspect is seen in most explicit levels of culture: language, liturgies, the institutions, and the laws. On the other hand, at a primordial or

foundation level, there is an irreducible stratum linked with an eastern matrix formed mostly by South East Asia.¹

With an area of about 143,998 sq. km, the country is one of the most densely populated countries in the world. It accommodates an estimated population of 116 million (1991) with an average density of population of 800/sq.km.

3.3 Topography and Climate:

Physical and cultural factors have always been the sources of ideas which generate the forms and contents of architecture in a particular region. In Bangladesh, topographical as well as climatic factors have created a significant influence in this regard

The eastern matrix is predominantly a water based civilisation and also, it is a matrix of 'rice culture'. This riverine dynamics and agricultural rituals have formed the basis of value construction, of a collective ethos and myths and of the articulation of self identity.²

The topography of Bangladesh is basically a low lying flat land criss-crossed by innumerable rivers and also dotted by marshes and lakes. The main three rivers, river Padma, Meghna and Jamuna, with their numerous tributaries and distributaries, water and drain this immense delta. 'Formed by the silt, then constantly shaped and reshaped by the rivers which themselves are perpetually shifting and changing, the land has a certain amorphous character.'³

Bangladesh has a sub-tropical monsoon climate. The country is a land of six seasons in a year prominent of which are three----- winter, summer and monsoon. It is marked by heavy rainfall during the four months of Monsoon from June to September, a winter of four months from November to February and hot humid conditions in between. Average rainfall is quite high which is about 254 cm/year. Sun is intense except the monsoon months. The heavy rainfall results into the extensive growth of vegetation which gives a year round verdant look to the whole country.

Fertility of land is the main resource of Bangladesh. As the land of rivers, the life of the people here is often guided by their courses. The rich alluvium deposited by the rivers is readily available in the land. Therefore, it is immensely suitable for agriculture, the main occupation of the majority of the people. Also, it logically

encourages the manufacture of abundant bricks which has become the chief building material of Bangladesh. Certain pliant indigenous materials like timber, bamboo, cane and reeds which grow in abundance in the soil greatly influenced the creation of roof curve—the typical Bengali hut derived from bamboo framework to throw off the heavy monsoon rain. 'Besides the life sustaining occupation around rice and fish, the Bengal delta is characterised by the life enhancing occupation around bamboo weaving and clay moulding, i.e. basketry and pottery.'⁴ The art of weaving is present in the objects of everyday use and in the fabrication of bamboo mats and other architectural elements. Clay the less expensive but excellent plastic medium resulted into the development of the art of pottery and terra-cotta which achieved certain uniqueness in its variety and richness in this whole subcontinent. From very ancient times, it is the soil that, besides being fertile for cultivation, has created the predominant building material, brickwork adorned with intricate terra-cotta art on the surface.

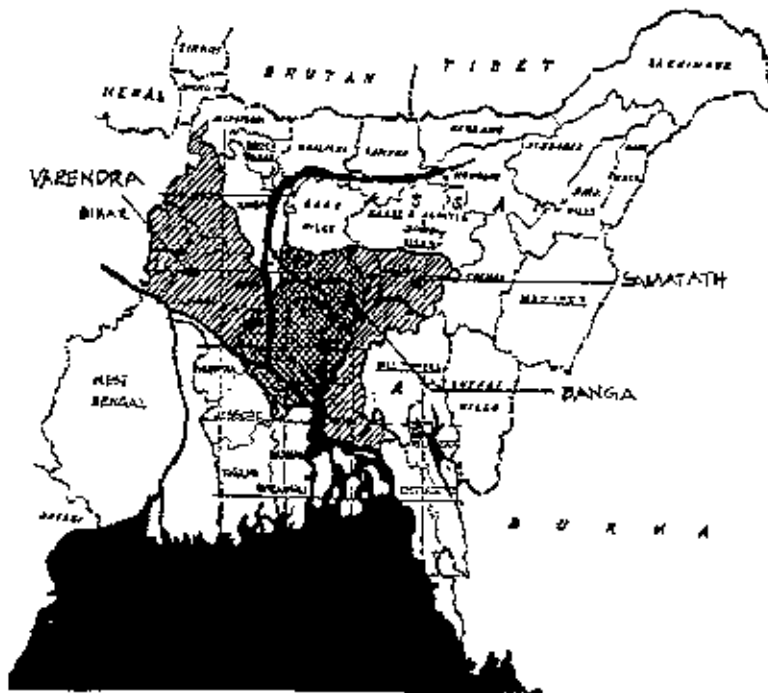
3.4 The Political Framework of Bangladesh

Bangladesh, before 1947 had been the larger and the eastern province of Bengal. Bengal has an incessant history which dates back to more than 2000 years back. The richness of its culture, fertility of soil around, its opulence have attracted mariners, traders, travellers and also invaders from all over the world who have settled here to have a life of ease and comfort.

However, owing to its location on the eastern part of the subcontinent, the invaders coming from the western side came into this region after a certain period of their first entry to the subcontinent. Therefore, 'their influence on Bengal was felt much later in modified forms.'⁵ The only exception is the advent of the British rulers who first occupied Bengal and took over the rest of India eventually.

Historically, Bengal was not always a single entity. Barrie M. Morrison, from his study on copper plates from 433 AD-1285 AD, had identified at least four kingdoms contained within the greater Bengal,⁶ namely, Varendra, Samatath (Eastern Bangladesh), Banga (Central Bangladesh), and Rarh (West Bengal)(Fig 3.2). Since 1300 BC, all these four kingdoms were ruled at different times by the Hindu and Buddhist monarchs. By 1200 AD, the region was conquered over by the Muslims. It is the northern part of Bengal (Pundra Bardhana) which came first under the Muslim

occupation, when in 1204 AD, Ikhtiyaruddin Md. Kholji defeated Laksman Sen. Since then up to the time of the Mughals, the entire region was administered by different Muslim rulers. During the period known as the 'pre-mughal', the connection



■ Fig 3.2. Present Bangladesh in Context of Historical Perspective

with Delhi became tenuous. In mid- fourteenth century, all parts of Bengal were unified by Sultan Shamsuddin Ilyas Shah. This led to the independent Sultanate period in Bengal which formed a significant part of history 'as it allowed deep rooted ideologies to the surface of the region.'⁷ During this time, Bengal emerged as a nation with distinctive language, architecture and literature—the monuments of the region became the expression of Bengal entity.

Later on by 1576 AD, Bengal became the 'Suba' (province) of the Mughals. The imposing Mughal style created a discontinuity with the regional identity .The idea of political centralisation was the specific feature of the Mughals and eventually a fendal system was initiated which ended in 1757 with the battle of Plassey. In 1905, with the partition of Bengal, present Bangladesh and Assam formed the eastern province of the British rule. The imperialist cultural imposition, initiated by the Mughals, were propagated further out by the British which completely severed the continuity of the socio-cultural and economic life of Bengal.

Up to 1947, Bengal had been the single large province of the British for nearly 200 years. In 1947, when the British left India at the end of the colonial era, India and Pakistan emerged as two independent states. The basis of division between them was religion. Accordingly, Bengal too was divided in relation to the religious groups--Hindus and Muslims. Because of Muslim majority, the eastern part of Bengal, the present Bangladesh became a part of Pakistan. However, the unified Pakistan did not last long as there have been serious incompatibility in terms of social, cultural and economic as well as linguistic aspects between East and West Pakistan. The Bengalees always had a distinct identity among the people of the subcontinent which gave them pride and consciousness. As a result, Bangladesh, the land of the language 'Bangla', previously East Pakistan, once East Bengal of the British, finally fought for and gained its sovereignty in December, 1971.

3.5 The Ethnic Background and the Social Setting


The overwhelming majority of the population in Bangladesh forms a homogenous ethnic group today. However, the racial mix of diverse races occurred in this region for a long period of time. In order to understand the background of the social condition in Bengal, some of the important deductions as made by the anthropologists in respect to the people of Bengal are discussed below.

The people of Bengal may be broadly classified into two major groups: the **higher classes of people**--the Aryans and Aryanised elements within the framework of caste system and the **primitive tribes** like the Kols, Subaras, Pulindaras, Hadi, Doms, Chandals etc. The later group comprise the earliest inhabitants of Bengal. They were Austro-Asians and descendent from the non-Aryan people of the Rigvedic age. Eventually they submerged with people of higher culture--the dark skin 'Dravidians' from the Western India and the light skin 'Aryans' from the Central Asia. The dark skinned Dravidians may be considered as primal masses of this subcontinent. By about 2000 BC the light skinned Aryans encroached the subcontinent. The racial composition of the Aryan group is a question of primary importance in the study of social condition in Bengal. The Aryans had a social structure composed of three 'varnas', with an hierarchy of caste in accordance with their functions, namely Brahmins, Kshatriyas and Vaishyas. Each group served definite duties towards the community and they maintained a complementary relationship to each other. A fourth class known as Sudras were transformed through the progress of Aryanisation that

attempted to bring the indigenous people into the framework of Aryan society. And the majority of these converted people were classified as untouchables. By the time that Bengal adopted the Aryan culture, numerous castes and sub castes had been evolved.

'It was probably one thousand years before the birth of Christ that the Bang tribe of the Dravidian stock was pushed out of their original home by the Aryan expansionists'⁸ Around 1000 BC, being driven off by the Aryans, the Bangs further moved towards the southeast and settled in the delta region formed by two mighty rivers--the Ganges and the Brahmaputra. 'The suffix 'al' is a Sanskrit word meaning raised mounds and the Aryans used the word Bengal to mean the territory where the Bang tribe used to live in the Vedic era.'⁹

In the early centuries of Christian era, the followers of different religious sects--Brahmanical, Buddhist and Jaina poured into Bengal. The political power of the Guptas in Bengal reflects the ascendancy of the orthodox followers of Brahminical religion. The growing importance of Bengal as an Aryan settlement is evident in the inscriptions found up till fifth and sixth century AD. Though the Buddhist influences dates back to 300 BC, the rulers of the Pala dynasty(800 AD) upheld this orthodox system as an ideal.



By 1200 AD, the country came under the Muslims and by 1600AD, the country the Mughals dominated the scene followed by the British. Thus, with the passage of time, an influx of people of other races--the Arabs, the Turks, the Afghans and the Persians---made Bengal their home. Amongst the Europeans who came for trade, the Portuguese were the first, followed by the Dutch, the French, the Armenians, the Greeks and the English.'¹⁰

3.6 Religious Influence

Bangladesh contains one of the largest Muslim population of the world, but throughout its history, Bengal has been predominantly influenced by three religious believes: Hinduism, Buddhism and Islam. 'As a country with a tradition of communal harmony and tolerance, Bangladesh acted as a melting pot of various cultures and religion.'¹¹

Hinduism is a philosophy that represents the view of a man and his position in the universe. It is the outcome of the synthesis of two former religions of the Brahmins and those of the agriculturist Dravidians. The religion is divided among the followers of three main deities: Brahma, the creator, Vishnu the maintainer and Shiva the destroyer. In Bengal, the Hindus are mostly the followers of Vishnu

The philosophical doctrines of Buddhism formulated by Lord Buddha became strong into the region as a protest against social inequalities of Hinduism. The simple expression of the philosophy was reflective of the common people and as such it became extremely popular and well accepted by the mass. Buddhism in Bengal lasted for a longer span than that in other parts of India. It was mainly concentrated on the then Varendra and Samatath. 'When Hiuen Tsang visited Bengal in 7th century there were more than 20 monasteries in samatath alone and more than 20 Viharas in Pundravardan.'¹² However by the invasion of the Hindu rulers, Buddhism was gradually pushed from Bengal towards the far East.

The Arab Muslims began to come to the region from the early nineteenth century followed by the Muslims of central Asia. The people of Bengal became more attracted to the liberal faith of Islam. 'Islam in Bengal did not come by conquest and force, unlike north India, but came quietly through the medium of saints.'¹³ In 13th Century, a mass conversion to Islam occurred and the chief agents for this conversion was not the rulers but the Sufi missionaries. 'Today, the world's second largest Muslim ethnic group, after the Arabs, is the Bengali people.'¹⁴

3.7 Conclusion

The comprehension of the architecture of a particular place, necessitates a proper understanding of the culture of that place and its influence towards constituting its architecture. Bangladesh, as a region has experienced different political and religious forces which eventually influenced the cultural and intellectual arena of the society. Attitudes of the people changed with new exposures. Accordingly, the architecture of the region also faced changes. But, despite all, certain inherent attitudes deep within the mind of the common people have remained firm which formed a strong sense of identity. This passion has been reflected in buildings through ages in many ways and has become the essence of architecture of Bangladesh.

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Chapter Four

Evolution of Architecture in Bengal—THE HISTORICAL PERSPECTIVE

4.1. Introduction

4.2. Pre-British Period

4.3 British Period

4.4 The Post-British Period

4.5 Post Independence Period.....The Present Trend

4.6 Conclusion

References

4.1 Introduction

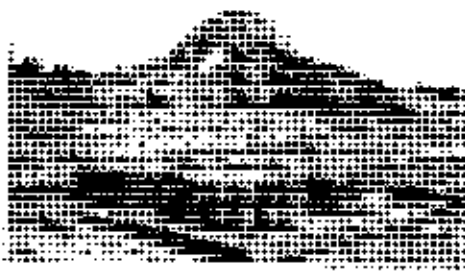
Architecture, probably is the most prominent of the attributes that a nation can choose for itself in the process of progress to define its heritage and culture. Dwellings are the outcome of man's struggle to natural forces which is conditioned by culture and history. Regionalism aims at unravelling the layers, to see how indigenous archetypes have been transformed by invading forms and in turn to see how foreign imports have been adopted to the cultural soil.¹ Thus, it is essential to search for the evolution of architecture in Bangladesh and to trace its history and identity through its architecture. The architectural heritage of the region is a substantial reflection of its very ancient and eventful history. The dated history of architecture in Bengal can be traced back from third century BC and can be broadly classified into four different periods:

- Pre-British Period (300 BC-1757 AD)
- British Period (1757-1947)
- Post British Period (1947-1971)
- The Period of Independence ----The Present Scene (1971 till now)

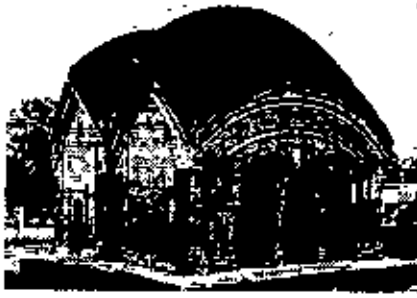
4.2 Pre British Period

The architectural style of the pre-British period can be divided into three distinct phases.

Ancient Period (300 BC--1100AD) : The architecture of this phase is primarily characterised with Buddhist monasteries and later by Hindu temples. The origin of Cruciform Buddhist stupa on a square base is in Bengal which later became a standard model of Temple form in Southeast Asia (Fig.4.1). On the other hand, the Hindu temples, which originated in other parts of India, has undergone a series of transformations in the local context.



▪ Fig.4.1. Paharpur Monastery 770-810 AD



• Fig 4.2 Gopinath Temple 1700 AD



• Fig.4.3. Choto Sona Mosque 1509AD



• Fig 4.4. Atya Mosque 1609AD

Muslim Sultanate Period(1204-1576 AD):

This is 'an era of great creative activity primarily based on the existing culture of Bengal.'² The Muslim rulers had a sensitive and sympathetic outlook to the local culture and context. As a result the architecture of this period is marked with strong regional elements and its complete synthesis with external ideas and concepts. In fact, Bengal can be identified as a land of modest architecture. Except the remainders like that of Paharpur, Mainamati and Mahastangar, basically the place is neither characterised with monuments nor it was adorned with palaces as in other parts of the subcontinent.

Rather, there generated a rich indigenous style unique to this region which came out from the territorial conditions. In the phase, new building types such as Mosques and Mausoleums were introduced. Sultanate architects learned their lessons from the common hut and also the from the then contemporary temples which too was developed from the hut.³ **The transfer of the**

uniquely curved roof of the *bangla* hut, from bamboo and thatch to masonry, was a Sultannate contribution'.⁴

The specific features of this period includes:

- **extensive use of Bangla roof** (derived from rural hut),
- the **curvilinear cornice** with hanging eaves,
- **rich surface decoration with terra-cotta art** and
- **extensive use of brick** as construction material

Mughal Period (1576-1757 AD): The political centralisation of the Mughals had imposed an uniform style of architecture in Bengal. And as such, Bengal, for the first time experienced a break in the continuity of its architectural tradition. The period underwent changes in use of material as well as experienced large scale projects, in contrast to the intimate scale prevailing in the Sultanate period. Although the accomplishments of the Mughals were much modest in scale in Bengal as compared to that in Northern India

'The Mughal authorities brought about a new changes, with a new architectural order, a new sense of sophistication and refinement, discarding some of the established



• Fig.4 5. Khan Md. Mridha's Mosque, Lalbagh 1706 AD

architectural elements'.⁵ As for example, • introduction of **plastered panels** in place of rich surface decoration of Terra-cotta art, • abandonment of typical curvature cornice to provide **horizontal panels**, • **three domed mosques** in place of familiar multi-domed mosques in Bengal etc.

4.3 British Period (1757-1947)

The British rule created a somewhat devastating influence in the subcontinent. The process of decay that already began in the feudal imperial state of the Mughals, was further deteriorated by the European entry. Kamal Khan Mumtaz, mentioned in 'Architecture in Pakistan', that during the British period, the arts and crafts in the subcontinent was in a state of decline.⁶ Even the great building tradition by the Mughals was taken over by the British which was rather imitative in nature. The colonial period, not only created a discontinuity in the development of distinct regional style of architecture, but also severed the socio-cultural and economic life as it has transformed the traditional society in various ways (Detailed in chapter six).

During the British period, Calcutta, the capital city, flourished as a centre of commerce and administration. Present Bangladesh, the Eastern portion of Bengal, was made a hinterland of Calcutta. The structures of the British were characterised with imperial imperatives. 'Thus the overall effect was monumental oppressiveness and exposure of power and an alien dominance supportive of their political will.'⁷ In the

early phase, the British buildings were the true copies of the European Neo Classical style. New visual Imageries totally alien to the region were introduced. The visual impact of the Greco-Roman features in white plasters had no relationship to their context, culture or even to the climate.



Nicholus Church,
Gazipur



St.Antones Church,
Panjorah.



Armenian Church,
Dhaka

• Fig.4.6 The Introduction of European Buildings in the Region.

Gradually, climate was the first factor to be incorporated into the European buildings. As such the British buildings, later on were characterised by the amalgamation of the Anglo Indian elements and forms. Thus, a **hybrid style using local elements such as overhanging eaves, wooden lattices, verandas etc. were added to the basic European built forms.**

The period of the British rule has often been termed as a 'rapture' which tried to cut various aspects in the region from their roots. But whether this long span of 200 years can be summarised into a single narrative is a point to ponder. 'As beyond and along with the narrative of foreign domination and colonisation can be discerned into another narrative--one of growth of what has been called an 'awakening'⁸ The positive impact of the British phase is reflected in 'Bengal Renaissance' in nineteenth century which represents the development of a growing nationalism as well as the transition from feudalism to modernity.

As for Bangladesh, the country was never under the direct seat of either British imperial power or of the Mughals. The mere imitation of Western buildings mentioned above were extensively constructed in other parts of the subcontinent, particularly in Calcutta and Delhi. 'The change that the British brought about in architectural styles represents instead a blend between the existing architecture, an



Ahsan Manzil



Curzon Hall, 1904

◆ Fig 4.7. The Blend between Mughal and British Structures.

importation of British European building techniques and designs, which are combined to meet the needs of the colonial power.⁹ Dhaka, once famous as the romantic Eastern capital, contained some buildings of British Imperial tradition. Some represents the blend of Mughal and British style, as for example the Curzon Hall, Ahsan Manzil etc. (Fig.4.7).

In British period, two interesting development took place in the residential built forms of the region. First, the development of 'Bungalow', a derivative of 'Bangla' that refers to a certain building type for the use of the British rulers. Secondly, the 'Mansions' of the rich Bengali marchents (Fig.4 8). The bungalow, both in name and form, originated in India, a fact more easily recognised since the creation of Bangladesh -- a product of cultures in contact, an indigenous mode of shelter adopted and adapted for Europeans living in India. It reflects the transformation of the simple hut of Bengali peasants into a basic residential unit of the colonisers. On the other hand, the mansions were with highly ornamented facades as the symbol of the affluence of the local elites, however the plans resembled the traditional lifestyle.



Mansion



Bungalow

Fig 4 8. The Two Distinct Residential development in British Period.

4.4 The Post-British Period

At the beginning of this period in 1947, with the independence of the subcontinent, India and Pakistan emerged as two independent nations. As for Bangladesh, the then East Pakistan, the freedom from the shackles of 200 year old colonial rule brought the country into another era of political subjugation. 'The West Pakistanis had consolidated administrative and economic power in their hands and East Pakistan was being used as a colony for the landed gentry and bourgeoisie of West Pakistan.'¹⁰ The only common bondage was religion, otherwise not only these were apart in terms of their physical distance but also were totally different in their socio-cultural outlook. Thus the architectural trend in this period 'swayed between two extremes'¹¹ and the profession was dominated by foreign architects.

At one extreme, there have been a neglectful attitude by the authorities concerning the development activities in this region. In the field of architecture, the state was the main client. Public Works Department (PWD) was the main builder. The democratic set up for the practice of architecture was totally absent. The major portion of the design activity was conducted either by non architects or by foreign architects. Buildings designed by them could hardly relate the local climate, need or the environment. The few consultants patronised by the government and non-Bengali industrialist and traders produced '...cheap Islamic clichés and a distorted view of modern architecture in order to identify with the sentiments of Islamic revivalism and progress.'¹²

On the other extreme, the post-colonial period in the decade of 60's, experienced some positive events that has a significant influence over the development of future course of architecture in the country. '...There was chaos in architecture, but there were achievements too. It was in this decade, that formal architectural education was established. And it was in this decade that important foreign architects like Louis I Kahn, Paul Rudolph, Constantin Doxiadis, Richard Neutra, Stanley Tigermen produced their works here. It was at Dhaka in 1968 that the most important conference of the Institute of Architects Pakistan was organised, proclaiming a new spirit in architecture. In the 60's, there were very few practising architects, there were gaps in architectural sensibility, and inadequately trained people with vested interests were operating within the profession, yet there was an agreement among the architects to offer their very best to society.'¹³

Up to 1947, there had been no formally trained local architect in the country. Muzharul Islam, the first practicing Bengali architect, trained abroad started his career in 1953. He



• Fig 4.9 Art College, 1955

has 'singly formed the first generation of contemporary architects and laid the basis of a profession and an intellectual discipline.'¹⁴

Although he was faithful to the tenets of modernism, but at the same time, a growing Bengali style with respect to the context, is visible in his works. Art College, Dhaka (1952) is an exemplary work of the period.

In 1962, the setting up of the first school of architecture as part of the Engineering school created a significant influence over the field of architectural profession in this region. The first batch of architects graduated from this school in 1966. And thus marked the beginning of practising architecture by the local professionals which eventually has given direction to the contemporary architectural development in Bangladesh.

The architecture by the expatriate architects during this period contributed another dimension in the architectural trend in Bangladesh. Architects like Robert Boughey, Stanley Tigerman, Paul Rudolph, Constantine Doxiadis and Louis I Kahn were commissioned to design public buildings. This is probably one of the most influencing events in the architectural development of the country. Not only did they introduce the then International style in modern architecture but also they showed the way to come out of the too simplistic attitude of this style and at the same time to incorporate the context into the designs. Although Western biased, the projects not only added a new dimension in architecture but also they remained a constant source of inspiration in the search for a deeper meaning and purpose of architecture.

The most significant event in this period is the idea of developing a Second Capital Complex at Sher-e-Bangla Nagar, Dhaka (Fig. 4.10). The commissioning of Louis I Kahn for the project has resulted into the creation of one of the greatest architectural works of the century. 'The Capital Complex at Dhaka by Louis I Kahn, became an important landmark in the contemporary architecture of the country and also in the world architecture scene.'¹⁵

A comparison between the Capital Complex and those of the PWD buildings fostered by Pakistan built in 1950's exemplifies the change in their mode. The buildings in the 1950's do not relate to the environment in which they occur. On the contrary, the Capital Complex, coming out from the strict discipline of modern architecture, is smoothly blended with the environment in which it is built. However, during the years of 1947-1971, with a growing sense of national as well as regional consciousness, there was an attempt by the local professionals to relate the built forms with the context.



• Fig.4.10. The Capital Complex, Dhaka.1962-1980.

4.5 Post Independence Period.....The Present Trend

In 1971, after independence, the nation became engaged with the immense task of rebuilding and reconstruction activities. The aim was to restore the economy and the basic infrastructure of the country. The first five years of independence was marked with rehabilitation works. Architecture or building projects were in a frigid state. Eventually, with the aspiration of a newly emergent country, the nation building activities began to receive momentum. The country experienced construction of diversified projects. Architecture, as a profession appeared with tremendous potentials in the process. The new setting put architecture as part of the building industry. The growth of urban population from a little over 6 million in 1974 to about 14 million in 1981 added a new dimension to the building industry.

The contribution of the new stream of local architects in the last 30 years marked the beginning of the contemporary architecture in Bangladesh. Independence created the desired democratic environment to the local architects. This offered great opportunities for them to begin their practice in the new country. With the newly established political set up, the question of reiterating and establishing a national

identity found a new dimension. However, the overall building activity could not contribute much to create the desired built environment. Many of these works reflected the misguided and confused conception about architecture and failed to relate themselves with the context and culture. Only a few architects were able to find a somewhat meaningful expression of their works in relation to the context.

The contemporary architecture of Bangladesh is characterised with varied and diverse building types both in the public and private sector development. After 1975, Western assistance, particularly from USA and aid from Middle East flowed in the country to undertake various development works. Along with this rising economy, the country started to carry out large scale projects for health and family planning, agriculture, livestock and fisheries, educational facilities, corporate office towers, the development of existing and new cantonment areas etc. However the majority of public sector architectural works were under the direct control of the government Public Works Department (PWD). This has been greatly detrimental to the healthy growth of profession in the country. The beaucroatic system has little appreciation of architecture or the physical environment or the physical planning. Being biased with the western training and education, these beaucroates often influence and impose their sense of aesthetics and concepts in the design propositions at their development phase. 'In developing countries such as Bangladesh, the utilisation of natural resources, manpower and national wealth requires meticulous economic and physical planning. The British were insensitive to this vitally important factor and unfortunately, the situation has changed little since independence.'¹⁶

On the other hand, in the private sector development, the emergence of 'nouveau rich', a new elite class led to the creation of another noticeable trend in the present day architecture. Under the patronage of this class, 'residential suburbs are growing as an exposition of architectural extravagances and fantasies,'¹⁷ with the introduction of the pastiche of Post modernism and cheap Islamic clichés.

Actually, to achieve a consistent and coherent architectural development, the architects cannot be solely responsible as the societal forces also plays a dominant role. At present, the society, specially the higher class are now exposed to the global scene. It seems that the attitude as well as the values of the clients, are now being influenced by the apparent get up which in turn has a harmful effect in our architecture. They are ignorant of the very essence of architecture and according to them, a noticeable

architecture is only possible by incorporating decorative features. And as such, various cross breeds coming into being in the name of architecture. The capability and the intention of the architects are often being surrendered for the sustenance of the profession.

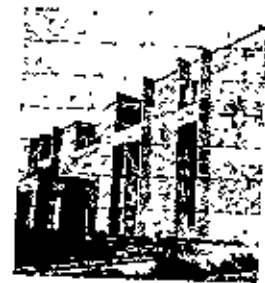
In the 1980's, a growing number of conscious architects emerged who started to question the type of architecture being built so far. These architects seem to have an intention to explore the architecture of the soil and to look deep into the historical, socio-economic and cultural context of the country.



Hermann Grmeiner Social Center,
Khulna, 1986.



Bangladesh Agricultural Research
Council Dhaka, 1982.



National Archives, Dhaka

• Fig 4.11. Contemporary Works of The Local Architects

4.6 Conclusion

The present architectural trend in Bangladesh is marked with heterogeneity of different styles. Many of the recent structures are built without the consultation of any architect and in many cases the architects are conquered by the unaware willingness of the clients. But, still there is light at the end of the tunnel as there exists a counterpart of the attitude which has unspoiled intentions for achieving a contextual architecture. A longing for resurrection of the century old tradition accommodating the changing socio-cultural needs of the society is there. Although few in numbers but many of the architects are uncompromising, convincing and have begun to explore new possibilities of local resources. They have started to change the notion of the people about architecture by their works. As such, the search and interpretation of the traditional buildings and transformation of these realisation into the present context is underway.

Through a detail discussion of the indigenous architecture, a connection between the contemporary scene and the traditional settlement can be established. It is only then one can really compare the similarities and dissimilarities as well as their mode of transformation in different context.

