

Analyzing a Traditional Neighbourhood Pattern of Old Dhaka: A Case of Tantibazaar

Tanima Tabassum

State University of Bangladesh, Bangladesh

Abstract

Dhaka is like a treasure house where layers of different ages of the city over the last 400 years remain juxtaposed. These layers contains a hidden morphological order of the different urban settlements of Dhaka and shows an indigenous archetype which formed spontaneously and created an organic pattern of settlement. The residential neighborhoods of old Dhaka, locally known as 'Mohallas', were considered as the morphological archetype of historic Dhaka. The spatial hierarchies within this neighborhoods form the fabric of the city that reflects the indigenous settlement character of Bengal. Tantibazaar is such a significant neighborhood that reflects the organic settlement pattern of historic Dhaka with a unique morphological identity of compact and linear buildings with a narrow frontage along a spinal axis. Moreover, this morphology contains a combination of spatial and social cohesiveness that is a sustainable living pattern for Dhaka's socio economic context. Due to rapid urbanization, changing economic opportunities and higher cost of urban land, insufficient legislative framework, inadequate financial support, lack of awareness and resources, absence of development control regulations, the historic urban fabric of these 'mohallas' is facing extermination. Though in this paper the urban settlement patterns of the neighborhoods present in Old Dhaka's urban fabric and their tangible and intangible quality is attempted to be identified.

Keywords: *Old Dhaka, Traditional mohalla, urban pattern, Morphological Order, Indigenous neighbourhood Pattern.*

1 Preamble

1.1 The Context of Old Dhaka

Dhaka, the capital city of Bangladesh, has grown from a small treading center to a metropolis while its antiquity can be traced back to the 7th century A.D (Birt, 1975). Dhaka's existence as a small town of some importance is proved by the discovery of two mosque inscriptions and remains, traditions and literary evidence (Dani, 1962). N.K Bhattacharji (1936) has reconstructed the extent of the city of Dhaka of pre-Mughal (old Dhaka) and Islam khan's city (new Dhaka) from the pages of Mirza Nathans Baharistan-i-Ghaibi. These two distinct parts as old and new Dhaka has developed through different historical phases and possessed various development patterns like indigenous, formal and informal. Within the spatial pattern, both old and new Dhaka has experienced the verity of phase developments. Hence, among the spatial structures within this it has been observed that there are two distinct phases, Old Dhaka and New Dhaka exists side by side. One in the historic core and the other in the extemporaneous settlement of recent years – the former is called the 'indigenous' and the later is labeled as 'informal' development (Siddiqui, et al, 1991). The historical core of 'old Dhaka' retains the traditional features of the urban settlement that it has inherited from the past. The natural endowment of its organic morphology is valued for its 'indigenous' urban pattern (Nilufar, 2004). The residential neighborhoods of old Dhaka, locally known as 'mohallas', were the enclaves of caste or craft groups considered as the morphological archetype of the old part. Most of these 'mohallas' (neighborhoods) were developed as Hindu trader's settlement and named after the specialized trades and crafts for which they are engaged such as TantiBazaar, ShakhariBazaar, Bangla Bazaar, Lakhsmi Bazaar, Kamar Nagar, Sutar Nagar, Goala Nagar etc (Imamuddin, et al, 1989). These neighborhoods mainly indicate the predominance of the Hindu artisan and professionals among the population of Pre Mughal Dhaka's urban center that had flourished with their craftsmanship during the Mughal period.

Apparently, the labyrinthine growth of the old Dhaka's localities does not express any order of settlements but distinct geographical areas have morphological character. This character constitutes an indigenous historic structure of the urban fabric. However, James Taylor (1840) found no order in the historic urban form of Dhaka. The organic character of these densely built areas expresses the aspiration of demand of the inhabitants. It is a complex pattern of connecting street network with densely built houses. There were narrow streets forming the boundaries of different neighborhoods creating a web of interlinked connections and deep cul-de-sac forming sharp turns in the urban blocks. These types of pattern are the common phenomenon in most of the localities of old part. However, a few long lines passed through the residential areas, which give rise to another type of urban pattern, eg. Shakhari Bazar Road, TantiBazar Road. These were mainly the commercial interface of the city; and such areas have no lanes and by lanes as the access are from single bazaar streets. These streets are defined by closely spaced buildings in contrast to the

