

The urban settlement study of the distinctive district in Old Dhaka according to the vernacular pattern

The possibility of urban cultural corridor according to its collective memory, dating
before 400 years of its known history

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Dedication



To all the Martyrs of the great Liberation war of Bangladesh
1971¹

¹ Rare photos of Bangladesh

Declaration

I declare that this thesis represents my own work, with proper acknowledgement where necessary. The information that has been taken from any source has been appropriately referenced with my highly consciousness; and if, furthermore not mentioned properly, then due to human erroneous. Any materials provided within this study has not been copied or plagiarized as far as to my knowledge.

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██████████

Abstract

The craft districts are products of many generations; created and carried through shared experiences of practicing communities. It's a symbolization of their values, ensures continuity of their traditional way of life and socio-cultural practices rooted in this place from the remote past. The two selected districts are indigenous and informal developments in the history Dhaka region. Being an organic city's part with anthropological cognition, here lays two exceptionally „beautiful“ linear orders over the old city fabric with long established cultural tradition and historical layering of the socialization based upon craft. It's better to introduce human activity at the center and the inhabitant's sense of place, territorial definition in their „parallel city“ mind would be prioritized by signs. Foremost discussion concentrates and investigates the dynamics of two distinct craft based districts' cultural collective growth. The spatial structure of vernacular settlement coincides with the functional and cultural performances and corresponds to the underlying force behind the city's spontaneous organic formation. As distinctive communities, the sites indicate together more humane involvement within their art-religion interplay over a lost landscape context. Physicality could be mislaid but also identity cannot be created overnight. Collective identity becomes eternal through practices but only traceable through semiotic signs in a society.

Keywords

Old Dhaka, Organic Morphology, Vernacular Pattern, Collective memory, Cultural corridor

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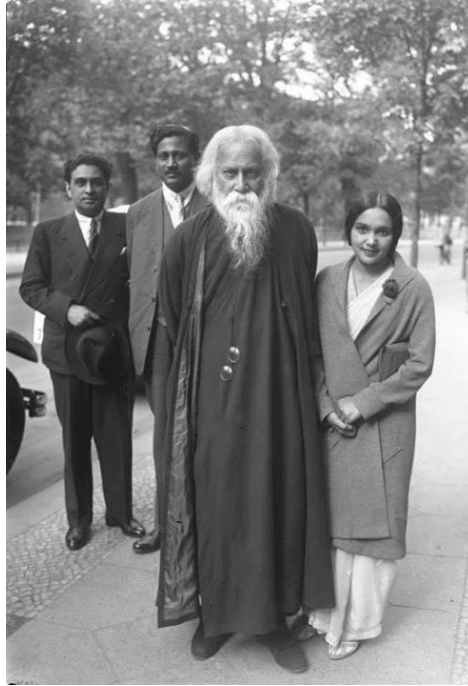
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Chapter 1 Introduction



Tagore visiting Berlin in 1930²

*“Where this song is true
In the meadow of infinite dusk
There
Runs the river Dhaleswari,
On its banks the dense shadow of Tamal trees-
And in the courtyard
Who waits (for her beloved)
Is wearing Dhakai Saree and vermilion on the forehead.”³*

² Rare photos of Bangladesh

³ Rabindranath Tagore’s famous poem titled „Banshi” written in 1932

1. Introduction

The 400 years' known history⁴ of Dhaka shows that the city has grown and enlarged to a significant scale while the basic idea derived from the indigenous settlement of the pre-medieval craft and trade center. The organic morphology also responded to major political, economic and social forces and different function followed the evolving urban form at least as reliably as vernacularism from the footprint traces. In this way, the old Dhaka's two distinct road patterns of Shakhribazar and Tantibazar might help to define the inner hierarchical logic of the city's organic evolution. The craft practices, religious rituals, their community cohesion all comprised a „parallel realm“ which is much stronger than its remaining timeworn infrastructures, something only left for feelings. This essence is something else than one can listen or see. The communities in the traditional neighborhoods of vernacular settings and their roles are yet to be fully studied. Potentiality could be hypothetically identified but has not focused the issue within the framework of collectiveness that occupied social scheme of the traditional urban neighborhoods.