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Chapter Five

Indigenous Architecture of Bengal ————— THE TRADITIONAL HOUSE FORM

5.1 Introduction

5.2 Approach

5.3 The Rural Homestead

5.4 The Traditional House Forms

5.5 Spatial Organisation

5.6 Climatic Considerations

5.7 Material and Constructions

5.8 Phase of Transition

5.9 Conclusion

References

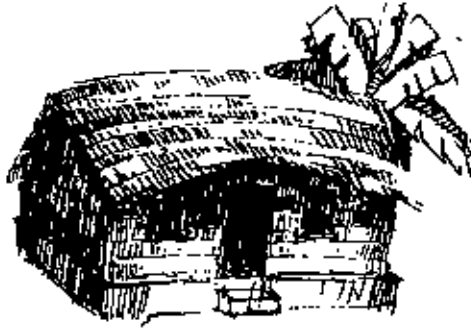
5.1 Introduction

Over the centuries, men developed the tradition of a region through trial and error and as such evolved a culture specific architecture which still persists in the rural areas.¹ Bangladesh has a building tradition exclusive only to this region and its people with specific cultural heritage and regional assets.² Thus the traditional house form of rural Bangladesh is an example of culture and religion specific social product.

Bangladesh is predominantly a rural based country. Urbanism is relatively a new phenomenon for Bangladesh. Most of the city dwellers are the first or second generation of urbanites and many of them just started their urban life. Although the increased pressure of urbanisation has made the urban life much complex, still the way of life of the urban dwellers owes much to their rural origin. And the space use in urban dwellings indicates that many of the traditional attitude towards the organisation of space have remained unchanged in the urban setting. Thus, it is imperative to have a conspicuous comprehension about the rural life and traditional architecture of the country in order to arrive at the basis to formulate the design approach for the contemporary urban house in the light of regional contents.

5.2 Approach:

To comprehend as well as to explicate the very essence of any architecture, a clear perception about two things are necessary: the nature of the architectural artifacts themselves and the many forces responsible for their production. In this regard, the indigenous architecture of Bangladesh may be analysed in the light of two point of views. First the **morphological development** and secondly, the **anthropological background**. The morphological development deals the rural dwellings in terms of their physical aspects emphasising the process by which the elements determine the factors of identity. On the other hand, the anthropological background determines the activity patterns of the house and the related spaces in terms of functional, social and religious outlook.³

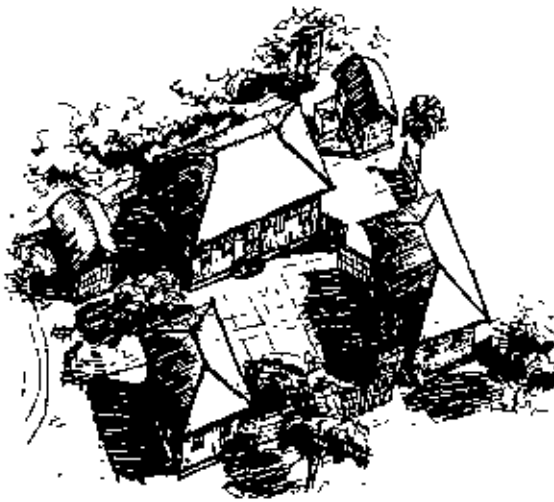


• Fig 5.1 The Hut

and to the climatic elements. The inner theory and images -----the design, form and character has remained relatively unchanged and constant for centuries. It is based on the ancestral folk wisdom deeply rooted in the soil and entwined in the fabric of the society.⁷⁴

5.3 The Rural Homestead;

Indigenous homestead reflects the collective consciousness of people. The rural people of Bangladesh are religiously conscious, have simple attitudes towards life with a peace loving nature. Agriculture being the chief occupation, 'a store house full of rice, a pond full of fish and a house full of relatives' is the age old picture of the rural Bengal. Self dependence is another important characteristics of these people.



• Fig 5.2. The Rural Homestead.

resources. And the spaces were always being enclosed by these vernacular builders through the use of available materials and indigenous construction techniques.

As far as the architecture of rural Bangladesh is concerned, it is the **rural hut** that forms the genesis of traditional Bengali house (Fig.5.1). The bent roof shape of the rural hut is considered as one of the identifying characteristics of the architecture of Bangladesh. The archetype reflects the way of life of the rural people, their social ethos and responses to the local resources

Traditionally, in Bangladesh, the user is the main manipulator of the built environment. Being a designer, builder, landscape specialist, artist and craftsman, he dominates the others. Thus the inherent qualities of rural people led to the creation of a specific type of architectural layout.

From ancient times, villages are created spontaneously out of necessity -----ease of comfort and use are always given priority. And to resolve this necessity, people have always depended on local

The determinants that form the rural architecture, can be termed as the abstract and the practical determinants. Land, trees and water are the abstract ingredients from which the main theme or essence of rural architecture takes shape. Practical climatic considerations like the sun and rain protection, use of light etc. have influenced the design of dwellings. But it is the life style of the people— the social customs, the degree of privacy etc. that ultimately determine the basic organisation of the rural dwellings.



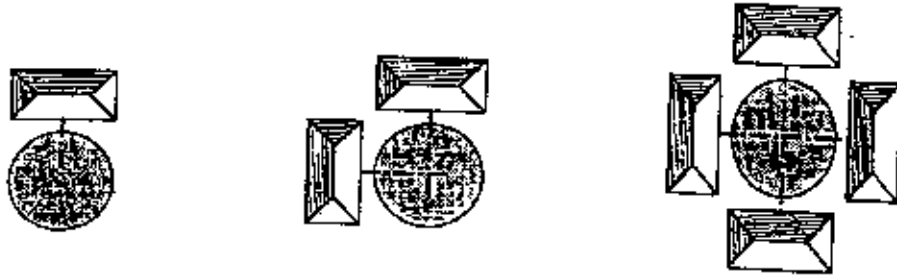
• Fig.5.3. Formation of Rural Homestead

Situated generally on slightly raised ground, the villages of Bangladesh maintain a horizontal relationship with the surrounding lands, most of which are agricultural. The formation of a homestead begins with the excavation of a pond and raising a 'mound' with the soil obtained above the flood plains.

This is a raised platform locally known as 'vita' meaning plinth, which demarcates the place for the house from its surroundings. Along the boundary line, coconut and beetle nut trees are planted. The raising of this 'vita' is a social phenomenon that connotes a place to live and provides an address. And it is over this mound that the houses ----the huts are built.

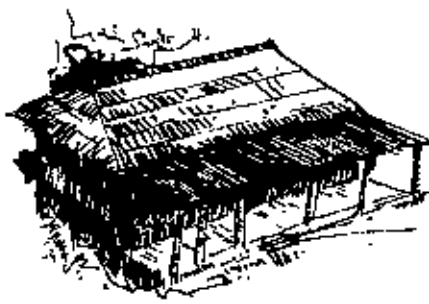
A traditional rural Bengali house is represented by a cluster of small, single roomed, detached 'huts,' loosely spaced around a central yard known as the 'uthan'. The number of courts may be increased with a large number of huts. As the common space for the whole homestead, the court yard is not an enclosed space, rather, has leaks to other adjoining areas. At first, single families start to live over the 'vita'. With the

extension of the family, more structures are added keeping the open to sky court at the centre. Thus the typical rural house composed of a number of huts are formed (Fig. 5.4). The individuality of these huts are retained. If necessary, more huts are added to the cluster but individual huts are seldom enlarged. The huts are locally known as 'Ghar' whereas the whole cluster is called 'Bari'. Traditionally a 'Bari' represents the joint family while the huts represent the individual households.



• Fig.5.4. Formation of Rural House in respect to the Courtyard.

5.4 The Traditional House Form: The Hut



• Fig.5.5 The Hut

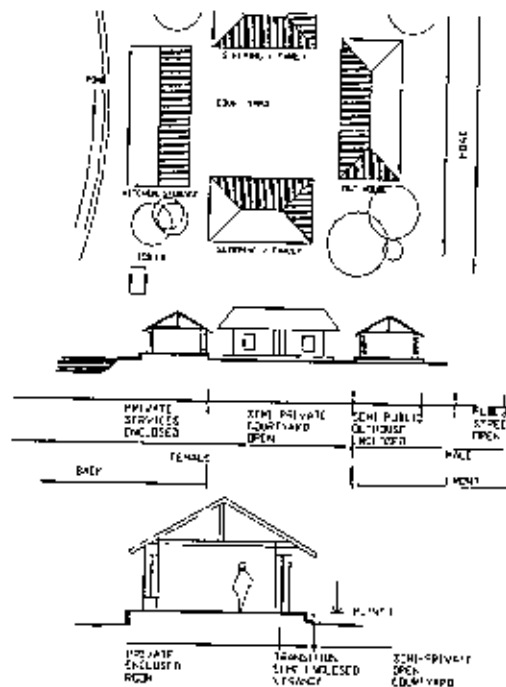
Simplicity in materials and design, lack of pretension in presentation, horizontally in expression—these are the essential qualities of a rural house. A rural house is characterised with the use of simple, rectangular and free standing structures known as the huts. Organised by a transverse manner, these huts open to the outside through their wider facade. On the top, each of the hut has projecting eaves, most commonly curved and on the bottom, there is an extended plinth. Windows are relatively small and are generally kept on the north, south and on the east side of the walls. The front of the hut usually has a full-length or partial veranda. The verandas serve as a transition space between inside and outside and also its overhang provides the necessary shading to the walls. In the elevation, the centre of the facade usually has centralised arrangements.

5.5 Spatial Organisation:

Being separated functionally, the 'Bari' is composed of sleeping huts, katchari ghar, kitchen huts and cowsheds. Located at the entrance of the house, the *Katchari Ghar* or *Bangla ghar* is a reception structure in a large open area. The cattle shed, a pavilion like structure, is also located near the entrance. The kitchen structure is usually placed along with other services like women's privy, well or tube well. Toilets, in general, are located farthest away and are usually found in the nearby dense growth of cane. In the service zone, a small structure is constructed for giving birth. The family graveyard is the final element which lies beyond the garden surrounding the house. Thus folk architecture is accommodative of all the needs of life—in its every sphere.

The organisation of the house follows two broad categories of functions:

- 'The family functions i.e. the functions pertaining to the family itself such as sleeping, cooking and eating.
- The formal functions i.e. the functions pertaining to the family as it reacts with the larger community such as socialising and receiving visitors.'⁵



• Fig5.6. Space Organisation of Rural House

The concept of the organisation of spaces relates privacy as well as activity patterns. As such the various spaces are arranged in a definite sequence between the public and private domains in the house. Thus, the house is zoned into *inner* and *outer* house respectively. They are also known as '*female domain*' and '*male domain*' as decided by the culturally defined social codes, customs and norms. In addition to this physical separation of two domains, privacy between male and female is maintained in different ways like behaviour pattern, wilful avoidance and time zoning. 'Thus, the boundary between the male and female zones are flexible and varies according to time, period and occasion.'⁶

From the formal point of view, the following may be identified as being some of the qualifying elements of traditional structure of Bangladeshi 'These are, **individuality of structure, persistence of the yard, a marked axially and equal importance of space and form** as represented by the vertical and horizontal planes of the facade and the courtyard.'⁷

Culture, available materials, social codes, customs and norms etc. seem to have more influence in shaping the rural house form and organisation than that of the climate. The introvert layout of the house around the court yard often creates problems regarding the orientation. 'When more than one hut is needed, a second axis at right angles comes into play and hence the courtyard is formed on three or four sides.'⁸ **The axial relationship puts some huts in east-west orientation, which is not desirable in the climatic context of Bangladesh as the main wind flow comes from the south east direction.** Religious belief also influence the orientation of the huts. The Muslim huts are normally laid out following the cardinal directions. This helps to establish the direction of '*Qibla*' for prayer. Also, the orientation of the sleeping mats and toilets are determined by this, which has further influence over the organisation of the space and their uses.

Open to sky courtyard, which is more suitable for hot dry climate has been widely practised in a warm humid country like Bangladesh. And this creates severe problems in the rainy season. Still, this central courtyard is the element which has successfully enriched and established human relationship for years. The courtyard plays a dual role in the rural society. It acts to complement various functions with the huts around and also provide a certain degree of privacy required for seclusion of the women folk from the passers by and male visitors.



• Fig 5.7. The Indirect Entry The Court

The indoor living areas in these huts are characteristically inadequate, mostly used for sleeping and storage. It is a single space inside, which is rarely divided into rooms.

The rest of the activities are performed in the uthan. Thus, being the extension of the indoor living areas, this courtyard has many purposes, every bit of it is usable space. It accommodates a number of functions such as outdoor cooking, paddy thrashing and grain drying and other characteristically common activities in the life of an agricultural community in the rural areas of Bangladesh. The protective layout of the courtyard provides a sense of security and convenience to perform these functions which has overshadowed the disadvantages like improper orientations and climatic problems.

5.6 Climatic Considerations:

'The rural house form has developed over the centuries of modifications to environmental factors.'⁹ Other than the problem of orientation, careful observation reveals instances of correct climatic planning into the folk building practice. Individual huts are carefully constructed with adequate concerns to protect them climatically. The low height of the structures, projected roof overhangs and the availability of abundant vegetation for shading considerably reduce the adverse effect of the sun and rain. Some age old sayings (*Khanar Bachan*) reflects this concern for climate:

South facing is king of rooms

East is its vassal

West meets the wretched ones

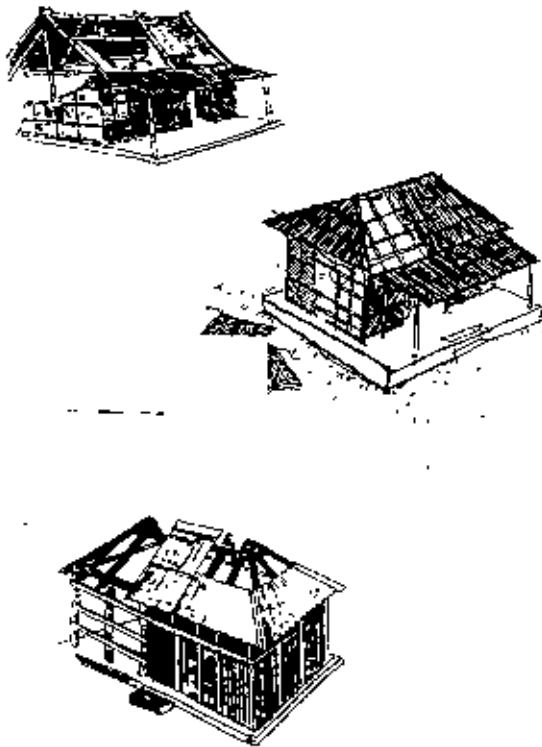
North is belittle.¹⁰

'Ducks in the east, bamboo in the west' is another old saying that implies a pond in the west and bamboo groves in the east. Thus wind from the south and south-east cooled

by the water ultimately cool the house. On the other hand, bamboo groves on the west protect the house from intense solar radiation. Use of verandas on the longer sides of the hut, protects the walls from heat and rain. Moreover the appropriate selection of materials also helps to achieve the desired level of comfort. 'The porousness of the rural house structures, the inherent coolness of the shaded mud walls and the insulating capacity of the thatch roof contribute to the excellent thermal character.'¹¹

5.7 Material and Constructions:

Rural architecture follows a simple, efficient and economical construction system. It is



created mostly with the use of most readily available local materials and indigenous construction techniques. The selection of material may vary according to the affordability of the inhabitants. The construction of a rural house may be discussed in reference to three major elements: **the plinth, the wall and the roof.**

The plinth made of rammed earth is the first element to be built in the process of constructing a house on which the superstructure of the house usually stands. The walls are of three basic types: **the bamboo wall, reed wall and the mud wall** (Fig. 5.9).

• Fig 5.8 Construction of Rural Hut

1. Bamboo Walls and Thatch Roof
2. Bamboo Walls and Corrugated Iron Roof

The former walls are formed in panels. On the other hand, the use of mud wall is dependent upon the suitability of the local soil. The roof structure is 'trussed' and placed over the wood or bamboo posts. The roof slopes at angles and may have two,

four or even eight planes to facilitate the flow of rain water. The resulting attic out of this pitch roof is often used for storage space. 'The roof frame is then covered with a thick layer of thatch woven carefully and skilfully completing the basic form of the rural house structure in Bangladesh: a structure that has all the ingredients of a regional architecture.'¹²



• Fig.5.9. Different Types of Walls in Rural Houses.

Depending on the type of construction, the rural houses can be classified into three categories:

- Kutcha:** The term indicates something temporary and not sufficiently strengthened. House entirely constructed of local materials (e.g mud, thatch, bamboo etc.) and local construction techniques.
- Semi-Pucca:** Part of the house is constructed of permanent materials like sand, cement, bricks corrugated iron sheets etc. A house with a cement floor and mud walls is an example of the kind.
- Pucca:** The word indicates something permanent, totally constructed of permanent materials. Example of this kind is rare in rural areas

5.8.Phase of Transition

At present, many of the forces shaping the traditional house form are in the process of change. Because of the progress of technology and increasing urban influence, change in the availability of materials as well as in the social norms and values, along with the change in family structure --the rural house is now undergoing a phase of transition. And this change is mostly experienced through the use of materials and to some extent, in terms of spatial organisation.

For example, the proper length of straw necessary for thatch to cover the roof is becoming unavailable day by day. The high yielding variety of paddy produces small length straws of inferior qualities which are now mostly used as the fodder of the cow. Therefore, tin and asbestos are widely being used as roofing material in place of straw.¹³

Programs like mass literacy, family planning, women's co-operatives etc. are helping the rural women folks to come out of their seclusion. Paddy thrashing, one of the most common activity performed in the courtyard are now being done with the help of mechanical devices. So, the courtyard as a space for providing privacy for the women or performing various agriculture related activity is not in use as before. However, as a space of interaction, the use of courtyard has always been and will be ever, either in its original or transformed version.

Poverty, village politics, economic depression and most of all, the colonial education system has influenced the traditional family structure of rural Bangladesh to change. The joint family and the extended families are now converting into nuclear family.¹⁴ This is initiating change in the subsequent spatial organisation of the rural dwellings. domestic influence in the joint family are now becoming a past. As a son of the family enters into urban life and leaves his village behind, a new house with new layout is created in which the eternal layout of four huts around a central 'uthan' no more appears. A new arrangement of two structures, one for living and another for cooking with an associated courtyard is formed for this new family. 'Nevertheless, the contemporary rural family and its related architecture lies dormant in every urban dweller as a common heritage.'¹⁵

5.9 Conclusion

Tradition, heritage-----the elements of pride has their origin in the rural areas. In a country like Bangladesh, once being colonised and recently becoming independent, the search for tradition, culture and heritage and the attempt to establish their relationship with the field of art and architecture is a continuing struggle. The task becomes more perplexing in architecture in which any positive guideline is not found as yet. At one side, the traditional folk architecture, due to the lack of patronage and interest, is now on the verge of decay. On the other, the contemporary trend of modernism blindly follows the western models where the context is ignored in many

of the cases.¹⁶ The origin of urban life and dwellings lie in their rural counterpart. The rural house is the physical manifestation of the traditional way of life of the people. It serves an example of optimisation of local resources and means. The design of traditional house provides the source and basis for an understanding of present day urban houses.¹⁷ Thus to encounter and to re-establish the identity, 'it is extremely important to learn from the traditional heritage and gain from the accumulated wisdom from the ancestors. If the residual thin stream is nurtured, a new and powerful chapter may be added in the question of overall identity. The spread of interest in these matters is vital to the task of retaining traditions and distinct ways of existence. In today's context, it is not unreasonable to be undeterred in such an effort.'¹⁸

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Chapter Six

Dhaka City——METAMORPHOSIS OF URBAN DWELLINGS

6.1 Introduction

6.2 The History of Dwellings in Dhaka City with respect to the Society and Background

6.3 Transformation of Urban House Form in Dhaka

6.4 The Contemporary Urban House

6.5 Conclusion

References

6.1 Introduction

The comprehension of a contemporary house in the present context of Dhaka, makes it necessary to go through the history of this city and its societal background. Through this, it is possible to experience the gradual development of urban houses with respect to the growth of the city. This chapter also would reveal the transformation of urban houses from its rural counterpart and finally would present the formation the contemporary house in the present urban context.

6.2 The History of Dwellings in Dhaka city with respect to the Society and Background

The history of Dhaka dates back to the seventh century. However, as far as the residential architecture concerns, no definite information is found until eighteenth century. The general pattern of houses except the public buildings and palaces is still unknown. Dhaka, the capital of present Bangladesh, bears the imprints of different historical periods. Since its inception as a small marketplace on the northern bank of river Buriganga, centuries have gone by with numerous events to give the city its present form and shape as one of the fastest growing metropolis.



• Fig 6.1 The River Buriganga.

During the last four hundred years, the city became the capital for four times. The history of Dhaka may be discussed in the light of four phases of development. These are Pre-British phase (the pre-Mughal and Mughal), British phase, Post British phase

and finally independent phase. In order to comprehend the context, to trace development trend and also to understand the built forms, it is necessary to evaluate the society and its stratification, values and culture prevailing during each particular phase. Hence the discussion would simultaneously include the social background of the city along with the development of its built forms.

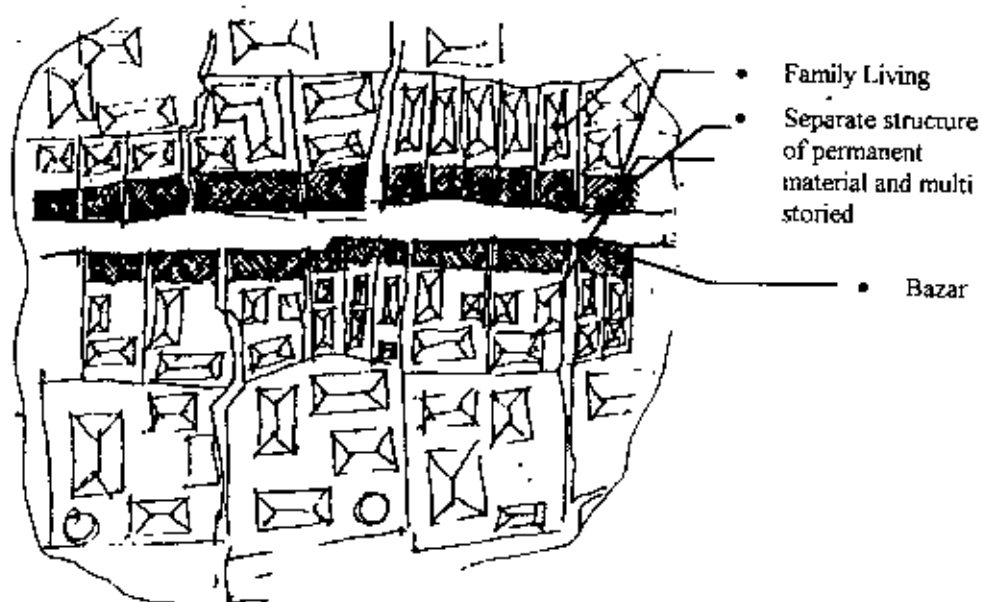
6.2.1. Pre-British Period

• Pre-Mughal Phase

The history of Dhaka started with the ascendancy of the Hindus (700AD). Yet up to the time of the Muslim Sultans (1400 -1600 AD), existence of Dhaka was as a small town with a very insignificant urban growth.¹ During this period, the city contained numerous channels within it and boats were the main mode of communication. The socio cultural sphere of these areas were dominated by rural traditions and as a result, the rural and urban people had similarities in their life style and pattern.

The early urban houses were rather a dense version of the rural house as the urban centres resembled more of a village. Thus the morphology of the earlier house form was of introvert type with a court inside. Unlike the single roomed huts, the blocks started to be compartmentalised.

In its primary stage, the city was consisted of a few market places and localities of craftsmen and traders. According to historians it was termed as a city of *Bahanno Bazar Teppanno Gali* (fifty two bazaars and fifty three streets).² The city was divided according to occupation groups, 'developed as work communities, specialised in some specific trade or craft.'³ According to this, **the whole town might be perceived in the perspective of two terms, one is bazaar and the other is mahalla.** All streets were 'bazaars' since they sold something, goods or services indicating their commercial character. On the other hand, 'Mahalla' represented a residential entity having a homogenous population, related through occupation, religion and geographical origin or caste membership and represented a closed social enclave.⁴ The type and occupation of the people originated inhabiting in these 'Mahallas' are reflected in their names. For example, *Kasai-Tola* (place of the Butchers), *Shankari Patti* (the place for ornament makers), *Kumar-tuli* (place of the potters) etc.



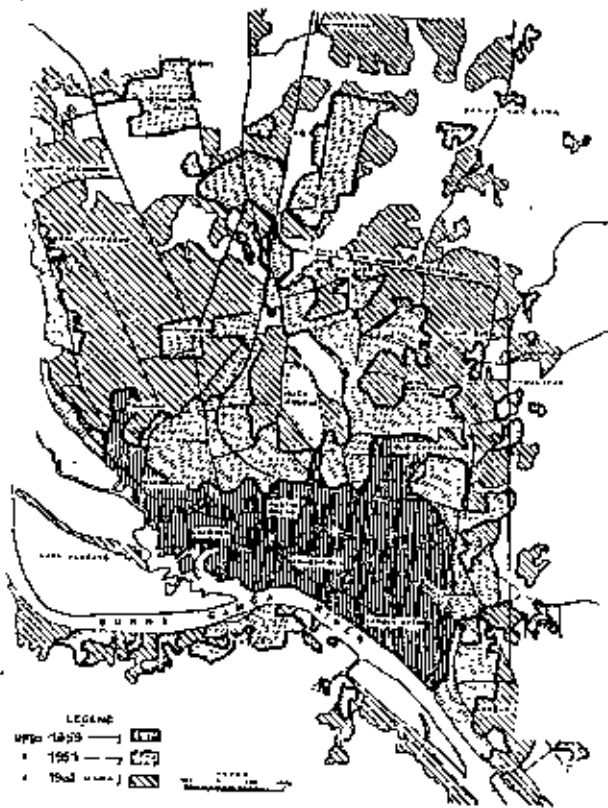
• Fig.6.2. Mahalla Morphology



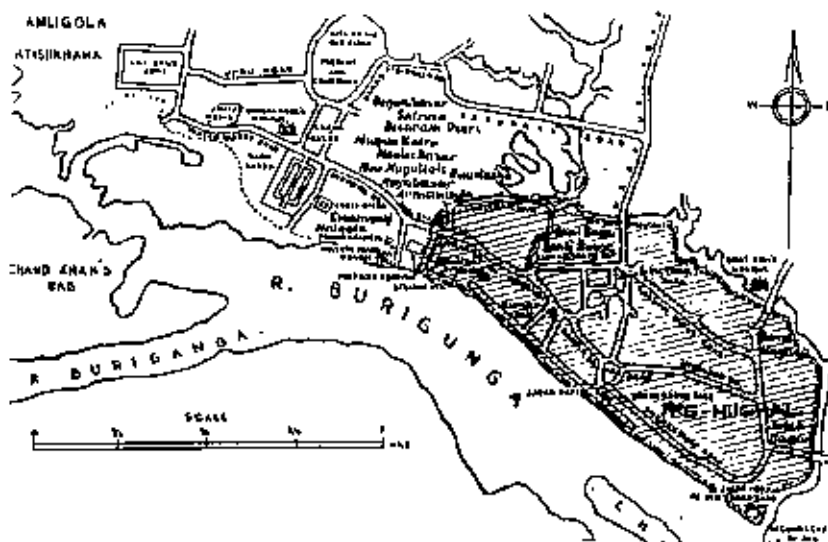
• Fig.6.3. The Linear Bazaar.

The *Mahallas* were in the form of cluster of houses around *chawlk* (squares) and were loosely organised and their external appearance lacked order. The morphology of the mahalla was formed by a singular row of houses on a central street known as the *bazaar*. Although

the bazaar appeared as a long street lined with shops, they were again arranged as a collection passing through different mahallas. Thereby the native city was characterised with a single pattern of two different built forms the linear bazaars and circular mohallas.



• **Fig 6.4 1. Map Showing Pre-Mughal And Mughal Dhaka**
 Source Dani, 1962, Dhaka



• **Fig 6.4 2 Dhaka: Stages Of Development**
 Source, Oriental Geographer, 1963

• **Fig 6.4 The Map of Dhaka City.**

- **The Mughal Period**

In the Mughal phase, the city truly flourished with the establishment of their provincial seat in Dhaka. From 1620-1713, the city was the capital of Bengal Subah (province). The Mughals patronised the social, cultural and political activities for the next 100 years and it is from this era, that a clear picture of the ascendancy of the city is available. The Mughal representatives were locally known as the *Naib-E-Nazim* or *the Nawabs*.



Gate of Lalbagh Bara Khatra, 1644AD
Fort. 1678.

- **Fig 6 5. The Mughal Structures.**

During this phase, Dhaka experienced extensive development and growth. Different mahallas were developed for people serving in the Mughal administration. For example, Nawabpur for Mughal nobles, Mighaltuli for ordinary class of the Mughal society.⁵ The growth pattern was organic in nature arising mainly out of necessity. The city extended to the north and west and for the first time road system was introduced, which initiated change in the orientation as well as the physical structures of the city. Other than the road network, the major building activities included mosques and khatras, forts and bridges.