former pattern where buildings are loosely spaced. Thus, two distinct urban patterns exist in the old city (Khan, 1982). Tantibazar is a unique example of the later pattern which posses at least 300 years urban settlement morphology. It was known for the craft 'tant shilpo' (weaving) especially the 'Dhakaiya muslin' which was the hallmark for the economic development of Bengal that time. For the last 300 years, this 'mohalla' retains its spatial as well as social identity. However, with the passage of time the special trading for which it was known, had changed but still carrying the name Tantibazaar and the unique settlement pattern of its kind (Fig: 1).

In the present urban context of old Dhaka, Tantibazaar holds a significant position through a development pattern and morphological change both in their trading and settlement pattern. Now the inhabitants of Tantibazaar are mostly goldsmith (Sharnaker).

A recent observation of Tantibazar shows a contrasting picture of the decaying past with the present due to uncontrolled growth, densification and poor maintenance.



Figure: 1, Dhaka in 1859, showing the densely pattern bazaar street of Tantibazaar (Source: Renell's map no-14).

1.2 Objective

Cities grow upon themselves with time mostly following the natural laws. The material form of the city is the intrinsic to its sociological, cultural and psychological reality (Rossi, 1982). Thus, the organic cities are autonomous and each part of its pattern develop according to its own law. However, this paper analyzed the organic settlement pattern of a traditional neighborhood, which retains one of the hidden orders of indigenous settlement pattern of old Dhaka until this date. Identifying the traditional pattern and analyzing the tangible and intangible aspects of the residential neighborhoods of historic Dhaka in the form of physical pattern, morphological development, building fabric, street facade building-space relationship and their responsiveness are the parameters for the study. It is believed that harmonious relationship of these factors make the settlement sustainable. The spatial pattern of these neighborhoods was sustainable as grew out of the community need.

This paper also focuses on the spatial pattern of a specialized neighborhood (TantiBazaar) which reflects the character of traditional settlement pattern of Dhaka to develop it as a cultural heritage and a symbol of a socio-spatial sustainability. As in Alexander's (1977) words, "A pattern is a discovery in the sense that it is a discovery of a relationship between context, forces and relationships in space, which holds absolutely".

1.3 The Urban Setting of TantiBazaar

Tantibazaar is located in the southern part of old Dhaka(in Ward-72, presently named as Prosonno Podder lane).It has grown along a narrow road of 12-15 feet wide and started from the junction point of the English road and North South road and connected to Shakharibazar through Panitola (Rakhal Chandra Sen Podder Street) . It is 1000 feet in length with rows of densely built houses. The settlement shows both closely spaced buildings and sometimes a few large plots also. The area is mainly a commercial hub with the residential quarters at the back of the shops. These are mainly the shop houses, a traditional form of mixed-use buildings where the street fronts are used as gold jewellery shops while the rear parts of the ground and upper floors are used for residential purpose. these residential house forms shows a dilapidated image of the past several era as the settlement of Tantibazar has gone through a long historical journey.

1.4 Historical Background of TantiBazaar

The pre-Mughal Dhaka acquired the name of "Bayanno Bazaar and Teppun Gali"(Birt, 1906). The main settlement lay between the river Buriganga and Dulai khali(present English Road) with its center near BanglaBazar. The town consisted of few important local market centers like lakhsmi Bazaar, Bangla Bazaar, Shakhari Bazaar(conch shell market), Tanti Bazaar(weaver market) and few other localities of other (Khan & Islam, 1964). The same occupational groups used to live in groups and in most cases the same house used for the

factory as well as the residence (Bhattacharya, 1954). Dhaka had a glorious past at that time of pre-Mughal Muslim rules. In 1608 dhaka became the capital of Mughal Bengal. During 17th century (1608-1610), Mughal Subedar Islam Khan Chisti gave privileges like tax rebate were given to these people of different professions to settle the new capital of Dhaka (Ahsan, 1991). These settlers were mainly the manufacturers and professional groups.