6.2.2 .Phase III : The British period

During the rule of East India company, Dhaka became a trading centre and witnessed a big decline in population and area shrinkage.⁶ In these years of Company rule, no urban development was initiated. The British representative started to settle in the fort, shifting the *Naib-e-Nazims* to *Bara Khatra*. Later on, a palace at Nintali was built for them.

It is from 1825 and onwards, a physical renewal took place in Dhaka. With the exerted efforts by the authorities and district collectors, the civic amenities were improved and the city was eventually transformed into a modern one. Ramna and the areas from old Paltan to Nimtoli and from Dhakeswari temple to Azimpur were brought under the development zone. In 1864, Dhaka Municipality was established. The urban services and systems were gradually introduced thereafter, which influenced the general housing condition of the city. Establishment of city graveyards away from the residential localities, improvement of sanitary conditions (approved by Dacca Conservancy Act in 1870) with the introduction of sweepers passage in residential areas to enable easy cleaning are the two major efforts by the municipality.⁷ Like the earlier period, most areas of the city still had *Mahallas*.

The period of late 19th century is of great importance. The centralised policy of the colonial government necessitated all the institutions to be urban based. During this time, the society as a whole underwent major structural changes. New job opportunities were created by the enlarging formal administrative sector. This new life style and living patterns in cities came to be recognised as 'urban', 'modern' and 'formal' as opposed to 'rural', 'traditional' and 'informal'. The changes found expression in the physical form of building and city design.⁸

During this period, a number of wealthy zamindars and businessmen used to live in Dhaka. This new elite class was comprised of English, Armenians as well as the locals. They were extremely wealthy and had connections with the ruling power.⁹ In this period, also, as the direct consequence of the colonial rule, appeared the indigenous urban 'middle class', who formed the future backbone of the city. This middle class was mainly constituted of learned professionals and employed with the government.

The rich elite class bought huge area of land in Dhaka, specially along the river Buriganga and started to construct highly ornamented houses as the symbols of their social prestige. The basic morphology of these mansions represents the most indigenous urban house form. On the other hand, from 1880, Wari was developed as the first planned residential area for the middle class. Designed in bungalow pattern, the appearance of the houses in this area were quite different from that of the elite class. They were more functional with a simple appearance.

With the partition of Bengal (1905-1912), Dhaka became the short lived capital of East Bengal and Assam. The city continued to prosper as a Muslim city, acquired an university and the administrative sector underwent vast expansion. The concept of old and new city was introduced in this phase. The British rulers segregated this new area from the native settlements and used the old railway line (laid in 1895) as a buffer space in between to maintain the required socio-cultural distance. Beyond this line, most of the development took place in the Ramna area. In this area, the bungalows for high officials along with the governor's residence (present high court), the secretariat. (present Dhaka Medical College), and the town hall (present Curzon Hall) were built. Eventually, Ramna residential enclave was formed. The new Dhaka used to be characterised by wide roads, spacious gardens, isolated buildings and bungalows with large compound. These Bungalows were big and lofty in comparison to those of the natives on the riverside and Wari .

The Mansions and The Bungalows

The British period led to the creation of two significant typologies in residential architecture. First, the 'mansions' of the rich elite class. Secondly the development of 'Bungalow', a derivative of 'Bangla' that refers to a certain building type for the use of the government officials.

- **The Mansions**

As the first examples of earlier city dwellings, the mansions possess a considerable degree of historic significance. Externally, these superfluous buildings resembled those of the Europeans blended with native arch and so on (Fig.6.6). But a closer observation reveals that the type of imitation was primarily confined to the facade treatment—the imitation of the classical orders, entablature and various details, these were basically the expressions of the affluence of these class.

The spatial organisation of these mansions reflected the hierarchy of spaces following the similar patterns evident in the indigenous rural houses and clusters. as the dwellers, the first generation of the urbanites, tried to maintain some of their traditional habits and practices. Spaces in these dwellings were with an inward looking arrangement, often around a courtyard, divided into inner and outer zones, responsive of the socio-cultural and climatic aspects.¹⁰



House of Jatrindra Muhan



Jabal Lodge

• Fig.6.6 The Mansions.

And as such, the females (*zenana*) became the repository of traditional and indigenous way of Bengali living with adequate privacy. However, the outer sphere representing the men's domain followed the way of life of the European pattern and had formal drawing room, library etc., furnished in an European style. Eventually, the privacy of the women as well as the furniture and furnishing of the inner layout underwent a process of change. The least effected area is the kitchen. Climatically, these mansions were quite sound. These brick wall used to have a wall thickness of 15"-20". The room height was proportioned to the



• Fig.6.7. Opening in a Mansion

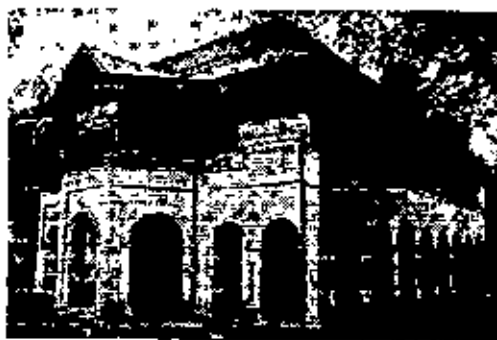
size of the room and was as such much higher than that of the present day. The walls were often perforated with openings from skirting to the lintel level and allowed them to be well ventilated. Cornices were extensively used in these structures as the protection element of the walls and the wall thickness was adequate to protect the openings. Thus the mansions had comfortable thermal condition.



• Fig 6.8 Mansions in Panam Nagar

The Bungalows

The 'Bungalows,' refer to a free standing, outward facing one or two storey structure, within a given compound having detached service structures at the backyard of the compound (Fig.6.8). This was the basic residential unit of the colonisers. However, it was also inhabited by the middle class—the government employees and Hindu gentlemen. The houses had pitch roof with verandas outside on the north and south. Thus they used to incorporate the responses to the local environment. Particularly, these north south oriented structures were climatically convenient. The verandas on outer side provided the necessary protection to the openings. The difference in living pattern as well as the extreme need of protection of the *shahibs*, the kitchen and servants quarter were located at the backside and away from the building. The house layout was divided into public and private areas for the *shahibs* and the servants. The kitchen was so located that it was nearest to the servants quarter and furthest from the private areas of the *shahibs*. Despite the fact that these Bungalows adopted some of the vernacular features, however, Colonial hierarchy was maintained in terms of the spatial arrangement.



• Fig.69 Chandra Kutir at Fulbaria, Dhaka

Decorative motives have been abandoned in these houses. They were marked by their simplicity, though nostalgic attitude is often reflected with the use of fireplace with a mantle piece ready to hold little ornaments.¹¹

Wari, being the first planned residential development in the colonial period in Dhaka, had a formal order with regular plots and grid iron layout. This provided the appropriate setting for the growth of the Bungalow type. More elaborate version of later period are found in the Ramna areas which were mostly built for the government officials. In the post colonial phase, the model was continued to be copied, however they were constructed on a much smaller plot

6.2.4. Post British Period

In 1947, Dhaka was transformed from a small provincial town into the second capital of Pakistan. This phase of development was followed by demographic change. 'The city became the recipient of thousands of refugees and displaced persons'¹². The majority of Hindu population left the city and were replaced by Muslim population.¹³ During this period, the society experienced major changes in social, religious and racial aspects. The population rapidly increased and became diversified. With the increased population, a number of new offices and new businesses were established. At the beginning, the Bengali Muslims were not proved to be compatible in either of these and thus Muslims from Delhi, Gujrat, Kathiawad and West Pakistan dominated the scene. Later on, Bengali Muslims from different parts of the country came into the city to have higher education which brought forward a large number of young Bengalis to the fore front. Thus they gradually occupied both the service as well as the business sphere.

The post-British period is characterised with the development of numerous government housing colonies in the major cities of the country. In the earliest rehabilitation project in 1953 at Muhammadpur by the PWD (Public Works Department) the concept of nucleus house was introduced for the first time. Construction of housing estates for government servants, was another point of emphasis. The C& B initiated the construction of first residential areas like Palashi Barracks, Dhakeshwari quarters (single storey row house) and Azimpur Estate (medium rise walk ups). Ispahani colony accommodated the higher section of the business class. In Eskaton garden, both the private residences as well as a number of government flats were constructed. In RajarBagh and Shantinagar, the other staff quarters were built by the government. Eventually, Siddeshwari, Kakrail and at Kamlapur, grew up into a large residential district. 'After 1953, the Dhanmondi residential area came up with its buildings and opened a new opportunity to the house

builders to rent their houses on exorbitant rates.¹⁴ Soon other areas with supporting facilities grew but the plot sizes became shranked.

Unlike the colonial bungalows, which used to be much lavishly planned on quite a large site, 'the post colonial fifties witnessed a change'¹⁵ As the 'modern' and 'optimal' solution, along with the introduction of multi-storied flats, the construction of bungalows were followed to accommodate the high officials, but this time the plot size was much smaller.

Dhaka Improvement Trust (DIT), was founded in 1956 with the intention to control the private developments as well as to prepare schemes for planned development of the housing and commercial sectors, road networks, underground sewerage etc along with the preparation of the master plan of the city.

- The Flats

The flats may be identified as the most significant residential development in the post-British period. In this type, the living and service part of the house are integrated into a single mass. Improved domestic technology as well as the inspiration from the mass housing and apartment living in the Western countries prompted the development of this type of houses.

Initially, the flats had huge verandas and wide corridors. Since there was no space standards or that much of limitation of the plot size, the flats were being significantly large. In the present designs, the flats have minimum circulation space with a more compact arrangement.

The earlier versions of the type used to maintain the socio-cultural distinctions. However, open space as courtyard were no longer present in this new typology and a lot of traditional functions eventually lost their meaning. Spaces within these houses are designed to accommodate **specific functions composed of tripartite relationship between formal, informal and service zones**. The service parts with kitchen, toilet, store and servant's living, all these were grouped into a separate wing and attached to the main living block. Service stairs were also provided. The arrangements, in general followed either L-shaped or U-shaped layouts, which were climatically compatible and as such became a prerequisite for ideal home

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The verandas as a common element in these houses are multi-functional in nature. Instead of being used as the linkage of different areas of the house, verandas were now split up and attached to different areas of the house, like with the living area, dining area, bed room and in front of the kitchen. Hence each of them have different character in it. The use of verandas continued as a popular element in the urban houses.

This flat or apartment type of house has been considered as an appropriate solution to urban housing and had incentives from the government in different forms. It has a 'special cultural significance, because of its close connection to government employment, the educated middle class--- all the proponents of a new life style.'¹⁶

6.2.5 The Period of Independence

In 1971, with the independence, Dhaka as the capital of the sovereign Bangladesh, experienced new dimension of development. Unlike the past, business, industry and other commercial activities in the city started to be dominated by local people and thus Bengali culture began to reinstate

For the last 26 years, the city is characterised with extensive urbanisation and population growth. Population of Dhaka increased more than double i.e. 222% between the period 1961-74.¹⁷ In 1981 the figure rose to 3.5 million. The existing population (BBS1997) is around 9 million with a projected population of 15.68 million for the year 2015. This has resulted into the creation of severe crisis in land allocation and housing.

Dhaka, being a rapidly growing urban centre of the country, exhibits a mixed and complex set of urban structural and functional characteristics.¹⁸ A recent study made by JICA (Japanese International Cooperation Agency), presents that only 19% of the total area of Dhaka Metropolitan city falls under residential category.¹⁹

As assumed by city planners that by the beginning of twenty first century, the Metropolis will turn into a Megalopolis. However, the overall building activity is not satisfactory both in terms of their quantity and quality. But, Dhaka is not a modern city till now as the it suffers from an acute shortage of civic amenities and urban facilities. The unplanned building activities along with problems from other sectors indicates that the future of the city is alarming.

• Population and Area of Dhaka City Through Years

Year	Population	Area
1608: Pre-Mughal	30,000	2.0sq km
1700: Mughal Age	900,000	40sq.km
1800: British Period	200,000	4.5 sq km
1867: British Period	51,636	10.0 sq.km
1891: British Period	83,358	20.0 sq km
1901: British Period	104,385	20.0sq km
1941: British Period	239,728	25.0sq.km.
1951: Pakistan Period	335,928	28.0sq km.
1961: Pakistan Period	550,153	35.0sq.km
1974: Bangladesh Period	16,79,572	125.0sq km
1981: Bangladesh Period	34,58,602	155sq.km
1991: Bangladesh Period	38,39,483	200sq.km.

Source: Rob and Asaduzzaman. Dhaka: Making a Megapolis, Weekend Independent, June 27, 1997

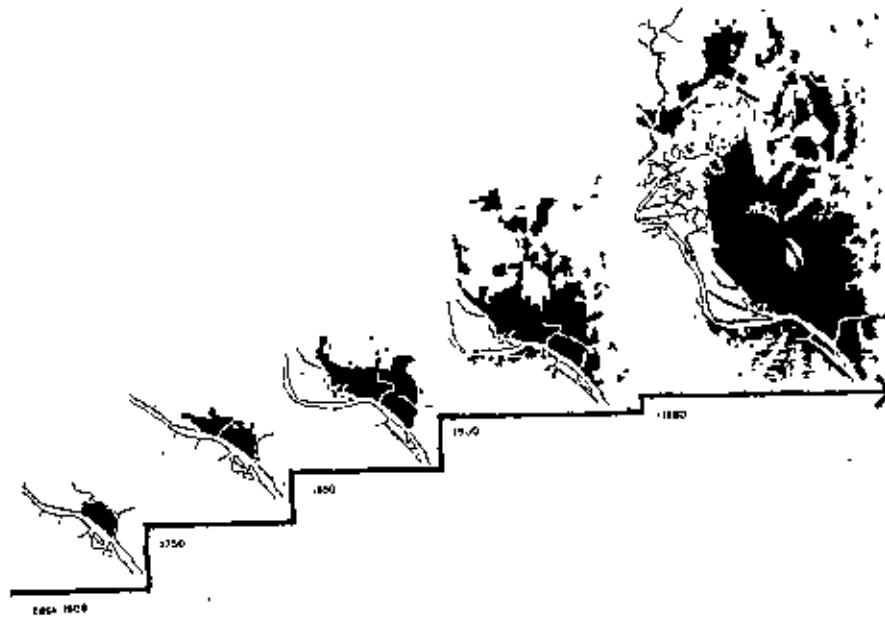


Fig. 6.10 The Growth Of Dhaka City (1600-1980)

Source: Shankland and Cox, 1981.

6.3 Transformation of Urban House Form in Dhaka

The formal appearance of an urban house is substantially different from that of a rural house. However, 'A strong resemblance is found between the organisation of space in the urban domestic architecture and traditional rural house.'²⁰

6.3.1. Rural to Urban House Transformation

The initial arrangement of the urban houses can be found in the examples from old Dhaka as the oldest surviving urban settlement. **Demarcation of the site by high boundary walls is the first action taken in the construction of urban house.**²¹ The boundary wall is indicative of the self sufficiency as well as the compact arrangement within a fixed site. The accessibility, plot demarcation, the concept of front and back are the vital phenomenon that have moulded the rural house to form the urban archetype.

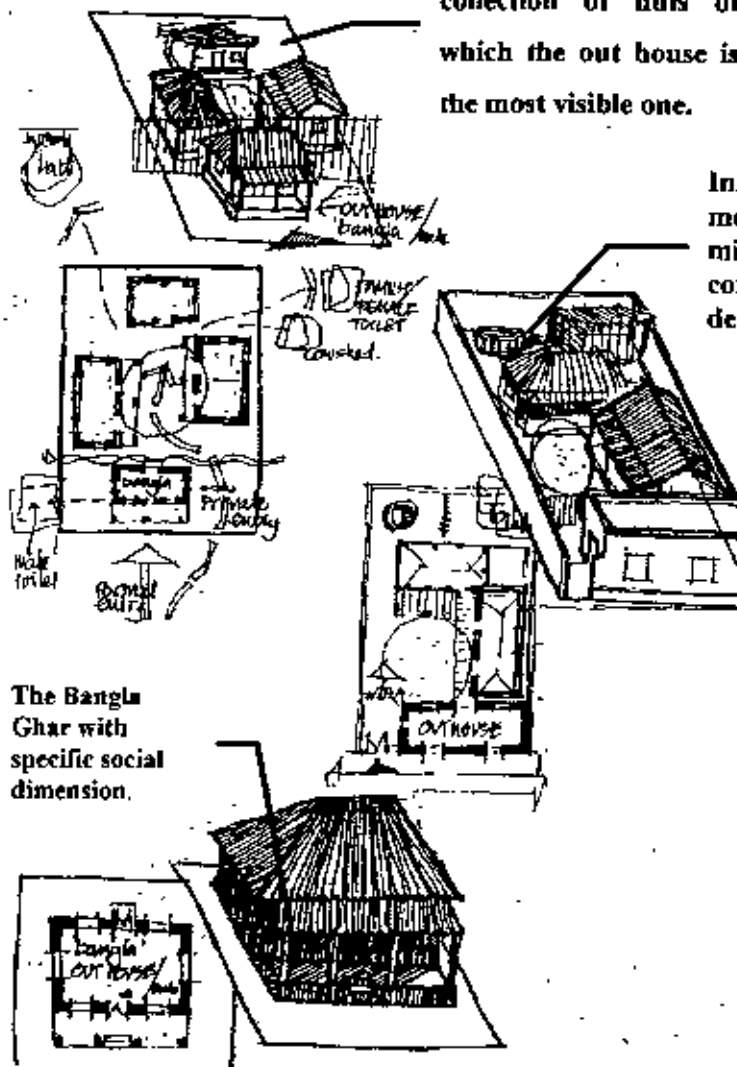
The initial layout of the house corresponded to that of their rural counterpart. The formation of urban house started with more or less same organisation in which the living spaces are grouped around an inner courtyard.

• The Basic Rural Houses

The rural house has remained unchanged over the ages. It is basically a collection of 'huts' arranged around a court. The basic constituents of a rural house include:

- courtyard as the focus of the household,
- the out house or the 'Bangla Ghar' as the most visible one, accommodating specific social function,
- importance of semi-covered spaces such as verandas.
- hierarchy of spaces ensuring privacy.
- the scattered settlement for climatic and ecological reasons
- the bent shape of the roof.

Rural house is the collection of huts of which the out house is the most visible one.



The Bangla Ghar with specific social dimension.

• Fig 6.11. The Basic Rural and Urban House

• The Basic Urban House

In contrary to the rural house, urban dwellings are always in the process of accommodating changes. Initial constituent of the urban houses are:

- resemble the rural house in plan with a courtyard,
- demarcation by boundary walls,
- of the traditional house, only the out house or the Bangla Ghar was the visible part with a definite architectural expression.

6.3.2 Urban House in Transition

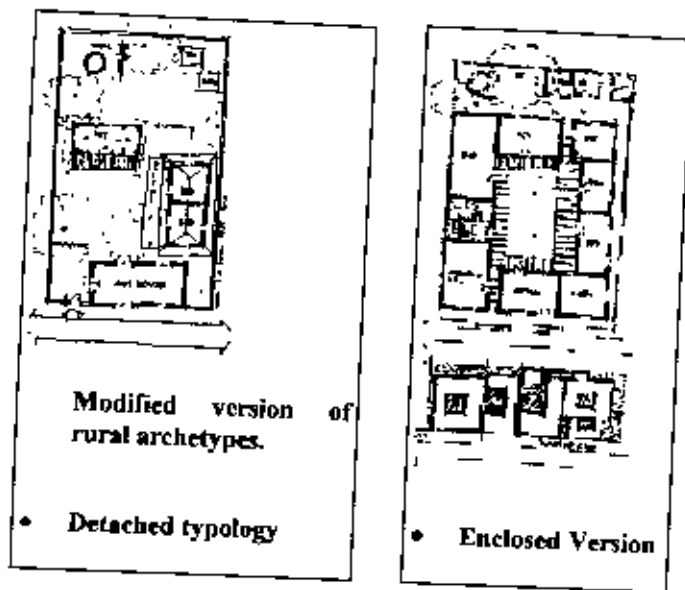
House form in an urban context is the outcome of the transformed socio-cultural background and changing values into physical restrictions. The transition of urban house helps to decipher the essential cultural demands on house form, the changing physical articulation and isolate future needs.²² 'Urban people are heterogeneous, so is their house form.'²³ It is the socio-cultural sphere that influence the preference of certain house forms. Due to the increased urban pressure, urban houses have undergone through a series of transformation and adaptation as the transformation and change in a city directly influences the subsequent development in its built forms. The morphology of house forms of the present day are not independent products. Rather they are the resultants of various urban forces generated at different phases of growth of the city. The development of urban houses with the growth of the city reveals the transition of urban houses in Dhaka city. This can be broadly classified into two groups : **the Introvert house and the Extrovert house.**²⁴

- **Introvert type:**

This is an inward looking organisation in which the entire activities of the house are performed in relation to central courtyard. 'As opposed to the rural situation where each unit is single roomed, in the urban situation, each could be a group of rooms.'²⁵ It is possible to identify four factors which created general acceptance of courtyard house in the urban context. These are **psycho-social** (related to privacy), **economic**, **climatic** (micro climate is more appropriate to domestic comfort) and **religious aspects**. In our local context, these factors have influenced the design of courtyard houses to varying degrees.²⁶

Two distinct type of house form are represented by the introvert typology:

- **Detached Type:** The direct representation of rural archetype with a court inside, e.g. houses in Mahallas in pre-Mughal Period.
- **Enclosed Type.** Most indigenous urban house form. The structures are built around courtyards maintaining the traditional hierarchy. Services were grouped at the back part of the house. Absence of sewerage system made these houses to depend on an on site disposal system. Thus a service road was provided at the back side of the house. Examples include the mansions of British period.



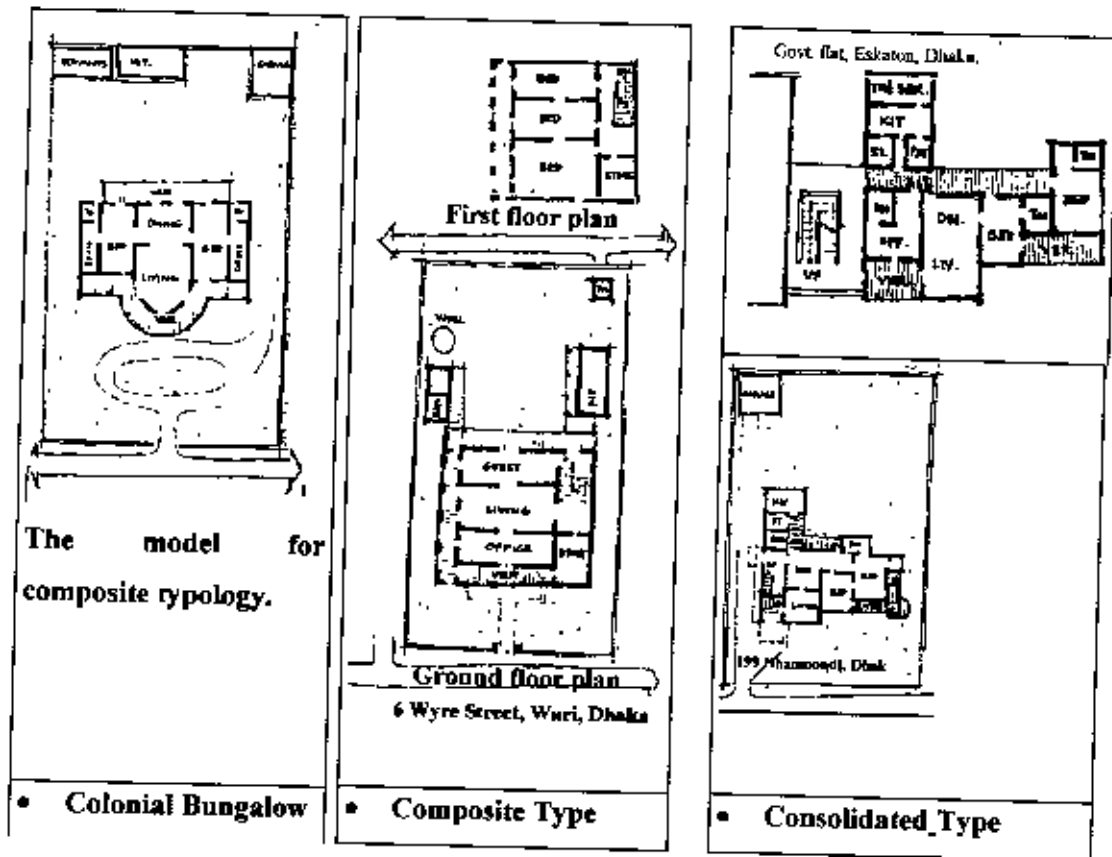
• Fig 6 12. Introvert Urban House.

• **Extrovert Type :**

This outward looking arrangement is a relatively new model in the local context. It has evolved as the consequence of the socio cultural change in the colonial period which introduced new life style, living pattern and values in urban living. With the establishment of domestic technology, the extrovert type developed as a more appropriate urban house form.

This typology can be subdivided into two categories:

- **Composite Type :** The type resembles the colonial Bungalow compound complex. Examples are those in Wari, Ramna etc
- **Consolidated Type:** This represents the flat typology in which the living and service part of the house are grouped into a single mass. Examples include the flats for the government employee of which is the most significant residential development in the post-British period. This type of house has been considered as an appropriate solution to urban housing.



• Fig 6.13: Extrovert Typology

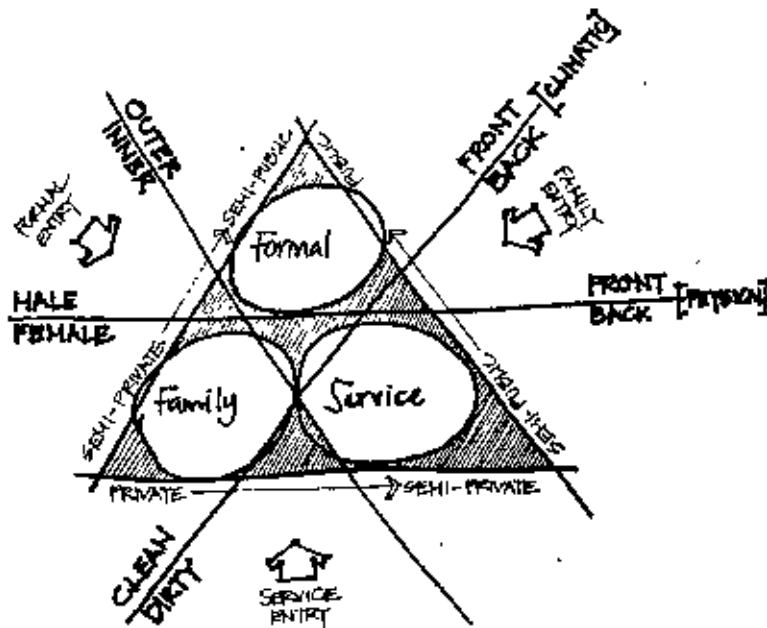
6.4 The Contemporary Urban House

'A Bengali House may be defined as a house adjusted to Bengali life style and living pattern, designed to accommodate domestic chores and rituals. The rules of organisation involves the traditional conceptual attitude towards use and maintenance of different domestic spaces along with the location, distance, relation and boundaries between various household activities.'²⁷

Over the last two decades, the design of residences particularly those of metropolitan Dhaka, has attained new dimensions and meaning. Due to the dynamic change in the urban life style, the urban residences experienced a process of transformation in its planning, organisation of space, physical expression etc. And this change can be felt best in the quality of spaces they have.

In the organisation of the interior spaces, the urban house has to conform to the socio-cultural patterns of the urban society and at the same time, it has to satisfy the environmental needs. Opposite pulls of tradition and Westernisation has resulted into adaptation of dual life style by the urban middle class. 'Their dichotomous values

found expression in the domestic design and living.²⁸ Thus, a house usually has segregation between the formal and informal activity areas within it, which corresponds to the western and traditional living habits and style respectively.

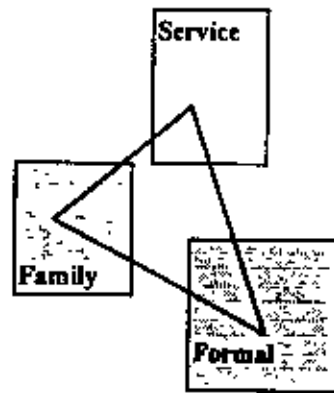
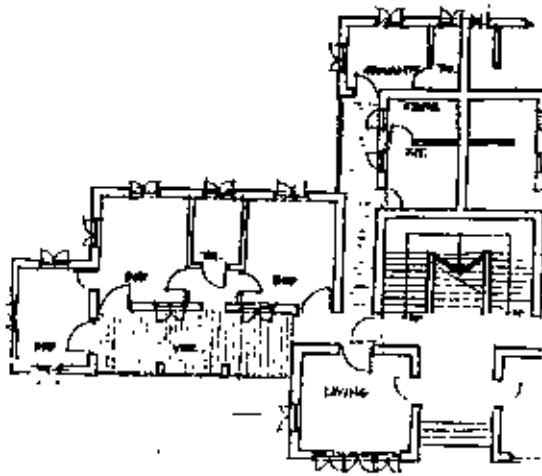


• Fig. 6.14: Organisation Model of Bengali House

The spaces in a house are composed in the tripartite relationship between formal, family and service zones, each having its clear physical distinctions.²⁹ These zones are created in consideration to privacy and to the nature of the use of the spaces. The quality of space in each zone is determined by the type of functions it accommodates along with the degree of accessibility it requires. It is important that each of the zones are organised in accordance to their correct relationship with each other.