Tanti Bazaar was originally the place of the weavers. The area was developed with shop-house settlement and reputed for the muslin factories. The trade of 'Tantshilpo' specially the Dhakaiya Moslin and the finest cotton were produced here, which was craved by the elites and the ruling class. Tantibazar, Nawabpur and Islampur were the hub of this cotton trade. The trade flourished for few centuries. During 1757, an urban revival took place in dhakadue to the advent of English colonizers. With the shifting of capital from Dhaka to Kolkata and introduction of 'mule twist', Dhaka's commercial prosperity received its severe shock. In 1817, muslin factory was closed and weavers deserted Dhaka to seek employment in agriculture (Ahsan, 1991). Gradually Bengal became the consumer from the producer in weaving sector. The area again lost its grandeur because of the migration of the rich inhabitants specially the Hindu businessperson to India after the partition in 1947. After that, a different trade started to flourish here. And Tanti Bazaar became a place for the Goldsmith, which was practiced there since Mughal period in a small scale.

2 The Growth Pattern of Tantibazaar

2.1 Morphological development

The settlement of Tantibazar express a strong morphological identity mostly with compact and linear buildings with a narrow frontage along the spinal axis and this was distinct from the loosely spaced buildings and large plots in surrounding areas except the settlement at Shakharibazar.

Most of the settlement's pattern is linear in nature at a wider scale and circular at homestead scale (Muktadir & Hasan, 1995), being along the river or some sort of water bodies as main source of services and communication lines. As such, Dhaka has grown from a small settlement within the confines of Buriganga and Dulai Khal to a sprawling metropolis. Dependence of indigenous settlements on natural services of water is clearly reflected in their evolutionary trend (Mowla, 1997). The indigenous urban fabric reflects the rural pattern of life, which had to adopt and transform to fit in the more competitive tighter urban spatial environment (Fig: 2). The study area reflects clearly that adaptation of urban texture through its morphological development and also expresses a strong sociocultural identity of its people.

The maps of previous era contain the morphological development of the spatial pattern of the area as a strong spine of communication holding the plots on either side (Fig: 3). A chronological observation through mapping, gives the

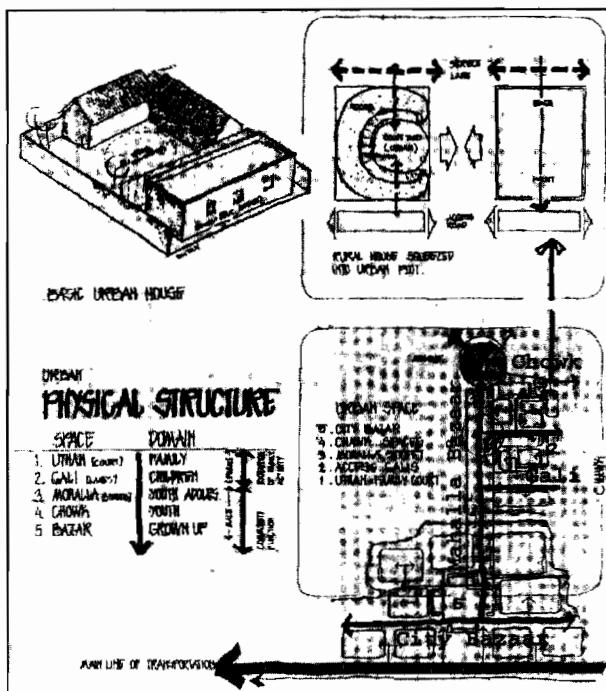


Figure: 2. Spatial manifestation of social structure: evolution of urban space in indigenous Dhaka (source: Mowla, 1997).