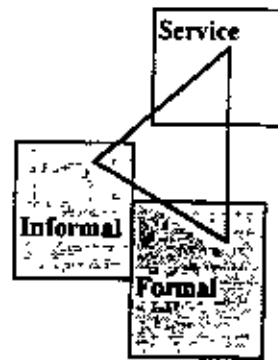
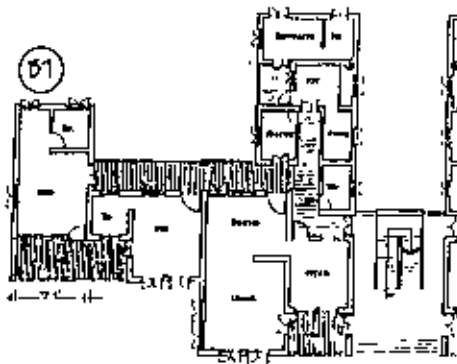
The formal and the family areas resemble the 'inner and outer' domains in the house which are formed on the basis of their functional and symbolic meanings. 'Traditional taste and preferences find expression in the inner house while the acquired western taste and attitude find priority in the outer house.'³⁰

However, it is the shape of the house which ultimately decides the respective location of these zones. The different spaces are so arranged that the most public areas are located near to the entrance and the private ones at furthest away.



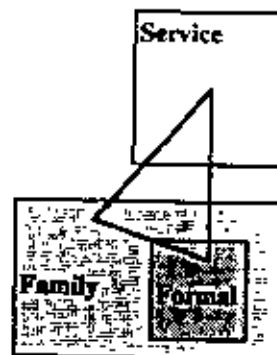
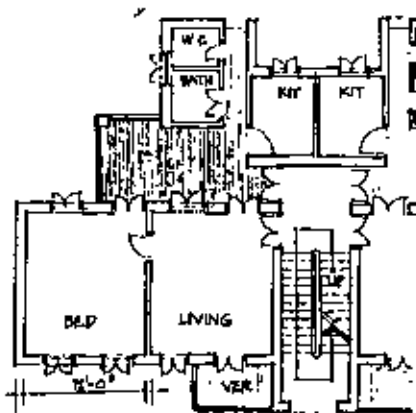
• **Rajar bagh Police Officers Quarter, 1628 sft.**

The plans reflect clear distinction of formal, family and service zone in which the circulation space act as a buffer space.

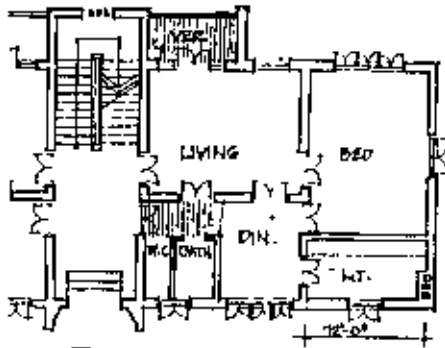


• **Baily Road Class I Government Officers, 2129 sft.**

The formal and the family spaces are grouped together with a direct relationship between them. The circulation space acts as a buffer between these and the service zone.

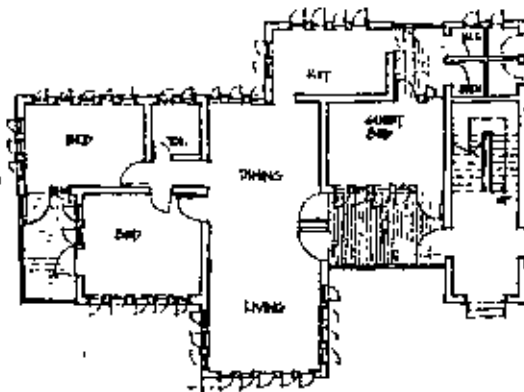


• **Jikatata General Type B 769 sft.**



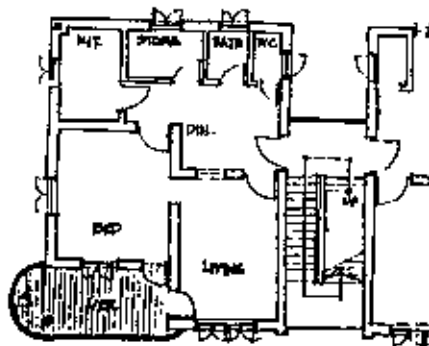
• **Azimpur Colony for govt employee 688 sqft.**

- In smaller houses, the physical distinction is difficult and the zones exist in temporal or spatial organisation of same room or area.
- The formal space is created at the outer part of the house. The service is segregated from the living zone by the circulation areas.
- In some cases, the toilet and kitchen at the service area are separated by activity areas.



• **New Elephant Road, BCSIR Officers, 1604 sqft.**

The relatively large house plans accommodate all the three zones distinctly. However it is the placement of the zones and the number and location of entries which decides the privacy of the family zone. It is important that the family and the service areas can be approached without interfering the formal zone.



• **Rajar Bagh, ASI Police. 913 sqft.**

The zones in this plan are systematically arranged. It is the location of the entry that creates the conflict, as the formal zone cannot be approached without interfering the family and the service zones.

Entrance to the house is seldom direct, it is guided by concept of privacy and social relationship. Usually organised as sequence of spaces, it follows certain order from public to private zoning having varying level of comfort for each. The location and number of the entries play a significant role in providing the privacy of the users. An entry foyer is very much effective in achieving the desired privacy from the outsiders in the formal living area to the inner part of the house

Traditionally, verandas have always been an integral part of the house. In traditional houses, the verandas increase the usability of the household spaces. Basically it forms the semi-open transition space from interior to the exterior. The use of veranda depends on its particular location.. As for example, in the formal zone, a veranda is used to receive and entertain guest and visitors or it can be just a space to stand in. Verandas in the family i.e. informal areas can be used as an extension of the spaces which may be used for household activities like drying up clothes and as such The service verandas are also the extension of the kitchen. The size depends on the particular use and therefore a function of its location.

The present morphology of urban houses has reduced the scope of using a courtyard. However the dining or family space is now becoming the hub of the household activities. And the spaces being organised around this family space can be termed as a modern alternative to the traditional *uthan*.

6.5 Conclusion

In this chapter, the transformation of urban house from in the light of history of the city is described. This revealed how the urban houses have been generated in accordance with the changed context. And also it has given the idea of what a contemporary house means in the present context. In the light of these discussions , it is now possible to analyse the various aspects of a contemporary residences in respect of regional determinants.

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Chapter Seven

THE CONTEMPORARY RESIDENTIAL ARCHITECTURE IN DHAKA CITY IN THE LIGHT OF REGIONAL DETERMINANTS.

7.1 Introduction

7.2 Regional Determinants

7.2.1 Cultural Determinants

7.2.2 Climatic Determinants

7.2.3 Response to Local Conditions

7.3 Case Studies

7.4 Conclusion

References

7.1 Introduction

To comprehend the architecture of a region, as defined in chapter two, critics have identified **culture, climate and response to local resources** as the major determinants. These ultimately identifies the **context** in which a structure is built. To dwell in city life, one finds a totally different picture in terms of physical as well as cultural expression. And the urban context is totally different in relation to the traditional one. The chapter attempts to search for the regional determinants in the selected urban houses and intends to see how these contents are being dealt in the changed context.

7.2 Regional Determinants

- **Cultural Determinants**

Culture forms the identity of people. As described by Hassan Uddin Khan, individual identity finds expression in architecture through a house which forms the most personal of spaces, that delineates ones individual statement¹ A house reflects the cultural values, social and economic background of its inhabitants. The spaces in an abode generates from the above factors and thus directly related to the context in which it is built. A residence must comply with the life style of it's residents. The reflection of cultural heritage of a region is inevitable in the structures built within it and probably it has the most profound predominance.

- **Climatic Considerations**

The concept of dwelling has evolved from man's need of shelter from the cruelties of nature. Since the early days of human history, climate has been one of the major consideration in building. For convenience of living, the structures are designed to best adopt a building in the climate of a region. In the hot humid climate of this region with high precipitation levels, air is invited to play through the structures. So, openings are provided in walls to enhance the flow of air. But this apertures also bring water during rain and the sun during summer into the house. So, climatic devices are introduced to control the penetration of unwanted rain water and to cast shadow to protect from the scorching sun.

Other than the shading devices, climate also influences the orientation of a building. The arrangement of internal spaces, zoning of living and sleeping areas are guided to a



large extent with climatic consideration. The climatic considerations in contemporary residences of Dhaka would be analysed to evaluate how they are incorporated in them.

- **Local Material and Technology**

The structures in any part of the world is characterised by the locally available materials and the building technology is developed according to them. The locally available building materials are frequently used in most of the structures and accordingly a vocabulary of architecture of a particular region emerges. As mentioned earlier, bricks are identified as the principal local building material. The extent of using local construction system and use of materials in the recent residences will be analysed to determine how much this factor is influencing our present architecture

7.3 Case Studies

Contemporary urban residences are basically of two types. The factors behind their classification are predominantly economic. The size, spatial quality, use of material etc. vary according to the different economic stratum of the society. Examples in which relevance to our regional essence can be traced have been taken as case studies. Each of the cases are described incorporating the discussions made with the architects involved. The residences are selected, to represent both categories of residential structures of Dhaka city.

Typology:

- Single Family House---Simplex/ Duplex / Triplex---Purely Residential/Mixed use
- Multi Family House ---Apartments

7.4 Conclusion

All the above examples from different type of residences in Dhaka city has something similar in them. The structures are designed by different architects, for different clients with varying scale and approach. But there are some inherent resemblance in their internal and external expression which characterises them as bids of the same string. In the next chapter, the similarities between them will be analysed to extract the influence of regional determinants in them

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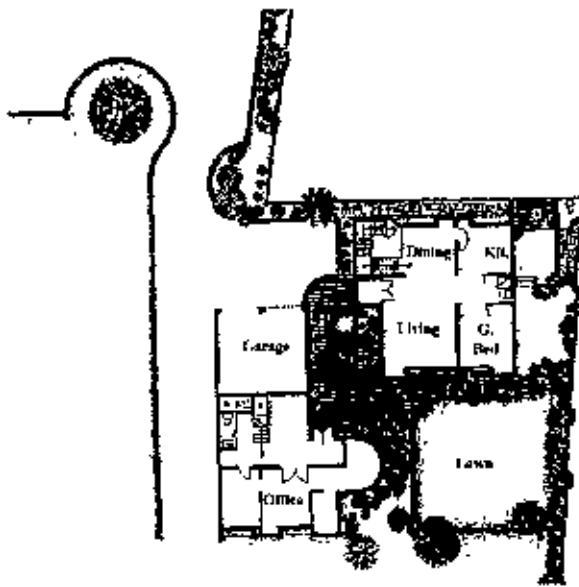
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- Case Study XII Drawings and Photographs Architect's Office

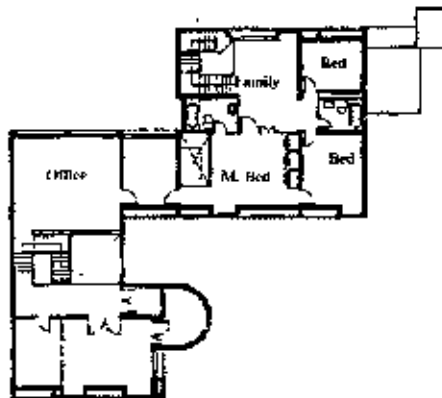
Case Study I

Project Data

Project.	Architect's Residence
Owner:	Bashirul Haque
Architect.	Bashirul Haque Hashirul Haque and Associates
	35B/2, Indira Road, Dhaka.
Location	35 B/2, Indira Road, Dhaka
Site Area	561 m ²
Covered Area	278.29 m ²
Total Built Area	556 m ²
Building Cost:	Tk 8 Lkhs
Year of Construction.	1982



• Ground Floor Plan.



• First Floor Plan

This is a residence designed by the architect for himself. The plot is a densely vegetated one, located in the periphery of a high density residential area of Dhaka city.

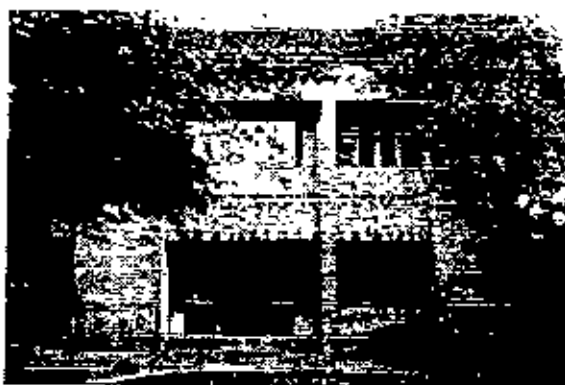
The building consists of two separate blocks, one contains the domestic spaces and the other is the work place of the architect. This two blocks are arranged in a L-shaped pattern forming a fore court and a private court. From the fore court there are two separate entries, one for the residence and the other for the office. The blocks are linked at the upper floor level, where they form a single entity as the domestic space is connected with the studio. The private court, which is shaded at the afternoon, provides an outdoor space for family relaxation. Two bedrooms from the upper level can enjoy the



• **Entrance of the House**

his built form. The living space has an open to sky patio, thus the play of light and shade of the bright sun can be experienced at this point which with plants and pottery creates a pleasing atmosphere

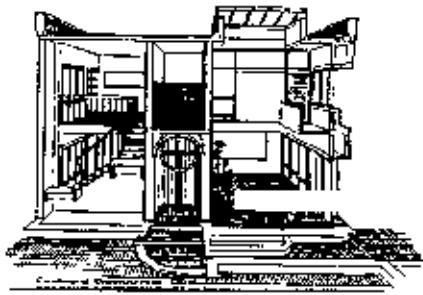
private lawn. From the master bed, a bridge beside the open to sky part guides one to a study/ computer room which acts as the linkage between the domestic and the office block. As a transition space, this room provides the necessary privacy into the master bedroom. The domestic spaces are arranged in two levels thereby forming a duplex. At the ground level, an intimate entrance leads one to a spacious living space with the dining space on the left. The living and dining area is basically a single space, flowing out to the private lawn on the south which serves as an extension of the living room. The architect has intelligently invited nature into



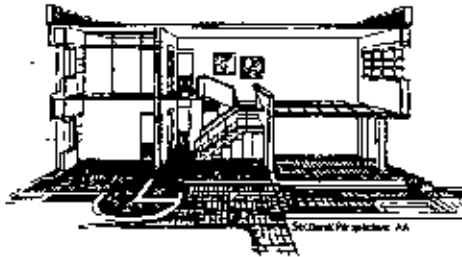
• **The Lawn and the Living Room**



The dining space, though being part of the whole, is so placed that it can have its own privacy, the proximity of the kitchen makes this space more efficient. This floor accommodates a guest bed which also can enjoy the private court on the south. The services like kitchen and servants quarter are grouped together on the north eastern part of the house. From the dining space, a stairway leads one to the family space at upper level. The stair actually links the dining and family space which has an intimate relationship between them. Around



• Sectional Perspectives



this family space, three bed rooms are arranged. Two bedrooms at upper level can enjoy the private lawn

The climate responsive attitude of the architect is reflected in his careful organisation of the blocks into L-shape and also in the zoning of different space. The L-shape of the blocks help to optimise the air flow and natural lighting into built areas. The living space and most of the bed rooms are given the south. The north-south orientation allows cross ventilation in most part of the house

The house reflects the cost conscious attitude of the architect. The innovative use of locally-made brick pavers on the floors of the living and dining space helps the interior space to blend with the interior walls. Again, the use of exposed bricks both inside and outside with the extensive use of indoor plants, makes the interior spaces harmonious to the surrounding landscape. The building is marked with use of simple architectural form with an emphasis to respect the life style, use of local building



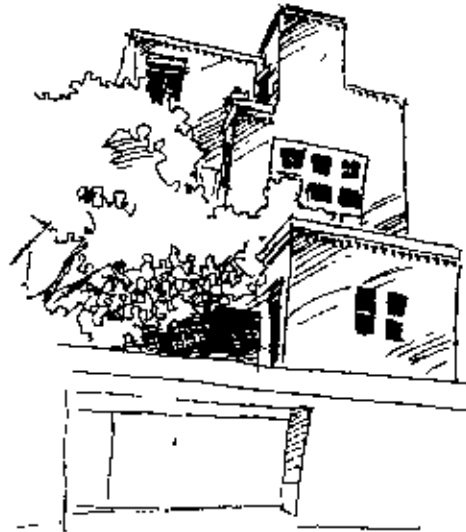
• Entrance Passage to the Office

materials and response to the climate of the country. This reflects the concern of the architect to respect the culture of the country. The building has an intrinsic rebuttal to the local conditions—the climate, materials and available building technology, which are the guiding factors behind the desire to create an authentic regional style

Case Study II

Project Data

Project.	Residence of Mrs. Fazilat Islam
Architect.	Haroon-ur- Rashid
Location	67/C, Road No 19, Dhanmondi R/A, Dhaka
Site Area.	308 m ²
Covered Area	160 m ²
Total Built Area	432 m ²
Building Cost:	Tk 35 Lakhs.
Year of Completion.	1995



• Front View.

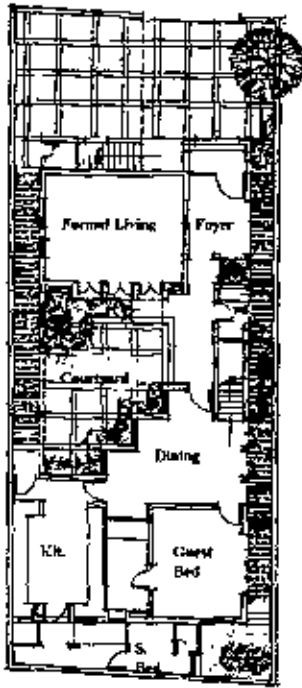


• The Court with the Play of Light and Shades.

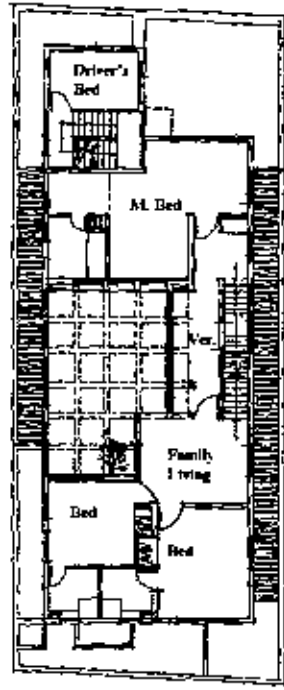
The residence of Mrs. Islam is located in a plot which is surrounded by buildings in three sides except the approach road on the north. The site and surroundings suggest nothing to look at, but a neighbour's bed room, a blank wall or into a toilet. This generated the introvert type rectilinear plan indicative of the architect's logical and sensitive intention. He has created an inward environment secluded from the disturbance of the outside. The linear 35'x90' plot is designed as a substance of walls and spaces around a central courtyard which offer a strong unifying reference. Moreover, the architect has used light as a design element in this residence. Almost every space in the house enjoy the stimulating interplay of light and shades.



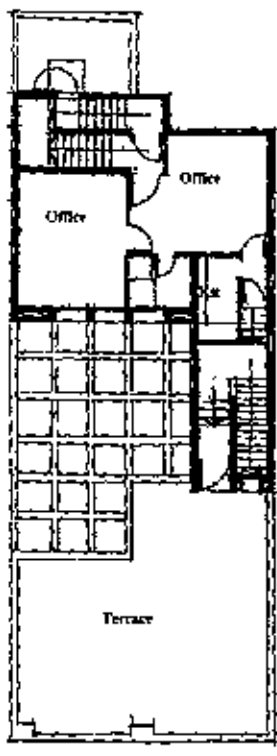
The house accommodates a duplex for the owner, the work space of the master at the second floor and a single flat for her sister in law at the third floor. The two units in upper level covers an area half to that of the duplex at lower level. This allows a larger set back on the upper floors to the south, ensures privacy to the lower duplex and also provides a terrace.



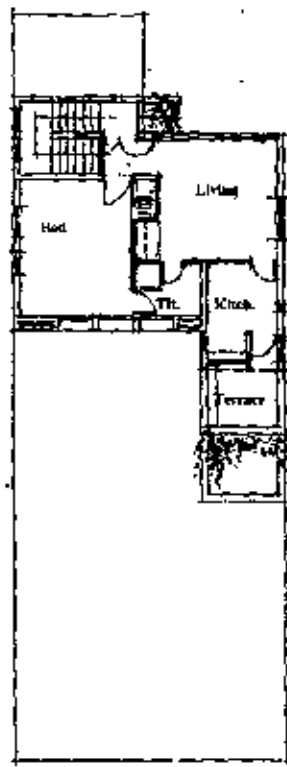
• Ground Floor Plan



• First Floor Plan



• Second Floor Plan



• Third Floor Plan





• **Foyer**



• **Service Passage**

this economic attitude of using spaces, designed no left over space in the whole house. The formal living is adjacent to the foyer. At the ground level, the court separates the formal living from the family zone. The court serves as an extension of the living in case of large gathering. Next to the foyer, a veranda leads one to the family spaces. The veranda like that of the older houses, has been used as a

The spatial arrangement of the house represents the necessary hierarchy of spaces. As one enters into the duplex, a foyer, itself adorned with plants, potteries and light, forces one to stay for a while and praise the beautifully treated space. On the left, the foyer is extended up to the boundary wall of exposed bricks and horizontal ribs at 8' level which creates the play of light and shades. Besides the foyer, the architect has used this treatment at every exposure, which forces light to create a beautiful play of shades and thus each space gets a different dimension, be it a service passage, or patio from the dining, guest bed or even the small toilet at the veranda. Other than the fact that one can experience the nature into a manipulated version and can have a visual relief,

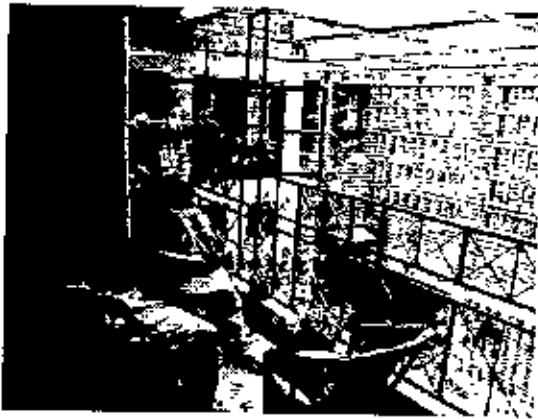


• **Dining Space**



• **View towards the Court from Formal Living.**

connecting element of different spaces. It also serves as a transitory space between enclosed and open part of the house which resembles the traditional ones.



• Verandas



• Stair from the Dining

• The Family Space.

The dining area is in close proximity to the kitchen for efficient functional relationship. From the dining area the guest bed opens and an enclosed and straight run stair leads to the upper level, the most private part of the house. The stair resembles to those found in early twentieth century houses of Dhaka creates a mystery.

In the upper level, the master bed is kept separated from the family space through the veranda. The stair continues up to the roof terrace and also to the office of the master of the house, which has another approach from the outer side of the house. The family space provides the approach to the bedrooms for the children. And, it is the court which ties every space of the house into a single entity.



• The Court from the Veranda.

The house is a deliberate effort of the architect to create an architecture responsive our life style, climate and use of local material and technology. It also reflects the cost conscious attitude of the architect. Privacy has been given ultimate consideration and as such, other than generating the spaces with necessary hierarchy organised into an introvert manner, the two storey high wall of perforated bricks on the western side

provides necessary privacy to the court from the surroundings. The concrete ribs, used at 8' level up to the boundary, has provided the necessary security to this house which is a common problem of the urban context. To deal with the climate, the architect has been aware of the macro climate as a shaper of built forms in the dense urban context. He has tried to manipulate the macro climate and achieved the advantage of micro climate. This is reflected in his careful use of the court which allows the spaces be well ventilated. Also the court keeps the house cooler in intense sun and warmer in winter.



The shading devices, of fibre glass and metal truss corresponds to that of the vertically pivoted vernacular imagery. The pergolas over the court continuously filter and modulate natural light to the interior. Thus the court have been used successfully as a element responsive to the both social and climatic aspects. The use of material is also sensitive to the context The architect has used

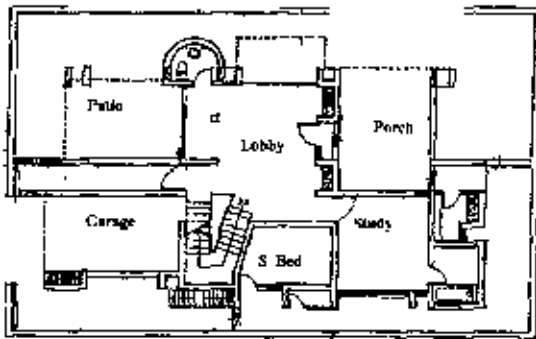
• The Openings

hollow bricks on the exposed parts of the roof and also used cavity walls on the front and back facade to reduce heat and noise transmission. The building is enveloped by load bearing exposed ordinary brick walls. The opening are spanned by R.C.C. beams. Other than maintaining the organic essence, it is the honest expression of the techniques used. Thus it also satisfies the demands of modernism which stresses on to have respect for inherent qualities of building material and expression of structure. The house constantly resembles its place and context. The exterior merges with the surroundings in it's scale and become a part of the urban fabric while the interior facilitates traditional and convenient living. Also it is an example of the creation of a meaningful architecture coming out of the participation of the architect and the client.

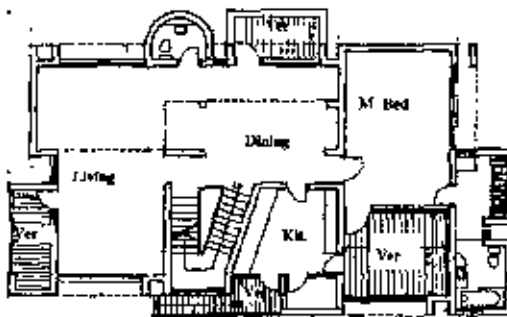
CASE STUDY III

Project Data

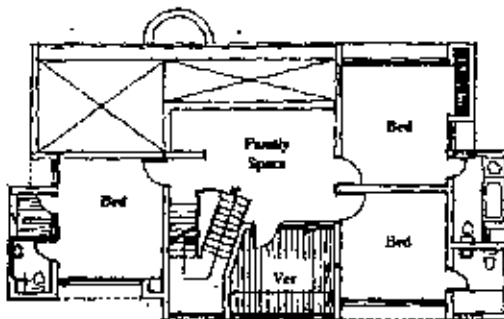
Project:	Residence of Mr. Syed Kamaluddin
Architect	Shamsul Wares
Location:	Road No 6, Dhanmondi R/A, Dhaka.
Site Area	301.15m ²
Covered Area	165 m ²
Total Built Area.	424 m ²
Building Cost	Tk. 25 Lakhs
Year of Construction:	1987



•  Ground Floor Plan



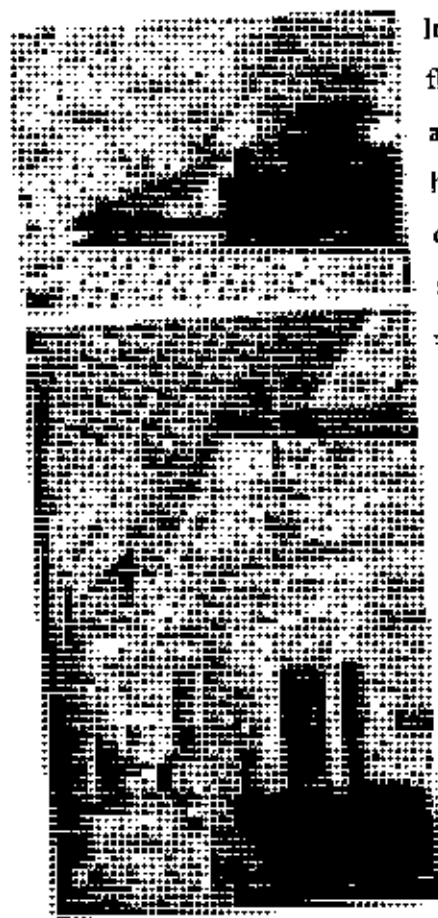
• First Floor Plan



• Second Floor Plan

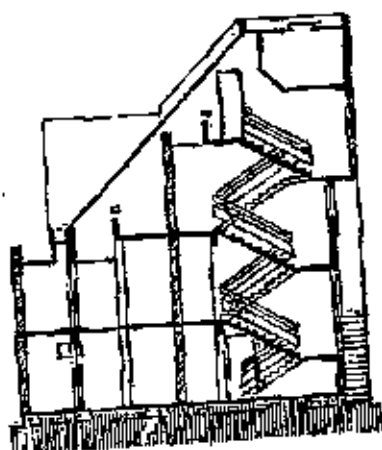
The house accommodates a singly family in three different levels and situated in a corner plot with roads on the northern and western side. The house has a quiet environment around it and located in a designed residential area. The building covers the entire site with necessary set backs as recommended by the RAJUK. The spaces are lavishly arranged in three floors maintaining the necessary hierarchy. At ground level, one approaches into the large lobby through the covered drop off. At one side, a covered patio extends this space to the exterior. This level also contains the guest bed. A grand stair leads one to the first floor which actually is the extension of the ground level. It accommodates the formal living, dining room and the kitchen. The proximity of the dining and kitchen is alike other case studies for efficient functional relationship. The kitchen is approached by a separate service stair from the

ground level. Unlike the previous case studies, the master bed is placed at this level, the access of which is from the dining area. The same stair continues up to the second floor to the family space from which the two bed rooms and the study room can be approached.