total picture of the evolutionary process of the urban texture of the area. At micro level, it shows the transformation of rural house form with a source of water and service along with it. Almost every house contains water well for drinking water and an artificial canal was thought to have existed for the purpose of service at the rear side. It is thought that the southern part connected to ShakhariBazaar is developed at first then gradually the northern part of the street stretched and extended up to Dholai Khal presently the English Road. Therefore, when each single land has to be subdivided to provide multiple families of the next generations, each plot to get street frontage and back service provision become linear and narrow. The plots were divided by mutual agreement between inheritors. Therefore, access and service line worked as a guiding factor for linear plot divisions. With the establishment of the piped services, the houses were no longer dependent on the location of the services, which led to the more elongated development of built form. In some cases, the plots are divided into two divisions with a narrow passage at the side of the front plot, which results into horizontal consolidation. Now it is growing vertically which is destroying the indigenous settlement character and the flavor of traditional pattern.



Figure: 3, Chronological development of Tantibazaar showing through the CS map of 1915, RS map 1952-55 and Base map 2002 (source: DCC).

2.2 Analyzing the settlement pattern

The fundamental characteristics of the indigenous pattern are winding, intricate streets, where walls defining the boundary (Khan, 1982). Historically a group of these boundaries forms the traditional neighborhoods. Neighborhood is primarily a social phenomenon arising from cohabitation in a physical area, locally known as 'mohalla' or 'tola' (Nilufar, 2004). In the old part of Dhaka, the mohallas were created with a few houses, mostly arranged along the access road,

sometimes along the urban space of bazaar street. Tanti bazaar, the Hindu trader's and weaver's settlement developed as such a local mohalla. The religion and socioeconomic status had a deep impact on its physical character. The urban fabric of the mohalla has a strong spatial quality of indigenous character. The settlement developed from a central axial spine of communication and bazaar street and the plots were arranged along the spine. The road is very narrow (12-15 feet) and intimate in nature. Through physical evidences, it is observed that the settlement developed through a hierarchy of spaces and hierarchy of social relationship, which was manifested by a particular type of spaces. Here the urban fabric developed as a sequence of Uthan, Galis, Mohalla, Morh, Chawk, Bazar. In which the narrow roads and galis (lanes/streets) have a human scale. Galis, common walls, inward facing houses, the commercial/civic morh (corner, roundabout or bent in a path) or chowk (square) areas, the mahalla etc. are some of the elements of its urban fabric. At micro level, it shows a transformation of village house pattern in to an urban extended family house (Mawla, 1997). And the mohalla is created with these houses. This is the oldest pattern identified at various locations of indigenous Dhaka also identified in the settlement of Tantibazar.

Here the mohalla was composed of shop houses, having shops at the road frontage then the residential unit is provided around the uthans. The Galis are present in form of a circulation towards the community street and the natural bending of the circulation spine created the morh, a place of interaction. The main access possessed the quality of both the character of the chawk and bazaar in a overlapping manner and contains the nature of traditional bazaar street.

2.2.1 The hierarchy of private house forms

Most of the buildings of Tantibazar exhibit a common character. The plots are elongated and sometimes an extreme configuration of 10feet x 100 feet can also be seen. The land is almost filled with built-up areas and the building height varies from 2-3 stories.

A house form according to Rapoport (1977), is the consequence of a whole range of socio-cultural factors seen in their broadest terms. A traditional rural 'Bengali House' in its basic form is a cluster small 'shelters' of huts around a central yard, locally called the uthan (Muktadir & Hasan, 1985). Influence of this rural traditional house form is also observed in traditional neighborhoods of urban areas. The settlement of TantiBazaar also exhibits this traditional form of house pattern. The early house form of tantibazaar was observed as a thatched hut, from the picture of D'oyley, titled as 'a Tantee or Indian Weaver of Dacca (Fig: 4). In the later development, the houses are mainly divided into three segments: the commercial part facing the street also provide a sense of privacy from the roadside, the residential area in the middle and the service area, consisting of toilets and washing areas in the open courts at the rear. Mainly two broader types of courtyard houses are identified here. **Typology 1** showing a shop frontage then sequentially comes the uthan of U shaped around which the residential rooms are arranged and at the back there is the service court having a well (most buildings of TantiBazaar) (Figure 2). Typology 2 shows a