• The Double Height Space.

In this house, the horizontal as well as vertical flow of spaces is evident. The dining, living, study and family space, all are arranged around a double height void which unites them into a singleton. The double height space which connects the first and second floor finds expression in a concrete pitch roof at the exterior. The pitch roof relates more to the traditional imagery other than dripping the rains off.



• Section

Creation of spaces were the prime intention of the architect which has been carried out quite successfully. However, the client has converted the guest bed at the ground level into study. The space which the architect ascribed as study is merged with the void and, as mentioned by the mistress of the house, did not work well due to noise and dust. The house owner wants isolation of the study from household activities. They are also planning to make the covered patio as the guest bed. A covered patio could not create enough appeal to its users. It reveals the fact that an open to sky space is more acceptable as it can bring the nature more close to people.



• **Veranda from the Dining**

scorching sun but at the same time, the few openings along with the three dimensional composition creates certain interest. The verandas have been extensively used in this residence as part of different spaces. Each of them has their own entity. As for example the veranda from the dining is open to sky and it relates the users to the exterior environment successfully. On the other hand, the veranda of the master bed is given adequate privacy.

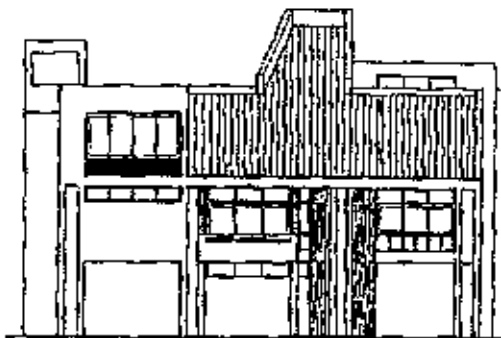
In his response to the climate, the architect has carefully zoned the different spaces. Each opening of the house is provided with necessary protection both by using shading devices as well as manipulating the building mass. The architect has shown his mastery in the treatment of the west facade which being mostly solid, protects the building from the



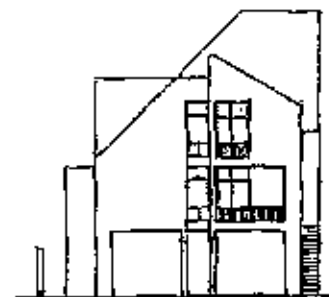
As the construction system, load bearing walls have been used in this house. The walls are plastered and the exterior facades are interestingly treated

• **External Views**

with a modern vocabulary. The architect of the house although very much loyal to the facets of modernism, yet he could not help incorporating the inherent characteristics of the residences of this region. This is most evident in the organisation of spaces in which privacy with certain hierarchy has been maintained, in the use of local material and construction system and of course, in its response to the climate



• **North Elevation**



• **West Elevation**

CASE STUDY IV

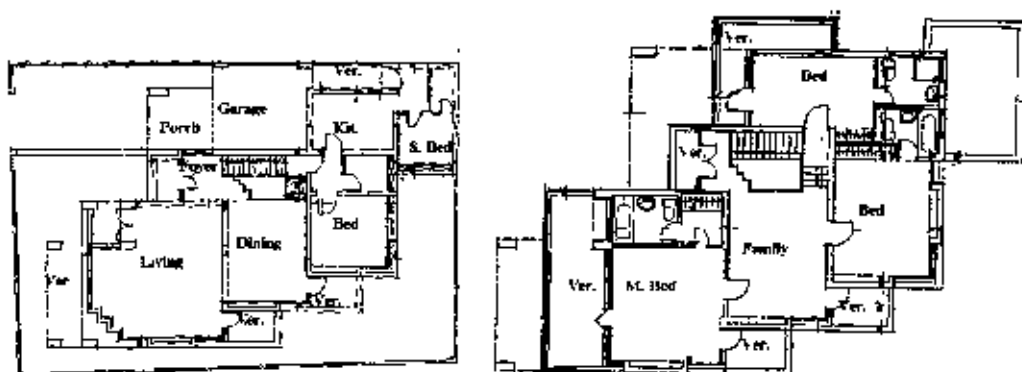
Project Data

Project:	Residence for Mr. Zakir Hussain
Architect:	Uttam Kumar Saha
Location:	Gulshan, Dhaka -1215.
Site Area:	333.95 m ²
Covered Area:	222.63m ²
Total Built Area:	483.58m ²
Building Cost:	Tk 20 Lakhs
Year of Construction:	1991-92



This is a duplex built for a single family situated in one of the posh residential areas of the city. The built mass in the plot creates a fore court and a back yard. The architect has organised the spaces respecting the life style of the users.

• The Front View



• Ground Floor Plan



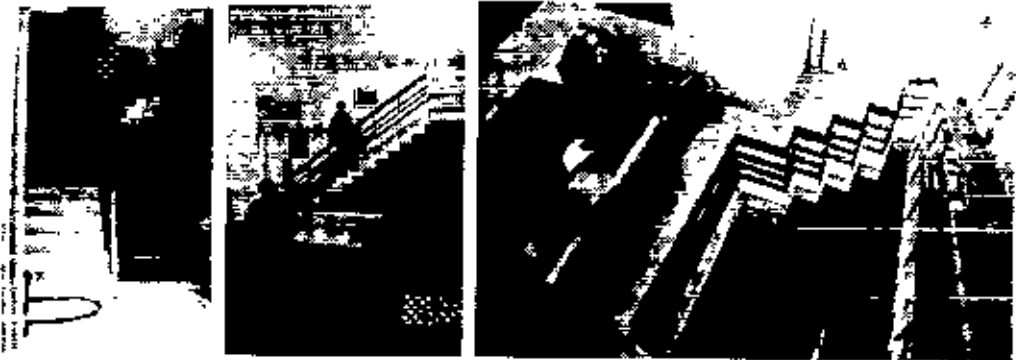
• First Floor Plan



• The Entrance

The spaces are arranged at different levels which are all unified together by the stair as a connecting element. The foyer is approached through an intimate veranda. The ground level houses the formal living, dining, the guest bed and the service areas. The living and dining area are so placed that they can retain their separate entity but if necessary can be treated as a continuous space. The kitchen is in close proximity but has an indirect relationship to the dining. From the foyer, a sculptural stair

links the upper level which contains the family space, around which the bed rooms are arranged. At the landing, a study room has been interestingly placed over the garage. The stair continues to the second floor to the roof terrace but before that, a games room has been provided at the landing over the study.



• Stair from Foyer. • Family Space • Stair as Connecting Element of Spaces.

The architect has created interesting verandas at different spaces. But except the one with the master bed, none of them has been used as a transitory space between the enclosed and open areas. Rather they form a part of the individual spaces.



• Veranda over the Entry Point.

The house represents a deep concern of the architect for our climate and also, his conscious attitude of using local materials and technology. The house faces the west. The architect has accepted this reality and designed the verandas to provide deep overhang as a protection against the sun. These, other than providing protection from the west,

also adds a visual interest and created an inviting front. Verandas on the south and on the west are staggered in a progressive manner. The repeated use of corner windows created another visual impact and added more openness to the rooms of this house. Load bearing walls are used as the structural element. The facing bricks on the building envelope provides a sense of uniformity.

CASE STUDY V

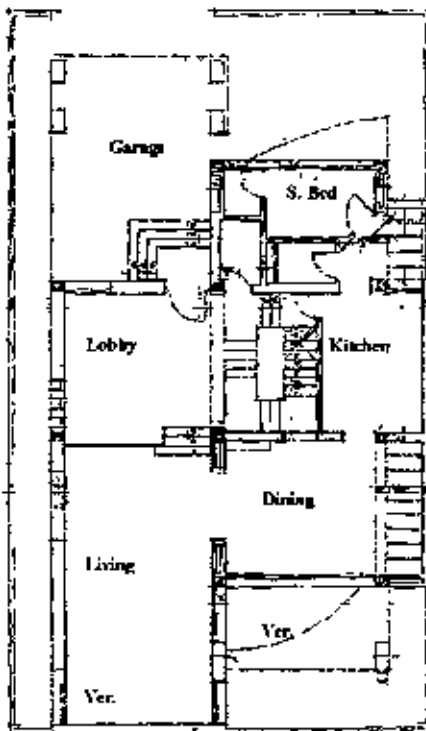
Project Data

Project: Residence of Mr. Enayet ulah
Architect: Uttam Kumar Saha
Consultant: Nandan Architects Ltd
19, Central Road, Dhaka 1205
Location: Central Road, Dhaka
Site Area: 270 m²
Covered Area: 199.90m²
Total Built Area: 421.33m²
Building Cost: Tk 20 Lakhs
Year of Construction: 1991.

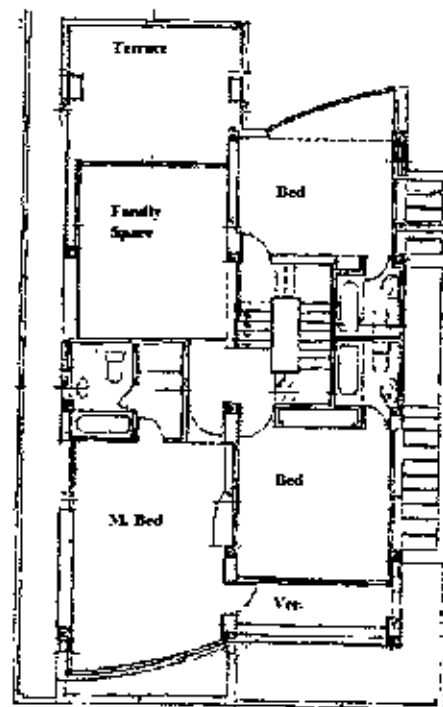


This is a duplex designed for a singly family. Situated in a dense residential area, this plot is approached by a secondary road and has a quiet environment. The building covers the entire site with necessary set backs as recommended by RAJUK as mandatory.

• The Front View.



• Ground Floor Plan



• First Floor Plan.

At the entry point, a large lobby is created from which one steps down to the living and dining area. Though each of the areas are separate, but their continuous flow achieve oneness of space.



• The Entrance



• The Stair



• The Flow of Spaces



• Children's Bed



• Open to Sky Space.

The attempt to manipulate the nature and to bring it inside the house, is successfully incorporated in this house. As found in case study II, beside the dining area, the horizontal ribs at 8' level up to the boundary line creates a stimulating play of light and shades over the potteries and plants. A sculptural stair connects the formal zone with its private areas. with the rest of the house i.e. the private zone. A bedroom for the youngest son is approached from the landing. With a few steps up, there is large family space and two bed rooms. The stair continues up to the roof terrace, but before that, another bed for the grand father is put at the second landing. The architect tried to provide spacious verandas to each space. The family space opens to a huge terrace through a veranda and it gives the

sequence of covered, semi-open and open space. The existing structure next to the building keeps the west shaded and the architect has used openings in the west without providing adequate protection. The architect has shown his concern for the lifestyle and to the local material and technology. This building is constructed with load bearing walls and enveloped with exposed bricks. Repeated use of corner windows along with the arc coming out of the mass has given the building an interesting visual quality.

CASE STUDY VI

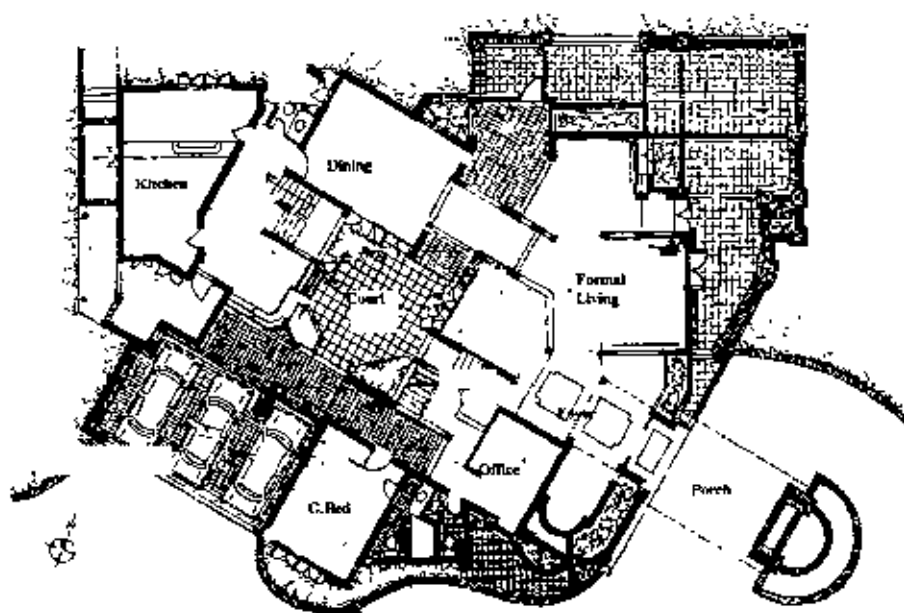
Project Data

Project:	Residence for Mr Muhammad Aziz Khan
Location:	14, Shahid Sarani, Cantonment R/A. Dhaka.
Architect:	Nahas Ahmed Khalil
Consultant:	ARC Architectural Consultants
Site Area	2003m ²
Covered Area	445 m ²
Total Built Area	742 m ²
Cost:	Tk. 1 Crore 5 Lakhs .
Construction Period:	1992-93



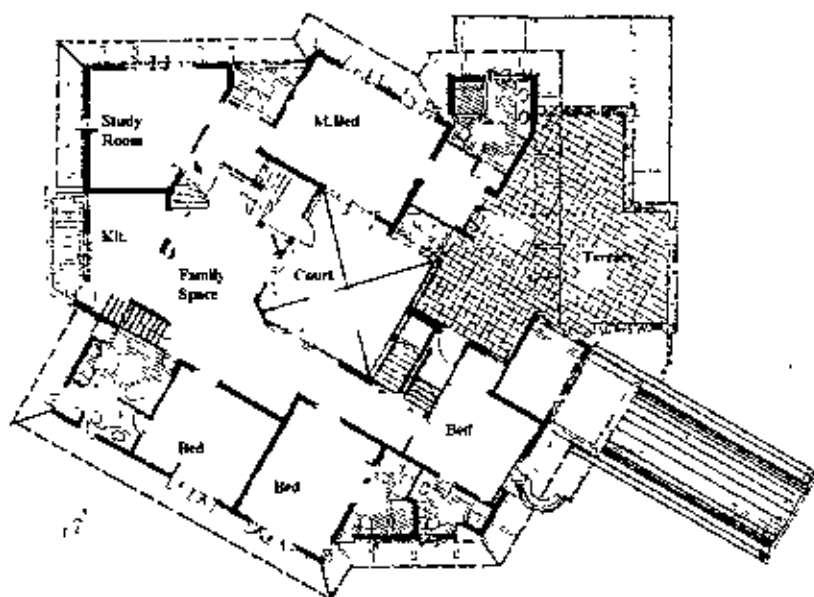
• Front View

This is a single family residence situated in Dhaka cantonment area. Being located opposite to the memorial to the martyrs from the armed forces, the building follows a specific by law and is provided a distance of 80' as a set back from the main approach road on the east. A stretch of 40' to the west too has been kept free for use in future by the owner.

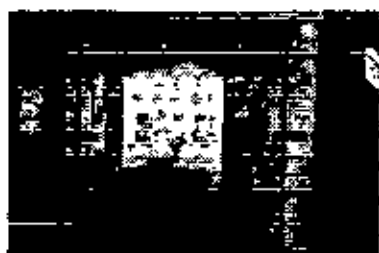


• Ground Floor Plan





• **First Floor Plan**



• **Foyer**



• **The formal living**



• **The Court**

The ground floor plan, an attempt has been made to blur the edges of indoor and outdoor spaces. The interior spaces are arranged around a central courtyard with necessary hierarchy. A grand foyer invites one to a spacious formal living. The formal living has three types of sitting arrangements, one next to the foyer, another which is stepped down and the third in close proximity of the dining area. All these form a

continuous space. The Dining area is kept separated by a covered corridor and the area itself is next to the courtyard. It is linked with the living at one side and with the service zone at the other. From the foyer, one may approach to the small work area of the owner and the guest bed. A garage and the service entry is placed on the back side of the house. To reach the upper level, there are two stairs in the house, one from the foyer and the other from the service zone. Both of them rises up overlooking the courtyard. The upper level is exclusively private zone of the house. The bed rooms are arranged around a family space which is placed just beside the court. The master bed with its library is placed at a few steps up from which the court can be enjoyed. The master's suite is kept on the north overlooking an open field away from the sun and the traffic of the road on the east, as was desired by the owner.

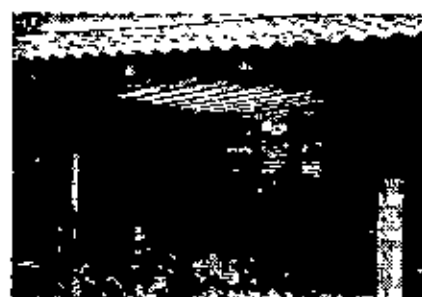


- **Court and Family Space**

In this house, spaces are lifted up and down to provide privacy of each. The courtyard serves as a spatial link tying up the entire house and also as an outlet shaft for the warm humid air swept up from the southern rooms to escape. Moreover, the court helped to make the rooms as single spaced which facilitates better ventilation. The building has adopted a simple unplastered load bearing brick building, with its concrete elements expressed and the floor slabs extended to form drip courses. The eaves of cement concrete tiles protect the walls from the sun and from rain. The exposed part of the ceiling i.e. the roof is constructed of hollow bricks which provides a satisfactory insulation.

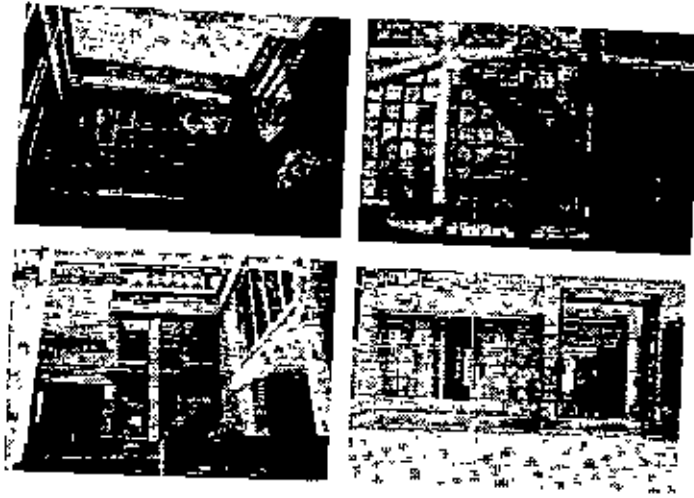


- **Cornice -**



- **Terrace**

The architect has used traditional visual imageries like perforated parapet railings, the tiled eaves, brick and slab projections etc in the house.



•Different Spaces of the House in relation to the Courtyard.

Thus synthesised the traditional elements to modern spaces. The architect has created fragmented elevations dealt with respective situation other than making a biased and preconceived elevation. The house is a successful example of incorporating the traditional elements into the present context.

CASE STUDY VII

Project Data

Project:	Kalindi Apartment Complex
Location:	36A, Indira Road, Dhaka-1215
Architect:	Bashirul Haque
Consultant:	Bashirul Haque and Associates Ltd
Site Area:	4007 m ²
Covered Area:	1669.76 m ²
Total Built Area:	7235m ²
Cost:	5 Crore 25 Lakhs.
Construction Period:	1989-1991



• The Court as Children Play Area

Kalindi Apartment is situated in the midst of a dense residential area. Other than building voluminous high rise apartments, which is a common trend in Dhaka, the one acre site of this project has been designed carefully so that it integrates open spaces

into the built form and thus would create a suitable a congested environment for a healthy living. To avoid the noise and the pollution of the adjacent commercial activities, the apartments are arranged into an introvert manner by creating a series of open courtyards of greenery. The complex consists of three blocks organised around three open courts. It is designed to make available the maximum amount of ground space for the use of the inhabitants. The recreational area has been defined by segregating the vehicular area. The parking area is placed beneath the central block.


The complex accommodates basically three types of apartments which are organised in a symmetrical arrangement, using mirror images.



AXONOMETRIC VIEW

The type A I covers a floor area of about 2367 sq. ft. It contains living, dining, family space and three bedrooms along with the service facilities. The apartment does not have any foyer. One enters directly into the formal living area.



• Plan Type A 

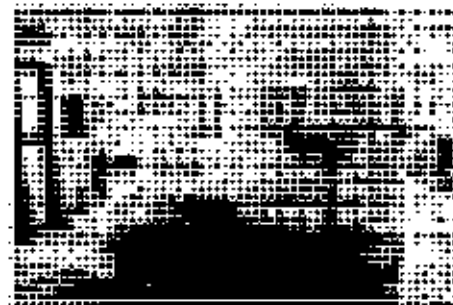


Formal Living

The dining area is carefully segregated from the living by using a wall. The family space which is next to the living is stepped down. These three spaces, although each has its own entity and privacy of each of them is assured, together they form a continuous space. Thus a feeling of oneness is achieved.

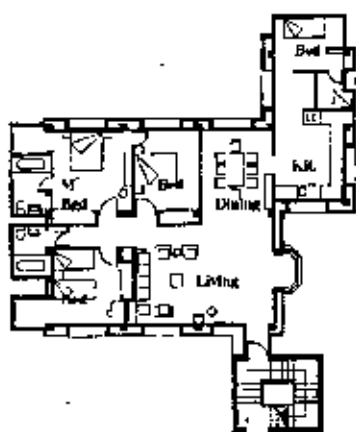


Family Living



- Living, Dining and Family Living -----The Flow of Spaces.

The bed rooms as the most private area are grouped together. The dining space is in close proximity to the kitchen and it can be approached from the private zone. Thus the desired privacy in the internal spaces is not disturbed. Other than providing open verandas, the architect has created a semi-open space with wooden lattice work as a common feature for the complex. It provides the necessary privacy and at the same time minimises sun glare. Without disturbing the airflow, a play of light and shade are created in the veranda. Thus it is possible to use the space for planters or for very basic utility, to dry up clothes which is not visible from the road side. In the A1 type, that space is provided with the living, family living and with the master bed. In its space organisation, this type is harmonious to our lifestyle. The type A2 follows the same arrangement as in A1 except that the area covered by A2 is about 2277 sft. which is slightly less than A1.

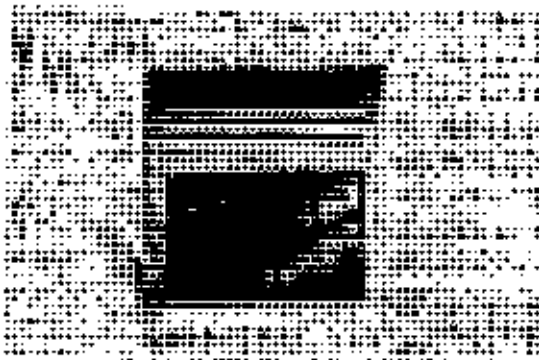


• **Plan Type B** 

The type B covers a floor area of about 1945sft. It contains living area, dining area and three bed rooms with the service facilities. Like the other type, this type does not have any foyer. One enters through a intimate passage into a vast area in which the living and the dining areas are organised in a L-shape arrangement. The bed rooms are grouped together and form the private zone. Despite the fact that the kitchen is in close proximity to the dining area and that the bed rooms form the private zone, but one has to cross the living area to reach the dining from the private zone. And this might result in severe problem regarding privacy in case when there is a visitor in the house. Therefore, to conclude, this type is not very suitable for a person concerned about privacy because of its circulation pattern.



- **Living and Dining as a continuous space.**



Climatic control has been one of the major design criteria in this complex. The volumetric resolution of the complex in the north south orientation has been carefully worked out. This enables a smooth flow of summer breeze through the complex. The

open court serve a dual purpose of providing optimum natural light and air movement to all the apartments. Cavity walls provides the necessary window protection. The use of locally available materials has given the building a distinct architectural expression. The building shows brick works, wood works and exposed concrete, which honestly represent the specific construction elements within the complex.

CASE STUDY VIII

Project Data

Project:	DhanSin Apartment Complex
Location:	35A, Indira Road, Dhaka-1215
Architect:	Bashirul Haque
Consultant:	Bashirul Haque and Associates Ltd
Site Area:	2671.61 m ²
Covered Area:	1460 m ²
Total Built Area:	10,668 m ²
Year of Construction:	1997



• View from Children's play Area at Upper Level

As a luxurious residential complex, Dhan Siri apartment provides a congenial environment to its inhabitants to pursue a cosmopolitan style of living. It is situated on the periphery of a dense residential area at the heart of the city. To avoid the noise from the main street, the building has a set back of approximately 50' away from the main road. And to reduce the visual scale of the complex at the street level, a low height entrance block has been constructed as an intermediate structure between the road

and the main building. The built mass at the top has been broken so that the overall building is not visually overwhelming.

DhanSiri apartment complex offers a wide selection of flats to suite the diverse lifestyles of modern families. It accommodates six types of apartments.



UNIT TYPE A



UNIT TYPE B



UNIT TYPE C

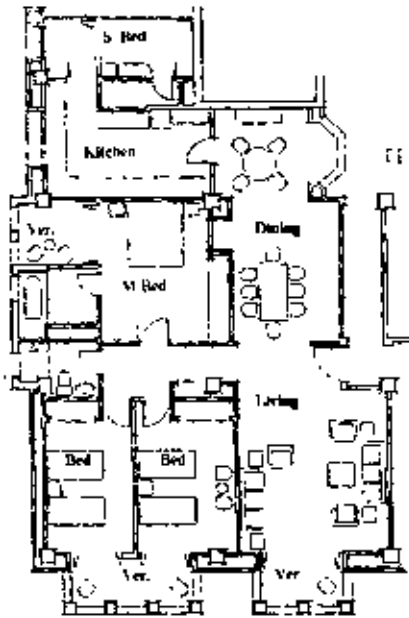


UNIT TYPE D

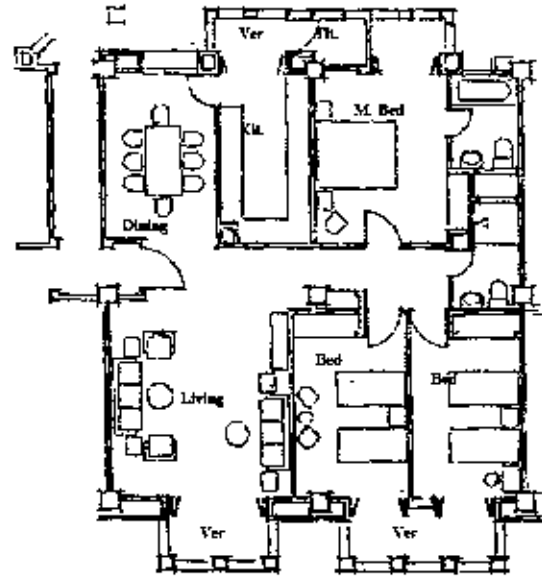


UNIT TYPE E

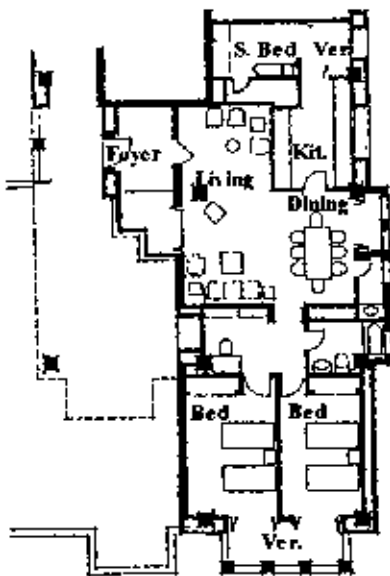
- Unit type A (2323 sft) and type B (1867 sft.) has similar organisation of space. Each accommodates living area, dining area and three bedrooms along with service areas. There is no foyer in these types. The entry door is between the living and dining area. The living and dining together forms a continuous space. The bedrooms, as the most private area, are grouped together. However, the dining or kitchen area do not have a direct relationship with the private area which might disturb the privacy of the inhabitants.



• Unit Type A

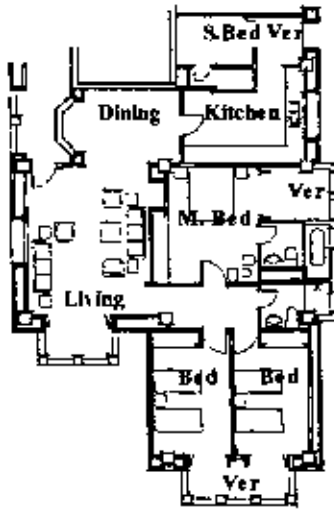


• Unit Type B



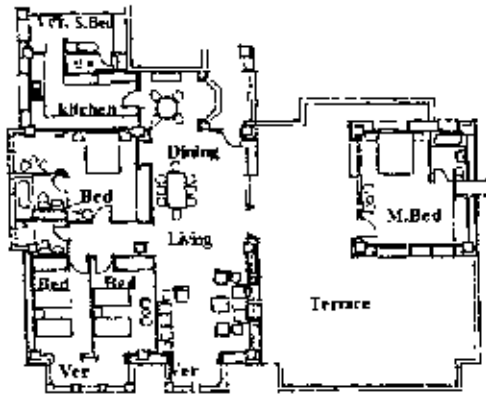
• Unit Type C

- Unit type C (1668 sft) contains living area, dining area, two bed rooms and a study area along with the service areas. Although this type has an entrance foyer, but it is rather transition space from the circulation corridor to the house. It leads to the formal living through which one has to reach the family spaces. The living and dining, like the other types, forms a continuous space. The dining area can be approached without crossing the living area. Absence of attached toilet with the master bed might result in privacy problem.

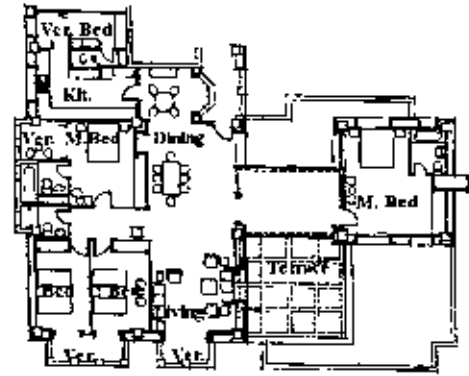


- Unit type D (2207 sft) accommodates living area, dining area and three bed rooms along with the service areas. In this type too, like the other types, bed rooms are grouped together and the living and dining forms a continuous space. However the relationship between these areas is probably the worst. To reach the dining area, the inhabitants must cross circulate the formal living. And this would result into severe disturbance in terms of privacy.

• Unit Type D



• Unit Type E



• Unit Type F

- Unit type E and F probably are the most interesting apartments in the entire complex. They cover the same floor area (2969 sft.) and has similar space organisation. However it is the size of the terraces (525 sft and 1150 sft respectively) that varies. These are the four bed room flats with the living, dining and service areas. The living and dining, like the other types form a continuous space. Privacy has not given enough consideration in these types as the entrance is through the dining area. However, the mastery of the architect to create beautiful spaces subdues these problems. The master bedroom has been detached from the rest of the house and is placed at the side of a huge terrace linked by a covered corridor. At this point, the space can make one forget



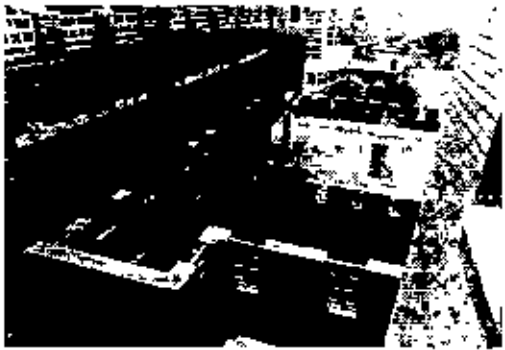
• Terraces of Type E and F



all the complexes of urban life and takes him back to his root. One can feel the grace of nature in his house as it used to be felt in the traditional houses. A kind of feeling that no luxury can provide. And one feels worth buying this open space.



• The Children's Play Area



• View from Unit E towards the Play Area.



• View from the Play Area to the Circulation Corridor

The complex contains certain elements which are repeatedly used in each unit and thereby act as a unifying reference. The architect has hardly put windows in the spaces particularly in the living and family spaces. Rather he has used folding glass doors in each opening which opens into a veranda. Thus a sense of openness to nature is created. Although this apartment is provided with adequate security, still whether the inhabitants can have psychological security and can sleep at the night with the doors open is a point of consideration. There are no grills in the entire complex, neither in the window nor in the verandas. The railing height is approximately 4 ½ feet for the security of the children. Recreational facilities particularly the children's play area have been provided on the open terraces at upper level while the ground level is used for parking. Ample use of verandas and terraces made the internal spaces close to the nature. Although the architect perceived the inhabitants to develop a kind of community feeling among them, however, these verandas and terraces which are visible to each other might not result into a happy situation in terms of the privacy of the users. But, if not much satisfactory in terms of privacy but these spaces

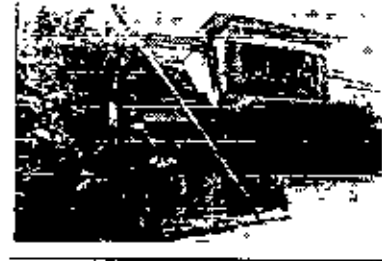
are very much satisfactory in the scarce of open spaces in the present urban context of Dhaka. The design incorporates local condition, primarily climate and building materials. Wind direction and sun movement have been carefully considered within the design for the physical comfort of the inhabitants by means of an atrium and varying the heights of the complex. The atrium provides natural light and ventilation to all the apartments. The ground floor, which has

been kept open for the car parking, pulls air and that moves into different units through the atrium. The use of brick visually blends the complex with the surrounding buildings and thus creates a homogenous urban situation.

CASE STUDY IX

Project Data

Project.	Residence of Mrs. Yasmeen Rahaman
Location.	55, Old D.O.H.S, Dhaka
Architect.	Urtam Kumar Saha
Consultant:	Nandan Architects Ltd.
Site Area	148.42 m ²
Covered Area	91.84m ²
Total Built Area	183.68m ²
Cost	Tk 15 Lakhs
Construction Period:	1993

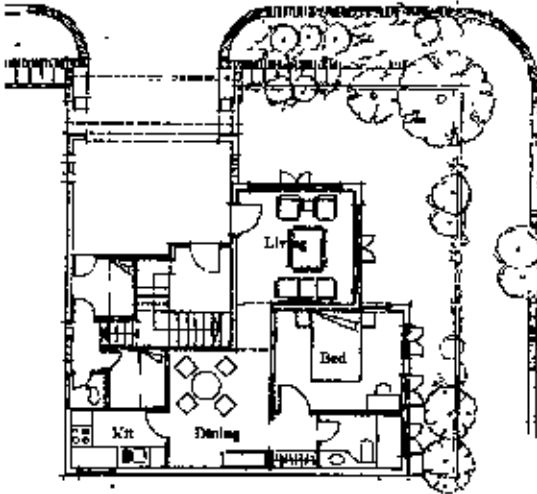


• The Front View

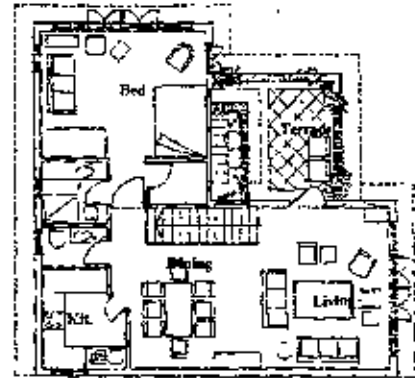


View from the North-East side

This is two storey residence designed for two single families. The upper floor is for the owner and the ground floor is for the tenants. The ground level accommodates a single bed room flat with living, dining and the service facilities. The entrance is through the living room which leads one to the family zone.



• Ground Floor Plan



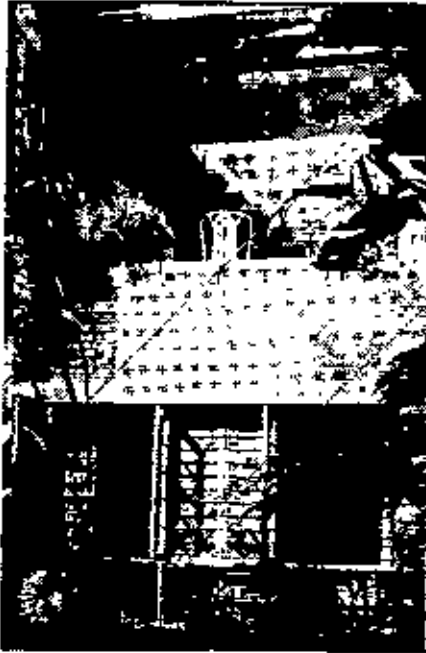
• First Floor Plan



• Stair to the Upper Level.

The hierarchy of spaces is maintained in the organisation. The dining and the bedroom are placed with adequate privacy. The southern part of the house is blocked as the neighbour has violated the building act of necessary set backs and constructed house. The bed and the living room receives adequate natural light and ventilation but the dining area does not have natural light. The upper level has been designed for the use of the owner who is a widow and lives alone. The stair runs from the entrance

lobby at the ground level and directs one to the living cum dining space at the first floor. The bed room and service areas are placed in their respective location with necessary hierarchy.



The interesting part of the house is the large terrace beside the living. This is the point where the architect has blended nature and the built form. The terrace can be approached from the living area only and not visible from any other part of the house. It is partially open to sky through which a straight run stair runs to the roof top. There are no other veranda in the house.



To deal with the climate, the architect has extended the roof in all three sides like a cornice. This protects the wall surface from rain and also provides shading to the windows. Load bearing walls has been used to erect the building. The materials have an honest expression through out the structure. Brick

works are exposed and the openings are spanned by concrete beams. The interplay between the cornice as a horizontal plane and the wooden shutters as the vertical plane gives the building a distinct visual impact. The intimate scale of the building, zoning of different spaces, use of material and response to climate, all reflects the deep concern of the architect to achieve a regional essence in this building.

CASE STUDY X

Project Data

Project:	Deep Shikha,
Location:	413, GulBagh, Dhaka
Architect:	Uttam Kumar Saha
Consultant:	Nandan Architects ltd.
	19, Central Road, Dhaka 1205
Site Area:	183.67 m ²
Covered Area	156.95 m ²
Total Built Area	627.8 m ²
Cost:	Tk 30 Lakhs
Construction Period	1990-1991



This is a project by a non government organisation (NGO) locally known as *Samaj Unnayan Sangstha*. This building presents an interesting example of accommodating function in an extremely tight and linear site of 2.75 katha. Optimum utilisation of space and economy are the main criteria of the design and the building reflects the mastery of the architect in doing so. The building accommodates a school for the children at the first two floors. To generate income for the project, the second and third floor contains four flats which are constructed for rental purpose.

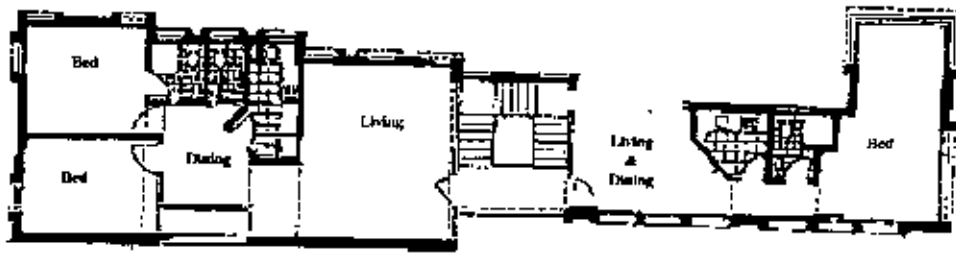
- Front View



- The Entry Lobby .

The architect extended the spaces in the ground level up to the boundary line and used them as part of the children's play area. Actually the boundary wall is heightened up to the third floor. But in plan it extends from the rear side up to the stair. Roof light

has been incorporated even in this tight situation and a touch of nature adds interest to the whole building.

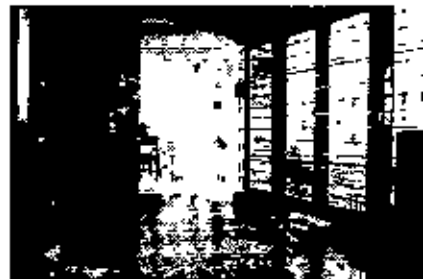


• **Second and Third Floor Plans: The Residential Units**



• **First Floor Plan**

• **Ground Floor Plan**



• **The Interior**

The flats at the second and third floor are of two types. Type one accommodates two bed rooms with living and dining area. The other type is a smaller one Type two experience more light and air than that of type one. Continuous series of windows in north and south allows cross ventilation in this flat and contains a single bed room and a living cum dining area. One toilet and kitchen constitutes the service area in both

units. Even in this very squeezed situation, the privacy of the users are given consideration. The architect has tried to manipulate the macro climate to articulate natural light and ventilation in different spaces. According to the site situation, the south wall would be shared by another building. Therefore, in flat type one, he has invited roof light which continues up to the classroom areas in the first floor.

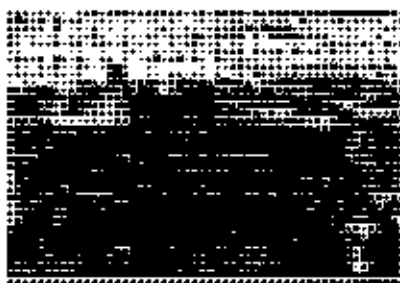
The architect had to make this building low cost to make the project feasible. Load bearing wall construction with ordinary bricks has been used in this building. The facade is of exposed brick works. The brick details at different parts of the building resembles the imagery of the older buildings and makes the building visually interesting.



• The Landing



• Roof Light



• The Surroundings

The grills and the window shutters are of metal. The building is a venture of creating maximum space with minimum cost and in totality an acceptable visual impact makes the project a successful one, a building that conveys its context.

CASE STUDY XI

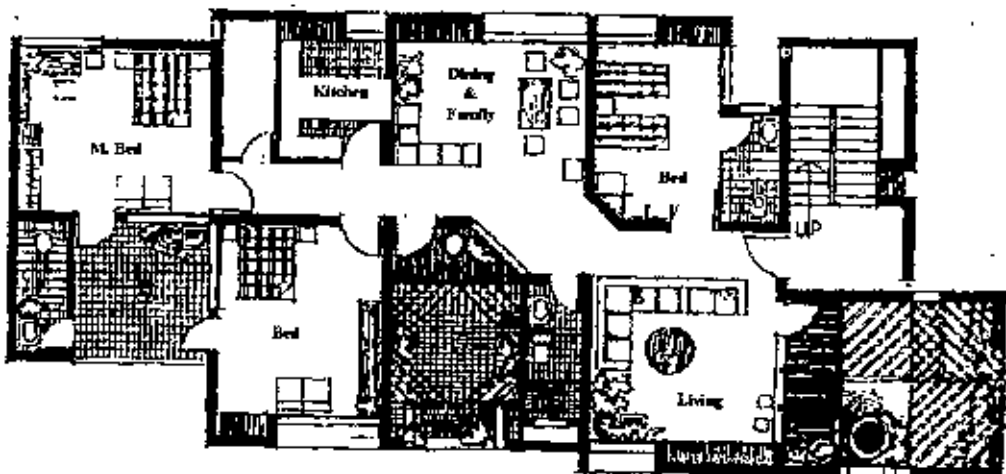
Project Data

Project.	Azam Residence
Owner.	Mrs Azam
Location.	10, Atash Khana Lane
Architect.	Rafiq Azam
Consultant.	Sthapotik
	6, Gulshan Avenue, Gulshan, Dhaka-1212
Site Area.	318.14 m ²
Covered Area	182.56 m ²
Total Built Area	429.4 m ²
Cost	Tk 12 Lakhs.
Construction Period:	1986-1988



This is a renovated residence situated in a typical alley of old Dhaka, within the historical Lalbagh Fort area. The old house was originally an introvert type and of a departing Hindu family, which was handed over to the owner in 1959. The courtyard, as like other such type, was the core of the family activity. As the family expanded, the need to have more rooms resulted

- **View from the Road** in constructing unplanned structures. When the family decided to build a new house and appointed an architect. In 1981, a portion of the ground level was dismantled and construction was initiated but



- **First Floor Plan**



was not continued. Finally, the family restarted the renovation work and decided to live in the upper floor. This time the architect was the son of the family.

The emotion of the family about the court was one of the major concern of the architect while organising the spaces. The successful transformation of the old courtyard in the upper level can be considered as the most significant achievement of

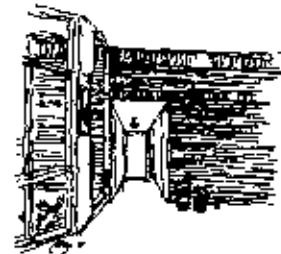


• The Front Lawn

the design. As one enters into the house, there is the formal living area of the house. The front small green lawn, as the extension of the formal living

actually provides the set back from the road to ensure noise protection and visual privacy. The lawn with the drama of light and shades with plants and potteries adds interest to the living room.

The door to the guest bed is from the living area is disturbing in term of its privacy. However, the family zone is distinctly formed with adequate privacy in the house. From the living area, the space flows into the dining area but placed at an angle that adequate privacy is assured. From the dining area, the three bed rooms can be approached through a short corridor.



• The View from Living Space to the Private Areas.

The family zone enjoy another informal enclosed courtyard as an extension of the dining and informal living. The multi purpose court resembling the older one creates a different appeal to the inhabitants. The selection of material like use of exposed bricks, the steps for sitting, the red tile floor, the larger glass panel



• The Private Court on the South

within the wooden frame relates the traditional environment in a modern setting.



- **Southern Court**

western part, the structural system followed frame structure. The rest of the building is constructed on load bearing walls. The architect wanted the building to blend with its surrounding. The building, though a contemporary one, yet forms a harmonised relationship with the dense fabric of old Dhaka

In response to the climate, the house experiences adequate natural light and air flow. The south east air enters through the eastern lawn, southern court and the veranda. The architect has used economic but varied materials. Due to the old structure on the

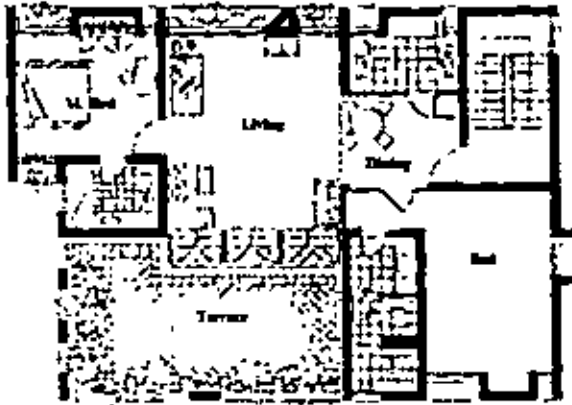
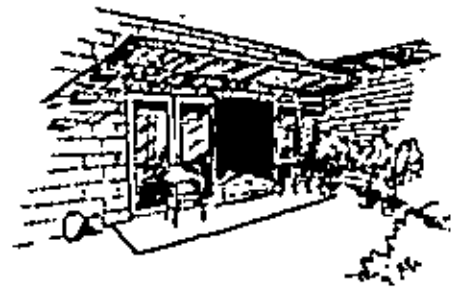


- **The Surroundings**

CASE STUDY XII

Project Data

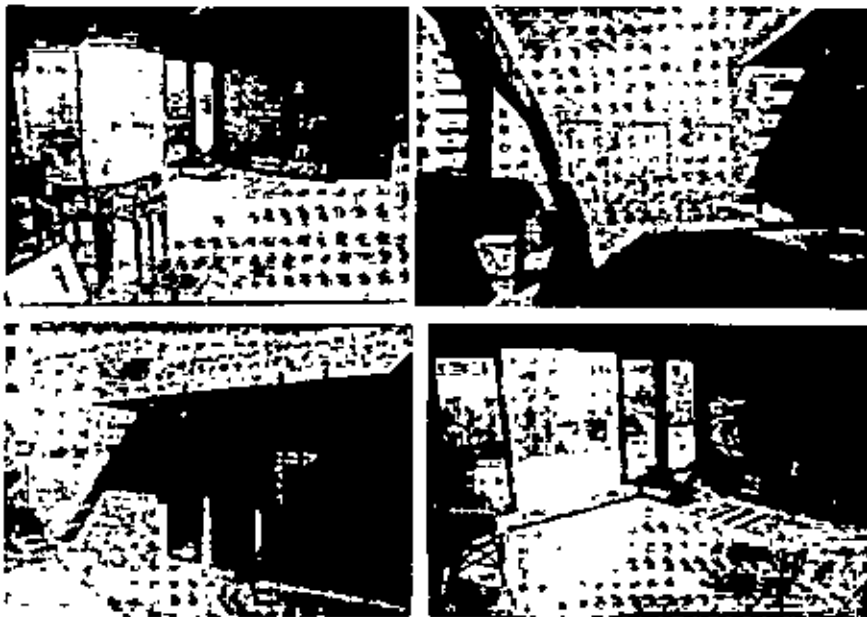
Project:	Architect's Terrace
Location:	19, Central Road, Dhaka
Architect:	Utam Kumar Saha
Consultant:	Nandan Architects Ltd
Cost:	4 Lakhs
Site Area:	667.9 m ²
Covered Area:	148.42 m ²
Construction Period:	1991-92



• Plan: Architects Living Terrace



Architect Utam Kumar Saha's residence is an example of how an architect perceives his place to be, where he creates spaces that is exclusive for his lifestyle and desire. The house is not owned by the architect, he is just a tenant. With the permission from the owner, he has renovated and extended the portion on the top floor where he used to live.



• Relationship between Indoor and Outdoor Spaces

As a renovation project, he had to follow the wall lines of the existing structure, which accommodates living, dining and three bed rooms. Instead the architect decided to have two beds and a large living cum dining area that flows out to the nature outside, in a semi enclosed open to sky terrace. And it is the relationship of the terrace and the

living room, that makes the unit worth praising. The architect in designing his den, is interested in creating space and to incorporate nature in them. And to achieve this, he sacrifices the privacy of the dining or having a separate living room. The terrace is the extension of the living area and it has carefully been detached from the bedroom areas. A semi-open space acts as the transitory space from the enclosed living to the open terrace. The use of brick tiles on the floor, the exposed brick walls, lot of plants and potteries and the straight run open stair to the roof top all accumulates a regional essence in the residence.

7.4 Conclusion

All the above examples from different type of residences in Dhaka city has something similar in them. The structures are designed by different architects, for different clients with varying scale and approach. But there are some inherent resemblance in their internal and external expression which characterises them as bids of the same string. In the next chapter, the similarities between them will be analysed to extract the influence of regional determinants in them.

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Chapter Eight

**SEARCH FOR REGIONAL CONTENTS IN THE CONTEMPORARY
RESIDENCES OF DHAKA CITY**

8.1 Introduction

8.2 The Regional Contents in the Present Context

8.3 Cultural Contents

8.4 Climatic Considerations

**8.5 Response to Local Conditions : Local Material and Technology with
respect to the Socio Economic Context**

8.6 The Substance

8.7 Conclusion

References

8.1 Introduction

This chapter concentrates on extracting the kernel of the regional determinants in the contemporary examples of residences studied from Dhaka city to evaluate how much do these residences comply with these determinants. As discussed earlier, **culture, climate and response to local resources, are the prime variables as the shaper of the built environment according to regional ideology.** These variables represents the context. The relationship between the past, present and future of the built forms can be found through their particular context to which they belong. Culture is not something stagnant and technology progresses day by day. So, subsequent change in the built structures are inevitable. Reference to **Culture, climate and local resources** would be drawn with the traditional structures, the early urban houses and that of the recent ones. This would assess the relationship between them and would identify the change that had taken place due to the change in the context.

8.2. The Regional Contents in the Present Context

As mentioned, the regional determinants identify the particular context of a building. **The context is a mutable variable, something that is transitory and mobile, always on the flux of transformation.** It is the context that reflects our aspiration, visions of the past and comprehension of the future, values for which we survive, for which our life is set.¹ The urban context of which we are only the first or second generation of urbanites, is totally different in relation to the traditional one which has a context of 100 years. The complementary relationship between indoor and outdoor spaces in the traditional houses with the loosely arranged cluster of huts formed an environment that has always encouraged to develop a growing community feeling among the neighbours. On the contrary, demarcation of the site is the first act being taken in the construction of an urban house, urban dwellings present a totally different account in terms of physical as well as cultural idiom. In the densely populated urban scene, people hardly know their neighbours. Economics plays a significant role in the urban context. Different income level generates the respective society and their culture. The smaller plots in dense urban context, the micro climate is seldom effective. At the present context, it is difficult to have the openness, the kind of light and air as found in the traditional houses though the expectations are there in the mind of urban dwellers. The space or the environment to sustain the traditional culture is absent in the urban context. Urban way of life forces people to get transformed, their habits, behaviour, pattern of life, all are subject to change in the metropolis which has

a totally different pulse of time. Thus one accepts a new house in new environment, which is smaller but convenient for his changed life style. But deep down his mind, there exists a longing for being close to nature, the openness and the intimacy he used to enjoy or the relationship he used to have with the others in the traditional houses that he cannot afford in the urban context. Being a part of the global scene, our context at best can accommodate the symbolic and psychological need. 'The only thing we must talk about is the period of the building, the architecture, the space. What quality does it generate to nourish values and fulfil ambitions?'.²

8.2.1 Cultural Contents in the Contemporary Urban Houses

As mentioned earlier, **culture indicates our identity**. Identity can be expressed in architecture in two ways, through spatial organisation and physical expression. Over the centuries, degree of privacy has been one of the key factor governing our life style. House as the most personalised expression, embodies various aspects of human life. Over the years, the social meaning of the related areas of the various activities performed in an urban house has played a very significant role. **The social values as well as the life style of the user have always given an inherent guidance towards organising the different spaces of the house.** Thus, the subtle existence of these values can be felt in the spatial organisation in all types of houses.

Culture is always accommodative of changes. The complexities of urban life has initiated changes in the lifestyle of people and as changes due to culture is the most dominant and traceable part, the house experiences subsequent alteration in its space organisation as well as in physical expression. Analysing how this change in lifestyle is incorporated in the contemporary residences in the light of tradition, it would be possible to find out the cultural contents existing in them. The following discussions would reveal and connect with respect to the tradition, the cultural contents as searched in the organisation of spaces as well as in the physical expression of a building.

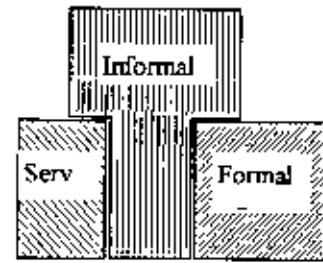
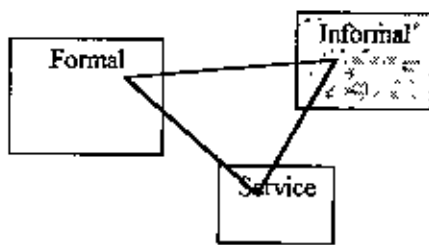
8.2.2 Cultural Contents in the Spatial Organisation and Spaces in a House:

8.2.2.1 Zoning

In chapter 6.3, transformation of urban houses from its rural counterparts has been discussed. The concept of organising spaces into different zones like the **formal, family and service areas** in a contemporary house as described in chapter 6.5, has



remained the same. However, it is the relationship between them that has undergone some alteration.



• **Horizontal Arrangement**

Vertical Arrangement

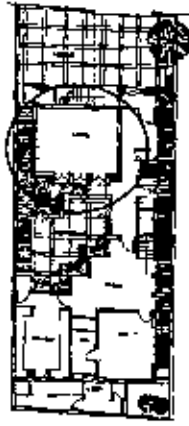
Privacy is in a dilemma in present residences. Now a days, females are equally exposed to the outside world as their male counterparts and socialising is no more a male function. And as such, the idea of strict segregation between male and female domain in the house plan has become loose which was a dominant aspect of space organisation in the traditional houses (as described in chapter 5.5).

The concept of corridor as the circulation space (as described in chapter 6.4), linking different rooms has now become almost absent. **The spatial experience of the studied residences mostly incorporate the concept of free flowing spaces merging the circulation in the process.** The subtleties of the spatial experience is enhanced by the design of spaces to flow from different levels, both horizontally and vertically (introducing double height spaces). This makes the individual spaces more lighted and airy. **The recent trend is to have a single uninterrupted space which provides a wide and spacious feeling.** This in turn has reduced the scope of providing privacy which was achieved in both the traditional houses and urban vernacular through zoning (described in 6.4).