comparative loose pattern having a vast open courtyard with an out house in front and two inner courtyards in a sequence as private and service court, sometimes having a gateway façade(house no 32, 74/2 resembles the affluent group of TantiBazaar) (Figure 3). There is another pattern of the first type of house form **Typology 3**, which contains a Mandir (Hindu worship place) in front of the house of type 1 category having a narrow passage beside to go to the rear residential part with an L shaped courtyard. Sometimes the Mandir is placed behind the shops (house no 106) or beside the main courtyard house (house no 17), which was mainly the personal temple of the house but now used by all.

2.2.2 The spatial pattern of community spaces

In this settlement, the narrow road plays a significant role in the social relationship of the community and works as a magnet of the settlement. Traditionally the people of Bengal have a habit of socialization in outdoor spaces. This habit led to the formation of Uthan, Galis, Mohalla, Morh, Chawk and Bazar etc., the traditional outdoor civic spaces, as the cornucopias of myriad events and different human activities (Mowla, 1997). This form of community relationship is also visible in the area of Tantibazar. Face-to-face relationship of the mohalla residents is another contributing factor to the sense of community. The natural bent of the path and the overlapping point of Tantibazar and Panitola became the mohalla morh and became the main socialization point. The frontage of the series of shops also provides a place for interaction (figure-7 & 8). Another place of gathering is the religious structure. So the civic facilities are incorporated at the human scale that develops the interactions of the inhabitants. The sense of stronger community also encourages maintaining many cultural rituals and increases the bonding.

The mohalla or indigenous neighborhoods are semi autonomous socio spatial units, with a very little control from any higher level of administration. In Tantibazar, four autonomous bodies are present to provide administrative control, one is the Mohalla Panchayet and other three bodies of gold traders' like- Bangladesh Poddar Samity, Swarnashilpi Sramik Sangha and Bangladesh Pathar Samity are present for trading administration. These have maintained the communal bondage and the spatial quality of the area.

The medieval artifact of old Dhaka is an expression of indigenous urban form. It is claimed that the organic cities reflect the 'community spirit'; and truly, the spatial structure partly reflects and partly determines the social

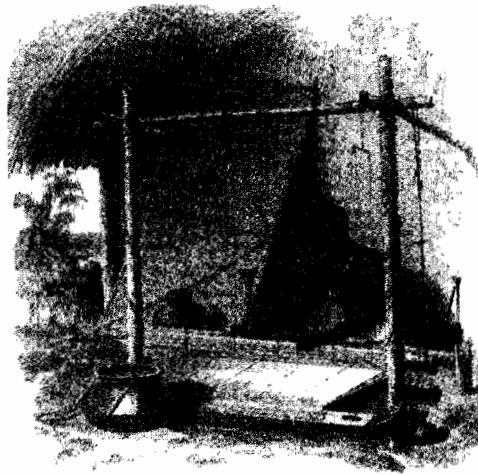


Figure 4. A Tantee or Indian Weaver of Dacca (Source-)

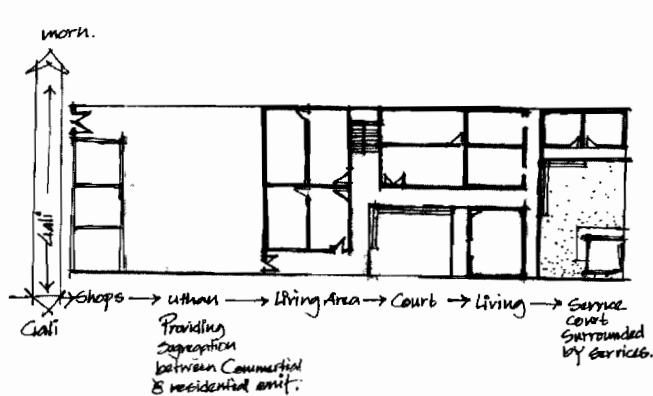
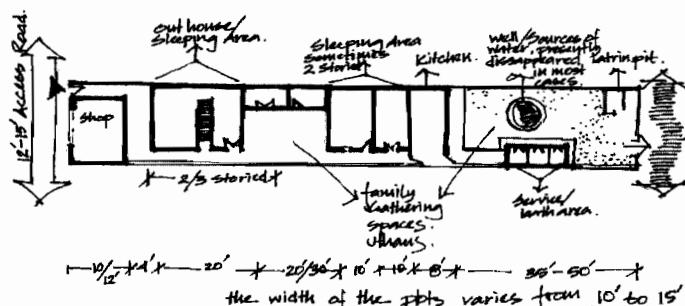


Figure : 5 & 6. Chronologically showing the house Typology 1 & 2 (Source-Author).

structure (Pahl, 1970). Tantibazaar as a neighborhood of old Dhaka also bearing this community spirit which is totally absent in modernized urban society.

3 Building and Space Relationship

Tantibazaar settlement maintains a vibrant character through its spatial development. Here both the spatial character of the individual houses and the face-to-face relationship of the houses create an intimate and human character.

The most important physical quality of a space is enclosure that creates sense of place. Street bounded by adjacent buildings gives a feeling of three-dimensional space. The street of Tantibazaar having a width of 12 to 15 ft, creates a good sense of enclosure and the quality of intimate urban space. This intimate space enhances the community and cultural activities at outdoor urban environment, which is also sustainable for community spirit. According to Alexander, interesting and lively spaces have nodes of activity at a maximum distance of 300 m along their length (Alexander et al, 1987). In Tantibazaar, that lively space is observed throughout the linear road especially at the shop frontages and natural bents and it serve as a main gathering space. The spaces in between and in front of the buildings are vibrant and provide many closed and short vistas, which make the streets, galis and other public space comfortable, satisfying and secure for assorted activities and to walk through (Mowla, 2002).

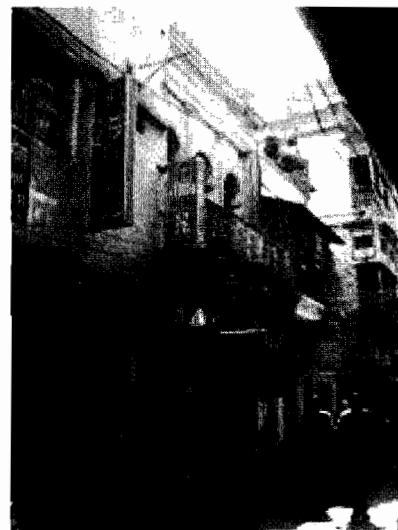


Figure: 7 & 8. The places of socialization at the linear road (Source: Author).

At the micro level, the courtyard is the most vibrant place for geo climatic reason and for social aspect of interaction (Figure 9). It is the breathing space for the dwellers. The houses with Courtyard along with a mandir create activities for the neighborhood to perform religious rituals that also act as a form of urban

space. The façade articulation around the courtyard also encourages outdoor active ties thus improve social ties among buildings through the semi open verandahs. The water well is another element present at the back courtyard that acts as a place of socialization (Figure 10). The courtyards present in this neighborhood is mostly U shaped in the inner part and L shaped at the rear side and the other side is provided with a thick high wall which provides security among the neighbors and enclosure.

The building facades also imply a harmonious relationship through balconies and windows with the street level. In most cases, the street connects with the building units through the commercial unit. The settlement possessed a street façade proportion of about 1:1 to 1:2 which is now totally lost due to newer development above the old structures (Figure 11 & 12)., In many portion of the road, the original character of the neighborhood has changed due to new construction of tall buildings, which gives a completely contrasting character to the spatial relationship of the area. Still now, the inherent quality of the community fillings is present in the space (Figure 13) but the environmental aspect is effected due to over saturation of people.



Figure 9 & 10: Showing the building space relationship through courtyard and service court at the inner house level (Source: Author).



Figure 11 & 12: Showing the contrast between the intimate space of the traditional character and imposed scenario of some modern intervention (Source: Author).