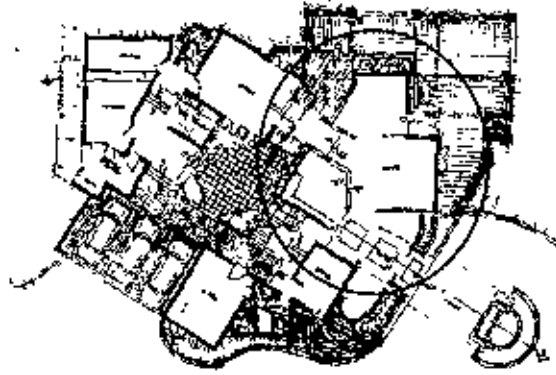
8.2.2.2. Entrance, Living and Dining Group

This living room, which is commonly known as drawing room, was introduced in the urban dwellings to copy the outhouses of rural houses (as mentioned in chapter 5.5 and 6.5). Still, in houses where the owner can afford a family living, a drawing room is exclusive for guest entertainment and not used as the living area. (as seen in case study II, VI, VII). It is kept well decorated, well furnished and used only during guest's visit in a house.

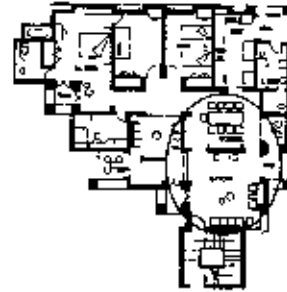




• Case Study II



• Case Study VI



• Case Study VII



• Case Study VI



• Case Study II

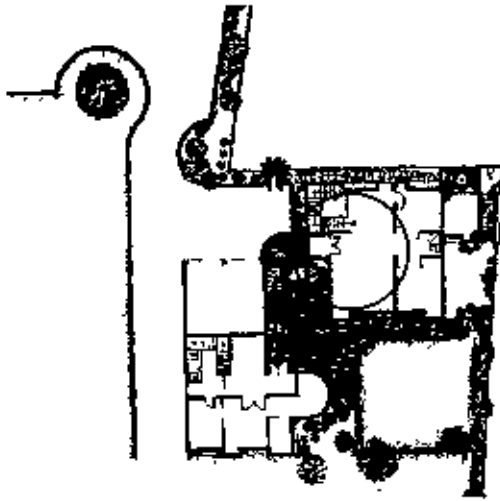


• Case Study VII

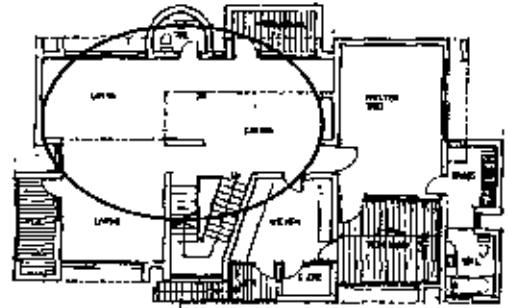


• Case Study VII

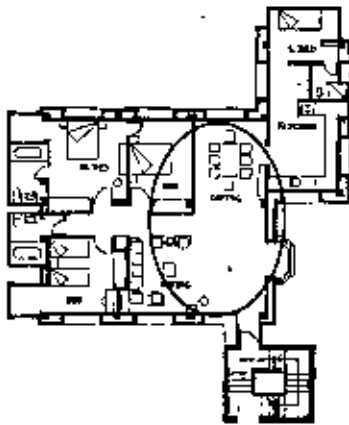
• Fig 8.1. Formal Living Areas as the 'Drawing Room' for Exclusive Use.



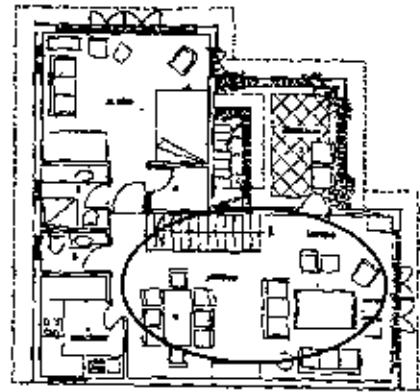
• Case Study I



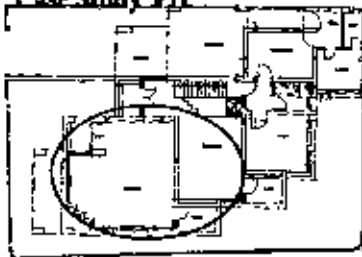
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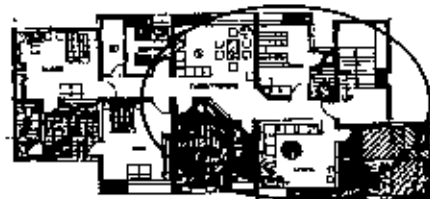
• Case Study VII



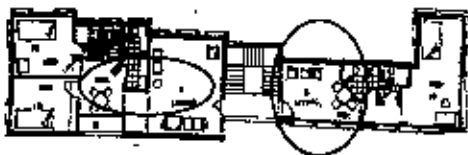
• Case Study IX



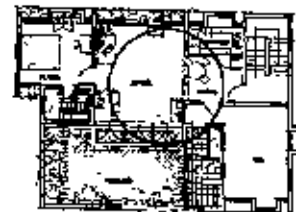
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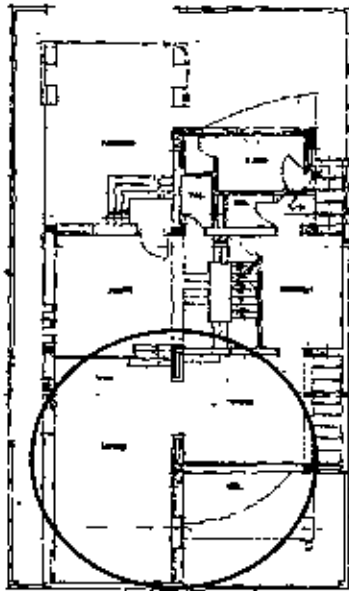
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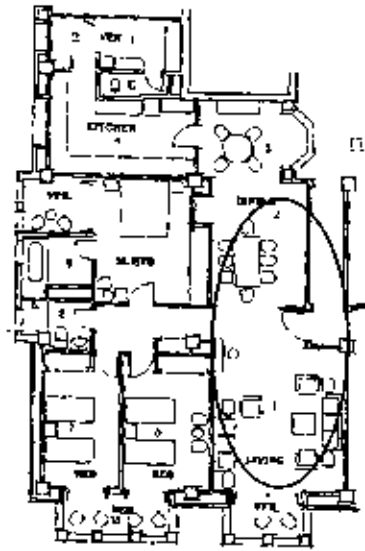
• Case Study X



• Case Study XII



• **Case Study V**



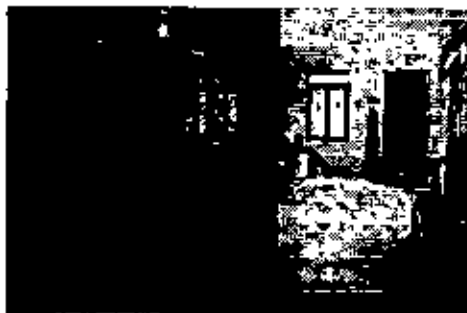
• **Case Study VIII**



• **Case Study XII**



• **Case Study VII**

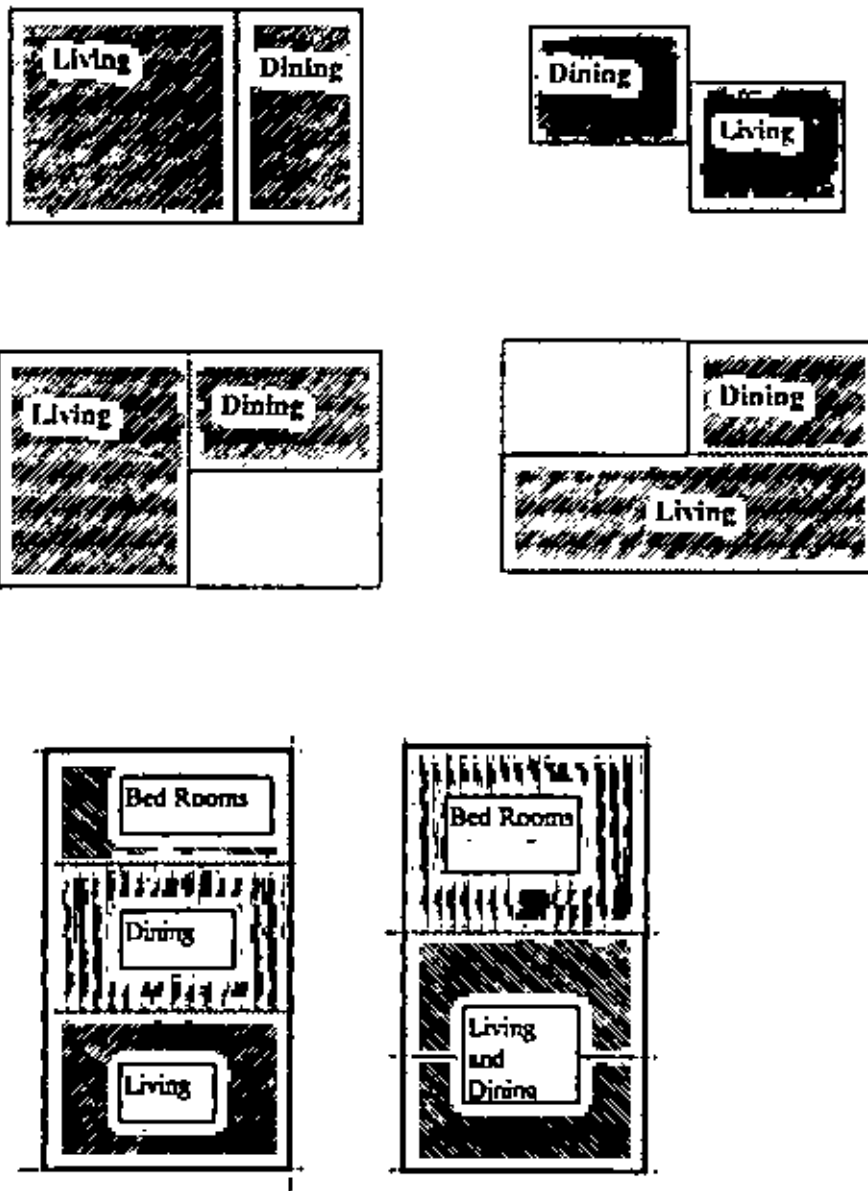


• **Case Study VII**



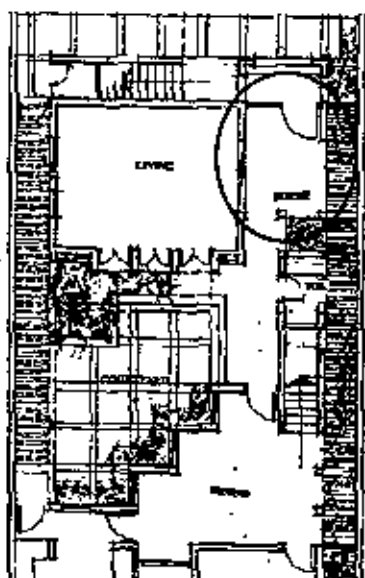
• **Case Study IX**

The significant change related to this space is its relationship with the dining room. The living room though kept highly maintained and used occasionally, is no more an isolated and self confined space, but it is interrelated with the dining area. In most of the instances the dining area is an extension of the living room, even in houses with separate formal living. Together they form a large single space, which is useful during different occasional family gatherings (case study I,III,IV,V,VII,VIII,IX,X,XI,XII).

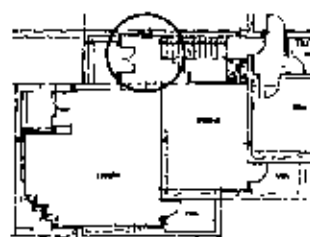


• Fig. 8.2. Living and Dining as a Continuous Space.

In case study II,IV,VII, foyer is used to segregate the circulation. This indicates the intention of guiding the guest towards the formal zone. The guests may be allowed to see the dining area from the living room, but the consciousness of restricting the view from the entry point is there. In most cases, a service entry has been provided.



• Case Study I



• Case Study IV



• Case study VI



• Case Study II

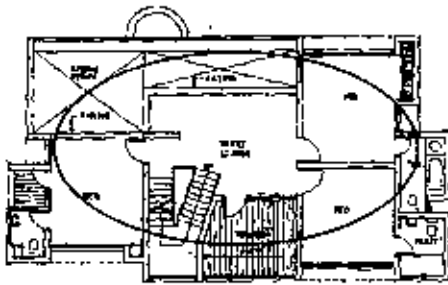


• Case Study IV

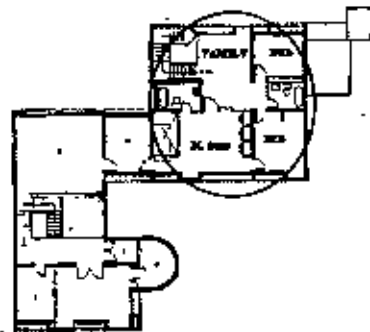
• Fig.8.3. Use of Foyer

8.2.2.3. The Family Living

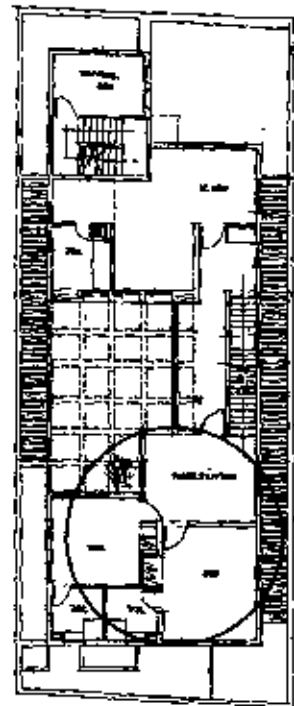
The family spaces have been used commonly in the studied residences. The use of family space has replaced the traditional use of *uthan* or courtyard where most of the family activities used to take place. The family space has now become actual living area for the inhabitants of the house (case study I,II,III,IV,V,VII,VIII). Leisure times are passed in this space by enjoying television, and music, reading newspaper, and so forth. It also serves as the transition space to the bed rooms. It is from this point that the private spaces i.e. the bed rooms are approached.



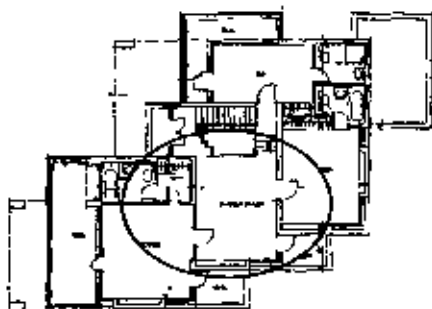
• Case Study III



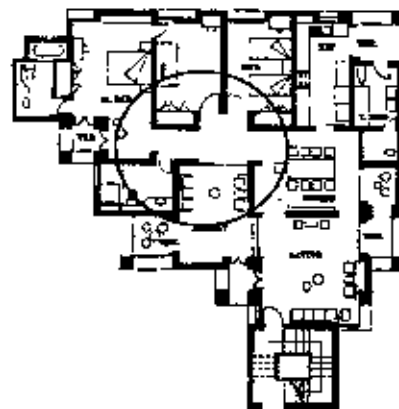
• Case Study I



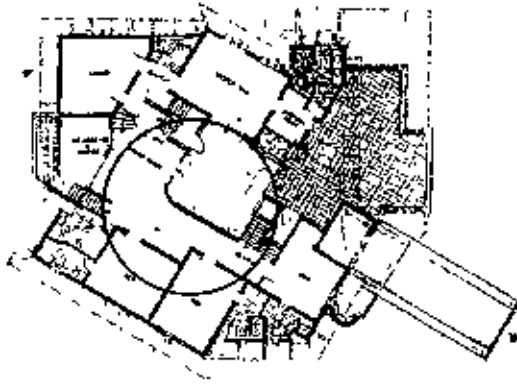
• Case Study II



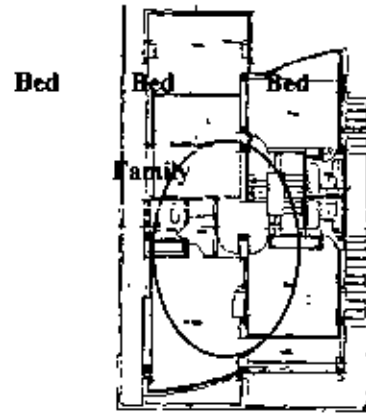
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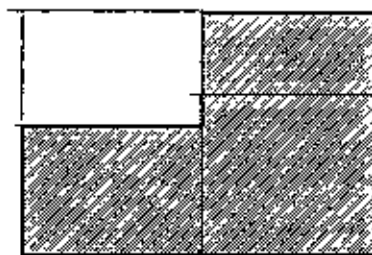
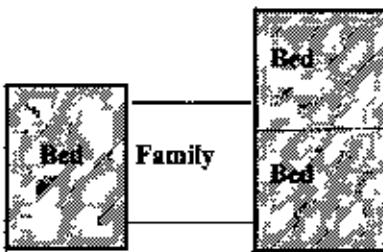
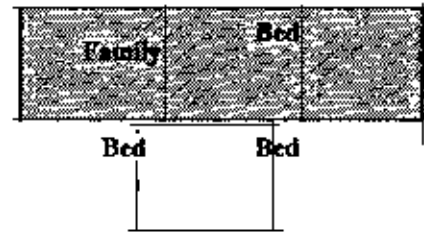
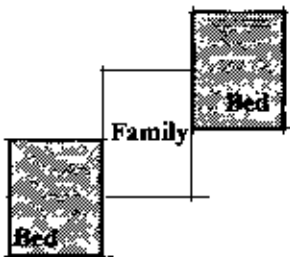
• Case Study VII



• Case Study VI



• Case Study V



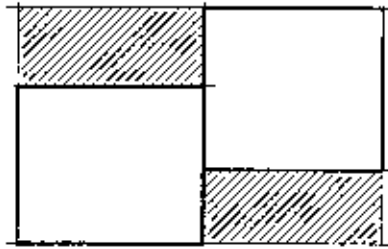
• Fig 8.4: Relationship between Family Space and Bedroom Areas.

8.2.2.4 Bedroom Areas

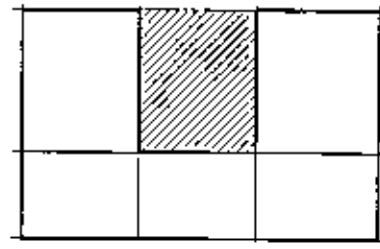
Although the life style of the urban dweller forced them to compromise with the degree of privacy up to a certain limit, however people are uncompromising to their exclusive privacy in the bed rooms which is considered as the most private zone of the house and have necessary control in access. In the duplexes, bed rooms are usually kept at the upper level. It is the family space, if there is any, the bed rooms are most commonly approached. case study I, II, III, IV, VII, VIII. Otherwise, the access to the bed rooms are from the dining space as in case study V, IX, X, XI.

8.2.2.5 The Open and Semi Open Spaces

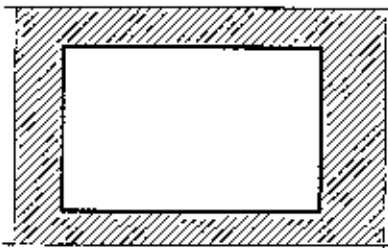
As identified by Khan (1982), the first act to a house is to delineate the un-built part of the house.³ Courtyards, terraces and verandas have long been used in the residences as an integral part. In the dense urban context of the present day, these open/semi open areas act like a breathing space and attempt to incorporate the nature into built forms.



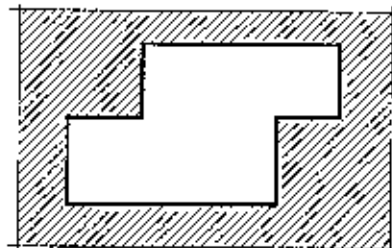
• Case Study I



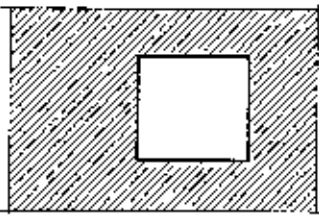
• Case Study II



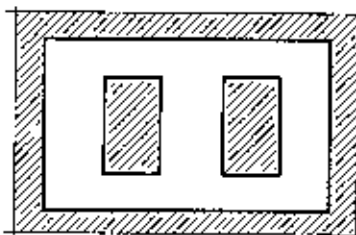
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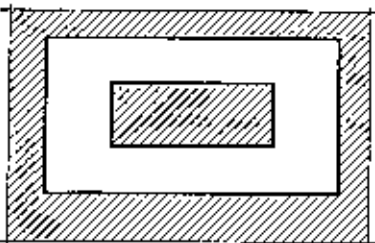
• Case Study IV



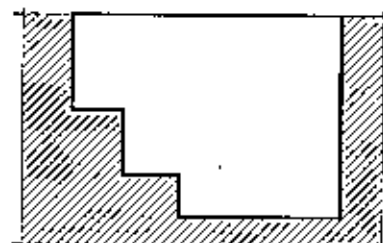
• Case Study VI



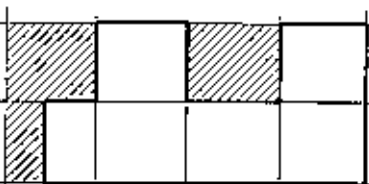
• Case Study VII



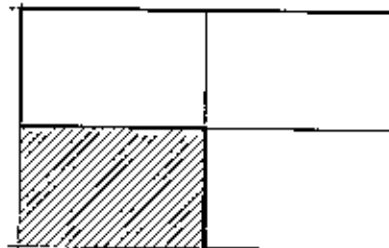
• Case Study VIII



• Case Study IX



• Case Study XI

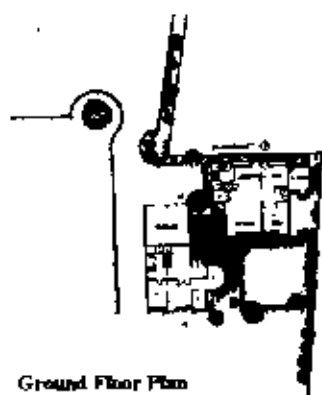


• Case Study XII

Open Spaces in the Case Studies

8.2.2.6 Courtyard

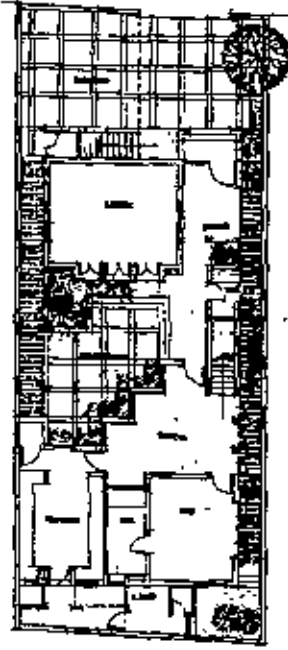
The court can be considered as a constant to determine the quality of built form. In traditional houses, courts are more of social importance than that of the climatic. Other than creating the desired level of privacy for the women, the court is the centre of all activities. The huts are rather incomplete without the court which was the extension of the characteristically inadequate indoor living area. In the mansions, courts were used to secure the privacy of the women and also, it used to serve as an activity area. In the contemporary houses, the concept of court has been transformed in the changed urban context. First of all, due to change in the social structure, the idea of strict segregation between the male and female domain in the space organisation of recent houses are almost absent. Secondly, the present residences have specific space for specific use. Finally, the highly dense urban situation results in scarcity of land with a very high price and most of the buildings rises vertically. Thus culturally, the present houses, are not incomplete without the court. It is rather an additional space from cultural point of view. Space are seldom arranged around the courtyard due to the change in use. Though very few in numbers, there are courtyards in some of the urban houses studied, as in case study I, II VI, VII VIII and IX. The court has become an extension of living areas and can be approached only from them. (Case Study I, Case Study XI) except in case study II and IV, where the spaces are organised around the internal court. Probably the case study II provides the most positive use of court. Other than climatic advantages, the introvert arrangement may result into an environment secluded from the disturbances of the outside which is dense and often chaotic. Perhaps, this is the most logical inference that can be drawn in favour of courtyard as a cultural content. The court is a space that makes one feel the grace of nature. Potteries and plants kept here add life in the concrete. In the scarcity of openness, this provides a kind of relief to the inhabitants.



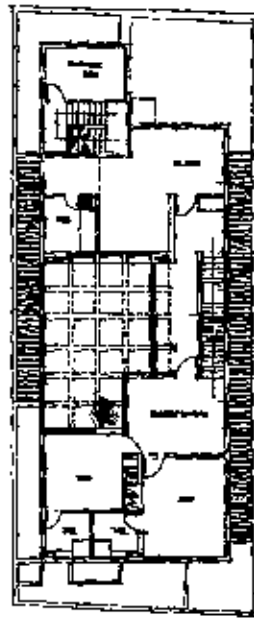
• Case Study I

The Outdoor Lawn Serves as the Extension of the Living Area.





Ground Floor Plan

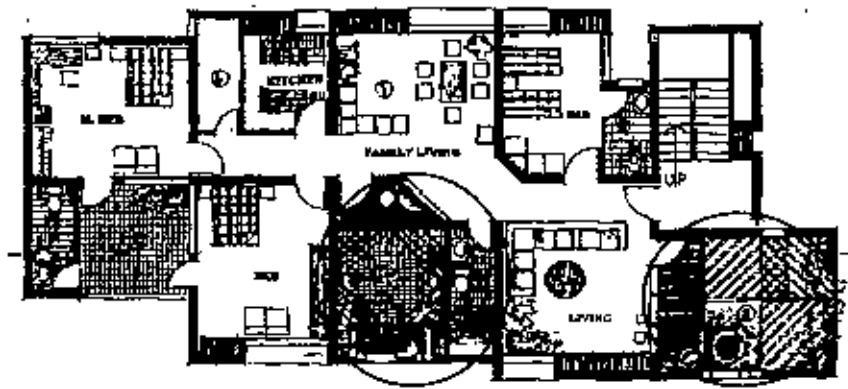


First Floor Plan



The court acts as the unifying element of the different spaces of the house from which the plan generates. Other than being the extension of the formal living, the dining, the family space as well as the master bed are arranged over looking the court. The concrete pergolas over the court with the double height wall at the side create a play of light and shades which is a constant phenomenon of the house. The inward looking house towards the court has provided a touch of nature and created an interesting environment inside. This has given the inhabitants a relief from the dense surroundings.

• **Case Study II**

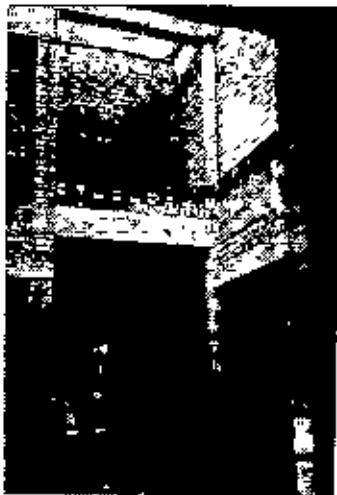
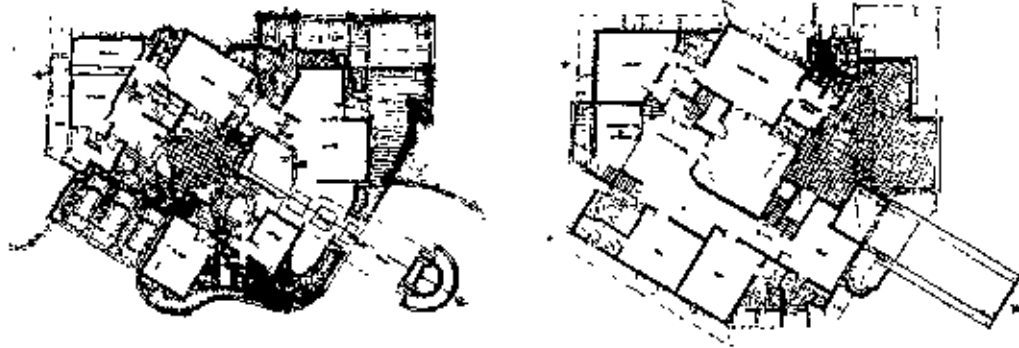


First Floor Plan



Successful transformation of court at the upper level. The front small green lawn serves as the extension of the living room. The multipurpose informal court from the dining area resembles the old court and relates the traditional environment in a modern setting.

• Case Study XI



- **Case Study VI**

The court in this house is an attempt to merge the indoor and outdoor areas. It is the extension of the formal living as well as the dining areas. At the upper level, the master bed and the family space can enjoy the court.

- **Fig 8.5 Court and the Different Parts of the House**

8.2.2.7. Verandas and Terraces

The verandas are used around the courtyards and they are transitory spaces in the traditional houses. Except the case study II, where verandas serve as a transition space from enclosed to open areas, in multi storied recent houses, verandas are only the spaces where the dweller can take relief, outside the boundaries of brick wall. Open to sky terraces are still used widely, particularly on the top floors as for example, in case study II, IV, VI, VII, IX.



- **Case Study II**



• Case Study VI



• Case Study VIII



• Case Study IV



• Case Study IX

• Fig.8 6. The Verandas and Terraces as the Most Preferred and Common Components.