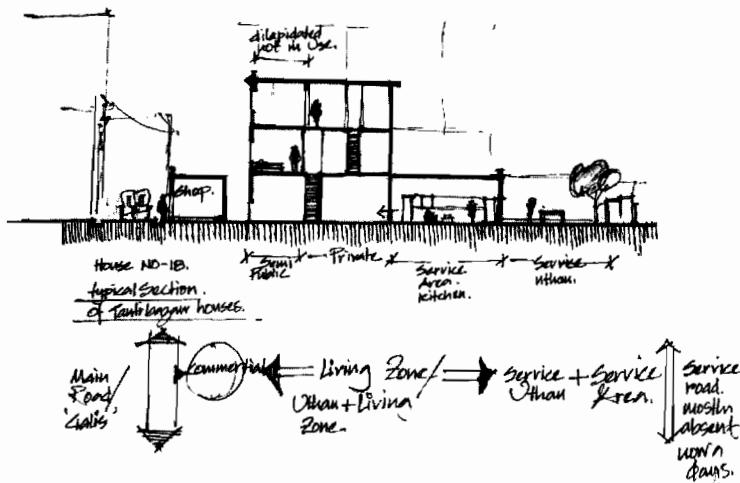


Figure: 9 The inherent quality of communal feelings through the sequence of spaces at TantiBazaar (Source: Author).

4 Findings for the sustainability in urban space

At a glimpse, the settlement texture of Tantibazar may look chaotic and absence of order in the pattern. But behind the chaos, there exist a order which occurred due to usability of people. But due to rapid urbanization, haphazard development

is occurring in this indigenous pattern. Most of which is not respecting any contextual basis of Tantibazar settlement inspite of the presence of the old buildings. The buildings character, specially the uniformity and continuity expresses the evidences of the previous era also symbolizes the unity in the social life of the neighbourhood. The overcrowding situation is even creating an unhygienic environment for living. The uncontrolled and fast changing character of the urban pattern is thus disruptive to the community structure.

The overall observation of the spatial pattern of the area may be summarized as follows:

- The actual socialization revealed through neighborliness and theoretically, neighborhoods are characterized by social homogeneity and tightly knit pattern of primary relationship (Nilufar, 1997). Thus, the linear mahalla represents strong sense of neighborly relation due to the same occupation, ethnicity and caste and creates social cohesiveness within the members..
- The bazaar street at an intimate scale works as a place of community.
- Face to face, relation among the streetscape makes the street vibrant and acts as a catalyst to increase the social bondage.
- The neighborhoods having an intimate territory works better.
- Pedestrian relationship at the tertiary road level like in the Galis(Lane) makes the street level more vibrant with overlapping activities such as communication, social gatherings. It also makes the neighbourhood environment friendly.
- Courtyard house pattern is geo climatically and socio culturally efficient for the living pattern and contextual base of this region.
- Hierarchy of spaces from the public domain to private domain creates a sequence of socialization space and sense of controlling which is sustainable in the context of this region where it provides seclusion to the women from the male visitors.
- Enormous number of voids in build form helps to interact to urban spaces. Elements like courtyards, verandahs, windows are the key elements to enhance the indoor out door relationship.
- The street façade height to width of the road ratio have a impact on the intimate scale of living as analyzing the neighbourhood of Tantibazaar it is assumed to be of 1:2 to 1:3.
- Mixed land-use pattern as working place along with living spaces also increases the belongingness among the inhabitants of the area which also enhances the social interaction.

- The narrow road pattern creates a chaos within the area so it should be converted as a pedestrian way to give people a chance to enjoy the flavor of the past.

All these are the basic characteristics to develop social, cultural and commercial activities within the neighborhood boundary. And these will promote one step towards a sustainable neighborhood.