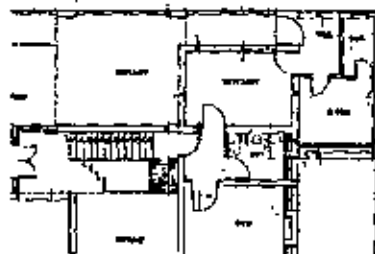
8.2.2.8. Service Areas

Kitchen and Services

The urban people have undergone drastic change in their lifestyle and that the improved domestic technology has given the house a new appearance. Yet the eating habits being the last stand of an authentic culture, the kitchen has remained as the least effected area in the house. In most of the case studies, a separate kitchen veranda or yard has been provided. It is always preferable to have a service entry to the kitchen. This is present in all the duplexes studied. However, in the flat types, the service entry is not very common, as they were in government housing projects as mentioned in chapter 6. The kitchen with its veranda and servants accommodation with attached toilet forms a separate area namely the service zone are common in most cases. Usually they are grouped together and located at the most negative areas in the site.



• Case Study II



• Case Study IV



• Case Study I

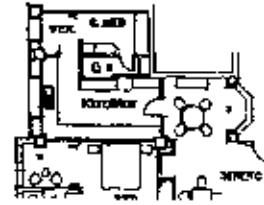




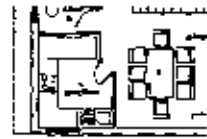
• Case Study VIII



• Case Study VII



• Case Study VIII



• Case Study IX



• Case Study XI



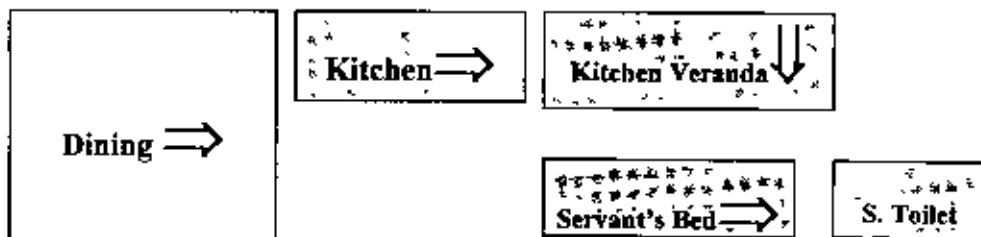
• Case Study VI



• Case Study V



• Case Study III



• Fig.8.7.The Sequence of Service Zone.

Toilets

This function has undergone drastic changes. In traditional way of living we were accustomed with common toilets away from the living area. In many instances, there were service courts to accommodate toilets and wells. Due to improved domestic technology, now the urbanites prefer toilets to be adjacent to their bedrooms and to be exclusive. Most of the recent houses accommodate toilet with each bedroom and an extra one is provided as the common and basically kept for the outsiders. The toilet fixtures in all the cases are positioned in north south direction which reflects the religious concern of the inhabitants to respect the direction of Qibla.

8.2.3. Cultural Contents in the Physical Expression of the Contemporary House

The appearance of an urban dwelling, for obvious reasons is different from the rural houses. Initially, the urban houses corresponded to their rural counterpart in their organisation of space. Later, the urban house experienced transformation with change of context and became distinctly different from the indigenous type. But in physical expression, being a permanent structure in different context, the urban house was always different. The process of urbanisation basically started in the colonial period as discussed in 6.2.3. The British, particularly in Bengal, blended the existing architecture with the imported European building techniques, elements and design. Response to the climate gradually led to a hybrid style using local elements like overhanging eaves, wooden lattices, verandas etc.(see section 4.2). Of the two basic types of houses in the colonial period, the bungalows had rather a simple appearance in comparison to the highly ornamented mansions of the local elite. Later in post colonial phase, the bungalows became more popular. In the 1960s, the international style and later on the facets of modernism evoked for lack of ornamentation and simple rectilinear forms. This inspired the architects to create a totally different attitude in shaping the physical expression of the house. Till now, the appearance of the urban houses speaks for modernism. But as specified in chapter two, there is no conflict between the idea of regional architecture and the principles of modernism. Being a very much modern house, it is possible to incorporate the regional contents in them. As a matter of fact, all regional buildings may be modern but all modern buildings may not be regional.



- The Indigenous Type
- Mansion
- The Bungalow

• Fig 8.8 The Physical Expression of the Traditional as well as the Early Urban Houses.

The case studies, each house appears to be in concord with modernism. The exteriors, in most of the cases are enveloped with exposed bricks. Brick is considered as a logically justified material in the context of Bangladesh. Use of exposed bricks in intimate scale, provide a sense of belonging. But, whether the exposed brick wall is the only answer to become regional is a point to ponder. Historically, though the structures were of bricks, they were not always exposed. Rather, the exposed brick walls are more representative of modernism as being the honest expression of the structural system. Actually, brick is regional in that it is the gift of our soil as the most readily available material and when exposed, the structural expression makes it modern. Thus a brick building, may satisfy the idea of modern as well as regional architecture. It is the designer's freedom in which way he wants to perceive his building. Whatever the physical expression the contemporary buildings has, it is the outcome of climatic and technological factors expressed in modern vocabularies. Traditional imageries like pitched roof, use of cornice etc. are easily acceptable to the people as a very known element of the region. But this does not imply that they do not accept buildings without the visual imageries and that buildings without the traditional imageries are not regional.



- Case Study II
- Case Study III
- Case Study V



• Case Study VI



• Case Study IX



• Case Study IV



• Case Study VII



• Case Study X



• Case Study XI

• Fig.8.9 Physical Expression of the Studied Contemporary Residences.

8.3. Climatic Considerations in the Contemporary Urban Houses

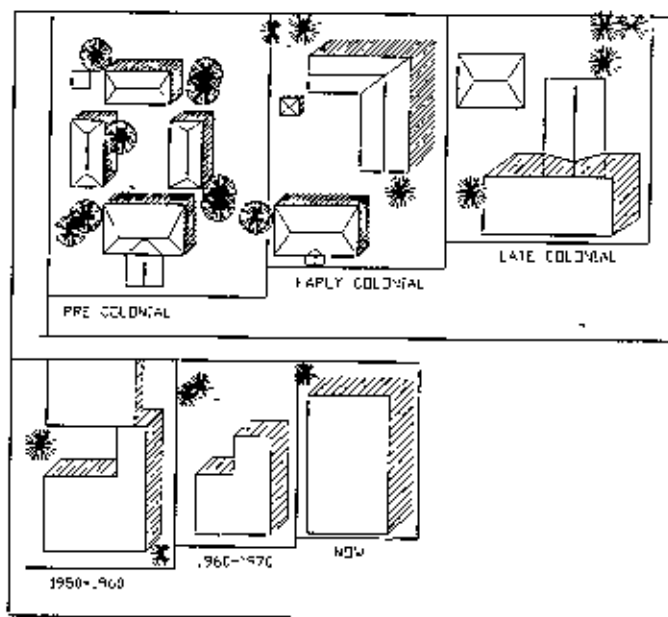
Climate is the agent by which human life is objectivised, and it is here that man comprehends himself; there is self discovery in climate. We find ourselves in a concrete climatic and geographic envelope and nature-climate forms an important component of culture.³ Climate though not the main but has been an important determinant in the creation of houses since ever. Along with the life style and privacy of the users, the different spaces in the house are organised in consideration with the climatic context of a particular site.

8.3.1 Site Planning and Zoning

In Bangladesh, wind flows from the south east and south in summer. The north presents light that is free of glare. The west is the most harsh part in climatic context.

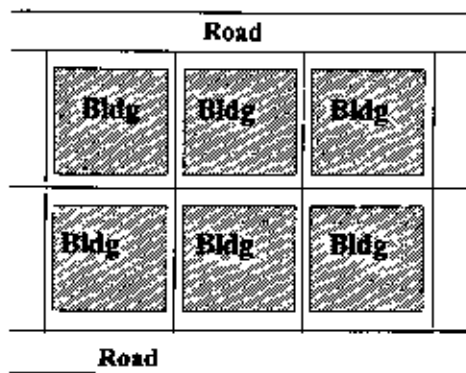
The south and eastern side of a house are considered as the most desired part and bed rooms are preferably placed on these side. Placing a building in the north-south orientation, is one of the best way to incorporate cross ventilation and other climatic advantages.

Traditional houses, in climatic respect, were not much well designed as the axial relationship between the single loaded huts around a court put some huts in the east-west orientation (as described in 5.5). Rather, the bungalows (discussed in chapter 6), were better designed in that they were single loaded and oriented in the north-south, thus provided with ample light and ventilation. Even the bungalows in the post British period and the earlier residences of Dhaka including government quarters were climatically sound.



• Fig.8.10. Development of House Form in relation to the Site.

It appears that the larger plot size allowed the spaces of these houses to be planned in harmony with climate. As the size and shape of the plots in Dhaka city have now become smaller, the traditional determinants of site planning do not work here (Fig 8.10). The traditional spaces were horizontally spread and the earlier houses were mostly two storied structures (see references in chapter five and six). Privacy from the neighbours were ensured in them. The high density of Dhaka city, has caused the present buildings to become vertical. The negligible gaps between the buildings hinders the airflow as well hampers the privacy of the inhabitants.



• Fig.8.11. The Contemporary Structures in a Dense Context.

In the contemporary urban context, in the smaller plots in a very dense fabric, the impact of micro climate is not experienced in most of the cases. It is the macro climate that decides many aspects of the built form .

In the present context, to make the rooms cross ventilated has become difficult. The single room depth suitable for cross ventilation can hardly be found in the dense situation. Only a few courtyard houses have one or two rooms with cross ventilation as case study II and VI. The inadequate distance between two buildings eliminates the advantages of south. In most of the cases, the rooms have openings on two sides, on either south, east or north.



To treat the west, light is usually invited either in indirect ways or using deep cantilevers. In case study VII, deep terraces and verandas provided the necessary protection to the west and at the same time made the physical front inviting.

8.3.2 Climate and Comfort

Type of material, wall thickness, room height, size of openings all work as pertinent means to moderate climate. As mentioned in section 5.6, the indigenous huts are constructed with adequate concerns to protect them climatically. The low height of the structures, projected roof overhangs and the availability of abundant vegetation for shading considerably reduce the adverse effect of the sun and rain. Moreover, the selection of material (e.g. cool mud walls or porous reed walls and the thatch roof with insulating capacity) creates an excellent thermal environment. In the early urban vernacular houses (discussed in section. 6.2.2), bricks were used as the principal

building material in the permanent structures. The walls used to have a thickness of about 15" to 20" The room height was comparatively much higher than present day, their room size were also much bigger than that of today. The walls were more perforated with openings from the skirting to the lintel level. All these together created a comfortable thermal condition in the interiors of those houses. The contemporary houses basically follow two types of construction system: the load bearing wall construction and the frame structure. The former is common in many of the case studies in which the 10" thick brick walls are used to support the structure. The other is usually adopted in structures more than five storey. The room sizes has been much reduced. The floor height proportioned to the room size is 10' in most of the cases. The openings are different to that of the earlier houses and the walls are not as perforated as those of the older one's. Thus, the contemporary structures in general, lack the thermal comfort that the older houses used to possess.

Although, the present houses are designed to be naturally ventilated, however, dependency on mechanical devices is a subject of the affordability of the users. However there are attempts to provide a better environment to some extent. As for example, in case study II and IV, hollow bricks are used on the roof top to reduce the heat transfer as an excellent insulating material. In case study VI, cavity walls are used which is highly appropriate to provide thermal comfort.

8.3.3 Shading Devices



• Fig.8.12. The Openings in the Early Urban Houses.



• Fig.8.13 Opening in Traditional and Early Urban House

Shading in the single storied traditional houses were served by the roof, which was extended to provide the necessary protection to the openings. In some cases, particularly in thatch houses, a small part of the mat wall was cut and pivoted to form the shading device. This represents one of the very common imagery of the rural vernacular. In the earlier urban houses, cornice is identified as the most common element to protect the openings from sun and rain (see in chapter six). A continuous cornice in the roof level at the end of the parapet used to protect the walls and the openings. The verandas also served to shelter the openings as a transitory space between the inside and outside particularly in the bungalows. The windows of early houses did not have any additional protection and probably wall thickness and the cornice were considered sufficient to protect the rain and sun.



• Fig.8.14. Openings in the Studied Residences.

In contemporary structures, the semblance of shading devices has changed a lot. In most of the cases, to create the necessary depth for the window protection, walls are folded inside (case study I, III, V, VII, XI, XII) or are extended outside like vertical louvers (case study X). In some cases, extended sunshades are used at the lintel level. As for example, in case study II, the shading device made of metal truss and fibre

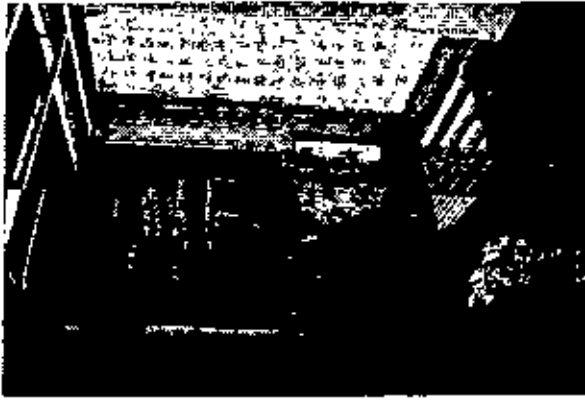
glass resembles that of rural vernacular. However, in case study IV and IX, cornice has been used like that of the earlier houses but in a different expression.



• Fig 8.15. Use of Cornice as an Element of Climatic Protection.

8.3.4 Use of Court

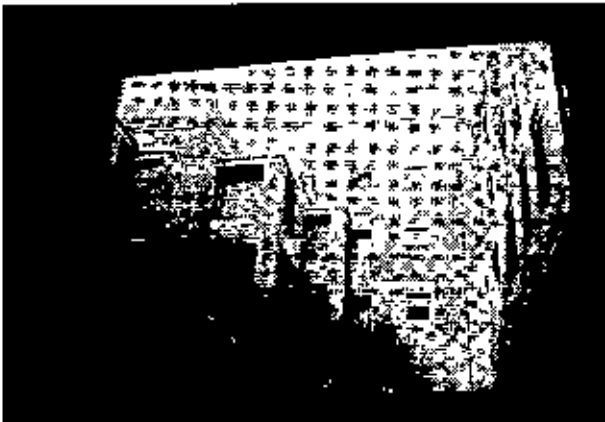
In the traditional house, courtyards were more important in their social use other than for climatic issues. The huts are individually well designed to deal with climatic aspects. However, in warm humid climate like Bangladesh, the court often results in severe disturbances particularly in the rainy seasons. Moreover, the organisation pattern of the huts around the court forces some huts to be oriented in east-west direction. In recent houses, the idea of using courtyards are reversed to that of the traditional setting. Courts, if possible to provide, is a good solution to climatic problems, specially in dense urban areas. In those situation, it is an open space where light and air can play and support the built areas. A courtyard house allows the rooms to be of single depth and hence, encourages cross ventilation which is difficult to achieve in the dense urban situation.



• Case Study VI



• Case Study II



• Case Study VII



• Case Study VIII

• Fig.8.16 Use of Court as an Element of Climatic Advantage

Courtyards can be used as one of the best ways to manipulate the macro climate. Case study I, II, IV, XI and XII, courts and terraces have been used positively as the modifier of climate. In case of apartments, the ground floor is now kept free to accommodate parking facilities. This is also helpful to invite air flow by tunnelling effect. As for example, in case study V and VI, the free spaces in the ground level forces air to flow underneath and then to be

distributed through the court in different units. Besides, the court keeps them better ventilated.

8.3.5 Roof Line

As the roofing materials in traditional houses were not capable to sustain the water for a long span of time, quick drainage was the only solution to the problem. Pitch of the roof was mandatory in rural houses to expedite the disposal of rain water. It had a very important visual effect as it breaks the sharp edge of the structures and made the structure blend with surrounding vast open agricultural spaces. Pitch roofs were so frequent in our built context, it has become the imagery of house and a part of our building tradition (mentioned in 5.2). However, use of pitch roof is almost absent in recent buildings as today, the drainage of rain water has other solutions. Roofing materials are less vulnerable to water with the introduction of concrete and drainage can be provided with mild slope. However, pitch roof are used just as a visual imagery in some cases .

8.3.6 Natural Light

Light, though being universal yet it is the kind of light that always varies from place to place. And it is the tropical climate, that encourages the buildings of the region to invite ample light and ventilation in contrast to the cold climate areas. The climatic context of the region presents bright sunlight as a gift of nature. Almost all parts of all the case studies have adequate natural light. The play of light and shades continuously changing with the sun can create certain excitement in the house. Use of light as a design element has only been carried out successfully in case study II and some attempts are seen in case study X.



• Fig.8.17. Case Study II—A Play of Light and Shades



8.3.7 Vegetation

The traditional houses are never complete as individual structures. Rather they are always seen in harmony with nature. As described in chapter 5, land, trees and water form the essence of rural house as the abstract determinants. In the earlier houses, plot size being larger and the city being much less dense, trees were in abundance everywhere. The lush green not only pacified the eyes, but also they used to keep the environment cool. However, it is not present in the In the highly dense urban context of present Dhaka as it used to be in earlier houses. However, in the studied residences, attempts are there to provide the touch of green with plantations. As grass is difficult to maintain, the courts in case study II and VI, are made paved. However, the use of plantation has made the environment more soothing. The case study I provides an excellent example of incorporating green into the built form.



• Case Study II



• Case Study I

• Fig 8.18. Incorporating Plantation in Urban Houses

8.4 Response To Local Conditions: The Local Material and Technology with respect to the Socio-Economic Context.

In their continuous search for creating an architecture suitable to the socio-economic condition of a country, the designers of the studied residences have responded sensitively to the local condition. As such they adopted local crafts and technology to derive a local vocabulary. Use of available building materials and indigenous construction techniques has been used by the vernacular builders to resolve the problem of enclosing a space. The architecture of this region is characterised with brick as the locally available principal building materials for permanent construction. In comparison to the developed world, Bangladesh is lagging far behind technologically. Technological factors have tremendous impact on the culture and thus indirectly brought changes to the living pattern as well as to the dwellings.

8.4.1. Use of Materials

From very ancient times, the rich alluvium deposited by the rivers has logically encouraged brick as the predominant building material, adorned with intricate terracotta art on the surface. As a permanent material, brick started to be used since the time of earlier urban houses up to the present time. Brick walls are used both as structural members in load bearing construction system and also as partitions between different spaces. Cheap labour is one of the major reasons that we can afford this type of construction. Among the examples studied, bricks are used both as structural and partition element. Besides, concrete lintel and floors, wood for shutters have been used.

At present, different types of finish materials like ceramic tiles, glazed tiles etc. are locally manufactured. Aluminium doors and window frames along with hollow metal sections, special types of glass, imported expensive finish materials like marbles, floor and wall tile etc. are now available in the local market. However, none of the case studies resulted into bizarre or lavish expression. The architects were cost conscious as well as very much region sensitive in the selection of materials using brick as the principal material. Brick tiles have been used as floor finish (case study I, II, XII) and hollow bricks as roofing material (case study II, VI). All of them speaks for the region.

8.4.2. Technology and Spatial Organisation

The supply of electricity, gas and water and sewerage system have a profound influence on the urban life style. Accordingly, present residences have undergone changes to adopt the facilities. It has become possible to bring the detached structures of traditional houses under a single roof and accommodate them in urban plots. Gas supply has changed the concept of kitchen where smoke was a major consideration and was kept at a distance. Now, it is a room for itself besides the dining area as no longer the problem of smoke generation persists. The water supply and sewerage system has allowed to keep toilets adjacent to bedrooms, which were kept at a safe distance in traditional houses to avoid odour. Technology has provided the opportunity for better management of service areas of contemporary urban house and thus it has changed the concept of spatial organisation.

8.4.3. Technology and Built Form

Contemporary residences are more than one storey in contrast to traditional houses. The early urban house since the eighteenth century were mostly two storied. Availability of land allowed to enjoy the open spaces in and around the building. But, scarcity of land and the technological advancement together forced to construct multi storied buildings in Dhaka. Two types of structural systems are presently being used. They are load bearing wall type and post and lintel construction. Usually, load bearing wall system allows up to five storey depending on the soil condition and most of the case studies follow this type. Frame structures are suitable for above five stories. In the case studies, example V and VI have adopted frame structures. In some cases, mixed structures are also seen. case study IV, XI. So, the urban grain is far different in present context and technology has changed the volume and accordingly the shape of recent residences.

8.5 The Substances

Based on the above discussions made on the basis of cultural, climatic and responses to local conditions, it is now possible to identify the regional contents present in the contemporary studied urban houses in the changed context.

8.5.1. Cultural Contents:

The culture in which, the traditional houses were erected has passed through the path of time. Not being a static phenomenon, culture continuously accommodates changes with respect to the socio-economic context. With the advent of modern technology, the way of life changes and as a result, culture is always taking newer shape and meaning. In the changed context, in our day to day life, a new urban culture has gradually emerged. The studied contemporary residences, being adaptive of this urban culture incorporates the complexities of our life style. And this finds expression in the spatial organisation and physical appearance.

- The concept of privacy has changed but not disappeared. The traditional concept of male and female domain has become almost obsolete. Urban people are now more interested in having a sense of privacy than physical privacy. The spaces are still organised into three zones but the relationship of spaces have changed. The experience of single uninterrupted space which provides a wide and spacious feeling is preferred. Thus living and dining areas are often treated as a continuous space. The bed rooms—as the most private area of the house, are approached

from the family spaces or, in its absence, from the dining. The improved domestic technology has increased the efficiency of the service areas.

- In the rural vernacular, the indoor living space is inadequate and incomplete without the court and it is the extension of the living as well as activity space. In the urban context, from cultural point of view, the court is an additional space to the living areas, which is more of a breathing space than an activity space. Still the courts, if adopted may create an introvert environment. This can provide the inhabitants a relief from the dense surroundings. Thus, court along with the semi-open spaces like terraces, verandas, act as an excellent psychological support to the users which adds nature to the concrete.
- The traditional imagery, though reflective of the tradition, yet is not commonly used in the physical expression of the studied residences. Visually, the recent residences rather present a modern vocabulary. Use of exposed brick in intimate scale in many of the houses gives a sense of belonging. At the same time, the exposed bricks speak for the honesty in the expression of material used which is an important facet of modern architecture. Thus, brick satisfies both the idea of modern as well as regional architecture.

8.5.2. Climatic Contents

- Light and air, as the basic element of the climate, remain basically uncompromised. However, the concept of climatic zones does not work practically in the dense urban context. Hence, manipulation of the macro climate has been emphasised.
- Unlike the spaces of the rural or early urban houses, the spaces of the contemporary houses lack thermal comfort and dependency to the mechanical devices is common even though buildings are designed to be naturally ventilated.
- Court serves an excellent modifier of climate in the urban context. Unlike the traditional court, which is not suitable to our climate but has more of societal importance, in urban context the situation is more or less opposite. The court encourages the rooms to be of single depth and allows cross ventilation. It acts like a chimney to the house as it drives the hot air up and helps in air replacement.

- In the dense urban situation, air flow is often obstructed, but we have ample light as a gift of nature. There are instances that light if used as a design element, it can make the house mysterious and interesting. Use of plants adds the touch of green soothes and makes the environment pleasant.

8.5.3. Available Materials and Technology

- The studied examples have a positive response to the local resources. In most of the houses, bricks are used both as structural and partition member, concrete as the lintel, floor and roofing material and wood as the window shutters. Together these materials provides a sense of belonging. For houses more than five storey, frame structures are suitably used. Though there are various expensive imported materials available in the market, they are very sensitively and selectively used and never dominates the local materials. Technologically the country is far behind the western world. The local technology with cheap labour is affordable in the socio-economic context and hence, is carried out intensely.

8.6 Conclusion

The case studies are analysed in this chapter with reference to the determinants of regional architecture. The issue is a subjective one and the result of the analysis is abstract in nature. However, a close observation and comparison found that twelve different houses have common aspects which is the outcome of regional influences. The binding similarities in the houses are compiled as substances. In the next chapter discussions will be made in the light of the substances to conclude the study

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- **Sources of Illustrations**

- 8.10. Drawn after Mallick, 1994.

Chapter Nine

CONCLUSION

9.0 Conclusion

Residences accommodate simple functions but involves a design process that is very intricate. It has to reflect the owner's way of life, behaviour pattern, taste etc. i.e. the constituents of the culture which has a very profound influence in a residence. House being the most personalised institution, the emotional involvement of the inhabitants play a very important role. In the process of designing a house, other than providing the shelter, in the subconscious mind of the designer arises certain questions-----the area of questions include his place, time, culture, climate and as such, all of which constitutes the context. These are the issues that make a mere shelter into a house. And the experience can make one feel a sense of belonging to its place. In turn the house becomes a statement of its entire context.

It is inevitable that an abode designed for and inhabited by persons of late twentieth century would differ from those of early nineteenth or late eighteenth century as the context has changed at a geometric rate. The contemporary people is more exposed to the global scene and hence to other cultures. His mental built up is far different from his ancestor's. His working hour, leisure, vacation, family involvement, mode of entertainment, way of thinking, way of eating etc. has drastic difference from that of his forefathers. But difference in context does not negate the wisdom of the ancestors. We can always learn from our past and transform this learning into the present context. The subtle existence of certain disposition in the mind of the contemporary dwellers have their roots deeply embedded in the old days. Western technology could not change our sun, our moon, or our rain and also the western education could not change the core passion of the heart. Technology, by offering cooling system has added some comfort to affluent urbanites but it could not substitute the thirst for southern breeze in contemporary houses and still, it is accommodated in houses where the site and the opulence of the owner permits. Vertical living in many tiers is possible by virtue of technological advancement and though it restricted the closeness to the earth but that could not wipe out the urge. The complexities of urban life style could not resist the urbanites, in his leisure hours, to seat beneath the nocturnal sky or feel the soft light in the dawn. Courtyards and open terraces are the evidences in favour of it. But the economy plays the vital role in this as in the present context, a building is considered as a commercial venture. There is a tendency of increasing the built area and the notion behind this is the maximum utilisation of the available land which is both scarce and expensive. More floor areas are thought as directly proportional to

more revenue. This has been resulted into messes of masses in the name of house without bothering for breathing spaces and even for light and ventilation. The overall residences seldom have open spaces due to scarcity of land and lack of affordability.

In the case studies of selected residences in Dhaka, it is evident that a considerable change has been taken place in the arena of domestic architecture. The studied structures are the examples of conscious and deliberate efforts by the architects involved to establish architecture of the land. These have significant architectural importance unlike those built under the pressure of rapid urbanisation. The examples are analysed and their connections with the traditional as well as early urban houses are discussed. Each architect has different mental faculty, preferences and choices. Yet, there are certain common aspects in their thoughts which are derived from their consciousness about the context. These common aspects in their thoughts are nothing but the regional contents incorporated in different degrees and qualities. The regional contents are the integral part of the local houses but in the case studies they are distinct and well exploited. This distinctness has made the selected buildings considerably different from their neighbouring houses. The case studies covers the different ranges of sites and houses that are commonly being constructed in the city—such as duplexes, multistoried apartments as well as small flats. They are made with similar materials, under the same sun and under the similar urban complexities. But the delineation of ideas elicited from the past experiences, the concerns about the heritage, the awareness of the tradition—all have added a different dimension into the houses. Coming out of the limitations of the city context, the conscious and deliberate effort by the architects to use the regional contents positively has resulted into solutions which the city really needs in the present context.

The common people cannot perceive a space in drawings. They get attracted to those by the apparent get up and buy or built them. And it is the experience, through which they realise that the house is not fulfilling his deep rooted desires. Once built, our economy does not permit these houses to be rebuilt. Thus they may become the burden of the owner as well as the city. The houses selected as the case studies are only a few houses in contrary to the common scene. To ameliorate the situation, the most important thing may be is to create the awareness of the people. The people need to have more exposures to the good examples. And the architect should also try to make them understand the differences other than to compromise with them. For it is the architects who have to bear the responsibility in the long run as the creators of an

undesired built environment. If it can be convinced that buildings sensitive to the context and fulfil the requirements of the setting are equally revenue generating, there are possibilities that both the client group as well as the developers would be interested to build accordingly. It is only then that the architects will have the scope to design on their own in respect to the context.

After two hundred years of colonial rules, only during last thirty years local architects entered in the profession in this country. After independence, architects got new inspiration and being a developing country the scope of practice expanded to a large extent. However, it seems the qualitative achievement is less significant in comparison to the quantity. It is not that the architects are unaware of their responsibilities but constraint and complexities is deterring the expected outputs. The case studies are the exemplary works which may shows a way to overcome the constraints. A successful architecture incorporates both the abstract and concrete purposes. A definite guideline for dealing with the abstract issues are detrimental to the creative endeavour. The solution is entirely up to the individual aspirations, sensitivity and determination of the architect.

Architecture, being the agent of change, has to open new doors, new aspirations for the future. The future should not be built imitating the past. It is lessons from the past that should be transformed for the present context. The quest for the regional contents in the contemporary residences is only the beginning of a struggle for a better future.

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