5 Conclusion

It is believed that beneath the strangest twist of a lane or alley, behind the most fitfully bounded public space in organic cities, lays an order derived from long established cultural tradition and historical layering of the social contract and the result of a string of compromises between individual rights and the common will (Kostof, 1991). This hidden orders need to be identified and analyzed to understand the essence of context and tradition. For a centuries Tantibazar has a long history as a traders neighborhood, started as a place for the 'Tantis' and then developed as a neighborhood of the gold smiths. The type of trading changed over time due to political reasons but the essence of the indigenous neighborhood settlement is still present through the social character and the physical identity of the buildings. The settlement texture developed through the cultural demand of rural context and took a form of urban pattern with changing nature of the social and commercial development.

The overall development gives a picture of harmony and continuity but in a fragmented way due to the modern interventions of recent times. Towards a sustainable living pattern, these types of settlements should be revived for the social and cultural identity of Dhaka. With the course of time, Dhaka is facing the treat of cultural identity and neighborhoods formed with heterogeneous groups at a large scale minimizing the scope of social stability. This indicates the need for protecting the character of the neighborhood and controls the chaos. And it need to be reminded that old Dhaka is a perennial source of tangible cultural heritage; as we lost most of the unique resources of this heritage, the rest should be protected.

References

Alexander, Christopher. (1966). A city is not a tree, in Design no. 206, 47-55.

Alexander, C., Neis, H., Anninou, A and King, I (1987). A new theory of Urban design, Oxford: Oxford University press in Moughtin, 1999.

Ahsan, Majid. Rosie. (1991). Dhaka: Past Present Future, chap-Changing Pattern of the Commercial Area of Dhaka City, Ed. Sharifuddin Ahmed, 432-437.

Birt, F. , B. , Bradly. (1906). Romance of An Eastern Capital, London, 75.

Bhattacharya, S. N. (1935). Dhaka University Studies, 1(1), November.

Bhattachari, N. K. (1936). Bengal Past and Present, XXXIII, 27-29.

Dani, Ahmed. Hasan. (1956). Dacca: A Record of its Changing Fortune. Dhaka: Asiatic Press. 21-22.

D'oyley, Sir. Charles. (1991). Translation of the Antiquities of Dacca. Translated by, Shah Mohammad Nazrul Alam, Academy Publisher, Dhaka.

Immamuddin, Abu. H., Hassan, S. A. , Alam, W. (1989). Shakharipatti: A Unique Old City Settlement. Dhaka. Aga khan Architectural Design for Conservation. 1.

Khan, F. Karim. , Islam, Nazrul. (1964). High class residebcial areas in Dacca city. In the Oriental Geographer, VIII(1), 1-41.

Khan, I. M. (1982). Alternative Approach to the Redevelopment of old Dacca. Unpublished Doctoral Dissertation, Katholic Universiteit Leuven.

Kostof, Spiro. (1991). The City Shaped; urban patterns and meaning through history, London: Thames & Hudson.

Mowla, Q. A. (1997). Settlement Texture:Study of Mohalla in Dhaka. Journal of Urban Design. 2(3). U.K. 259-275.

Mowla, Q. A. (2002). Emergence of Civic Space in Dhaka. Plan Plus. 1(1). 98-116.

Muktadir, Mohammad. A. , Hasan, Dewan. M. (1985). Traditional house Form in Rural Bangladesh-A case study for Regionalism in Architecture.

Nilufer, Farida. (2004). Hidden Morphological Order in an Organic City .Journal of Protibesh. 10. 33-40.

Nilufer, Farida. (1997). The spatial and social structuring of local area in Dhaka city- A Morphological study of the urban grid with reference to neighbourhood character within naturally grown areas, Unpublished doctoral thesis, Unit fir Advance Architectural Studies, The Bartlet school of graduate studies, university Collage London, University of London.

Pahl, R. E. (1970). Patterns of Urban Life. London : Longmans.

Rappoport, A. (1977). Human Aspects of Urban form-Towards a Man Environment Approach to Urban Form and Design. Oxford: Pergamon Press.

Rossi, Aldo. (1982). The Architecture of the City. Cambridge (Mass): MIT Press.

Siddique, Kamal. et. Al. (1991). Social Formation in Dhaka city.-A study in the third world urban society, Dhaka University press limited.

Taylor, James. (1840). A Sketch of the Topography and Statistics of Dacca.