Still some districts express specialization of the particular Mohollas as selected living quarters for dedicated artisans, craftsmen and traders in very close-knit communities. To name, Shankharibazar still is a conch-shell bangle market, Kumartoli was potter's neighborhood, Tantibazar was trade center or production area of weavers, Patuatuli for jute-silk painters' locality, Sutrapur was carpenter's neighborhood, Banianagar was retail businessman's locality, Churi Hatta was glass bangle market, etc.⁵ (see Table.1) However, it is possible for these local areas constituting in natives' psychic through various urban aspects. According to the inhabitants' perspective, on the basis of the identity of places, the scale of the zones or the size and shape, as well as social integrity and group cohesion it could be traced. The primary spatial patterns in existing evident inceptions need to revise. Moreover, this research aims to investigate the urban growth of old town by analyzing how the cumulative process of spatial growth and consolidation of selected linear sites have influenced the morphological and communal contribution over organic cityscape. So, rather than identifying individual significant elements, it is important to assess these two districts against whole city fabric by understanding socio-cultural context in old Dhaka.

⁴ Mamun, (1993), p. 105

⁵ Ahmed, I. (2012), pp 151-154

1.1 Contextual background

Dhaka, the capital city of Bangladesh, has grown from a small Hindu trading centre in between the Dholai canal and the Buriganga River⁶, to today's metropolis. Most historians believe that urbanized settlements here date back to the 7th century⁷ under the Buddhist kingdom of Kamarupa. Later the kingdom followed by the rules of Hindu Chandra and Sena Dynasties from 9th century to 12th century⁸. According to most of the Bengali historians, the name Dhaka may have originated from the temple of Hindu Goddess Dhakeshwari which was constructed by Hindu King Ballal Sen in 12th century.⁹ Ancient legends also link some archaeological ruins at Rampal, Durduria, Savar's Dhamrai, Dhapa and its peripheral belt.¹⁰

Dhaka has been portrayed as a continual urban existence with its six major phases of socio-economic and political fluctuations.¹¹ According to such conception, after the fall of Sena Dynasty, different Muslim independent Sultanate Dynasties of Turk and Pathan as well as Afghan origins like Khilji, Mameluk, Shah and Khan, all ruled here from years 1204 to 1608¹², Afghan Fort was also constructed during this period at the location of the present Central Jail area. It was proved by the discovery of two mosque inscriptions at Binot Bibi mosque as literary evidences from 14th century in Persian language.¹³ Written chronology of old „Dacca“ starts from the Mughal period when Islam Khan established the capital of newly conquered Bengal in 1609 and its official documentation began.¹⁴ This is only a fragmented portion of its long journey. The main trade district of Pre-Mughal Dhaka was confined only in-between the area of Sadarghat and today's Bahadurshah Park¹⁵. This idea reconstructed the extension of Dhaka as a town during Islam Khan's new city building in the west front as „Mughal Dhaka“ from the pages of Mirza Nathan's Baharistan-i-Ghaibi.¹⁶ Then the needs of administration and defense were added, while commercial activities are still present in the east. Being a natural harbor, Banglabazar-Sutrapur area of Dhaka within the engulfment of River Bouriganga and the Dholai Khal (see Figure. 1) became the trade outpost for Sonargaon.¹⁷

⁶ Ahsan, (1991), pp. 396- 414

⁷ Nilufar, (2004), pp. 33-40

⁸ Khatun, (1991), p.634-636

⁹ Dani, (1956). pp. 31- 48 & 213

¹⁰ IGI (1908). pp.105-116

¹¹ Islam, S. (2011), pp. 33-38

¹² Ahmed, I., (2012), pp. 204-210

¹³ Dani, (1956), p. 213

¹⁴ Karim, A., (1964), pp.38-39

¹⁵ Dani, (1956), p. 40

¹⁶ Bhattashali, (1936), pp. 27-29.

¹⁷ Shanawaz, available at (<https://www.youtube.com/watch?v=YKrGq0eyhFs>) accessed on 8 pm, 8th February, 2017

Owing to its commercial importance for a great variety of commodities like the famous muslin cloth, earthen pottery, miniature arts and agro based crafts products, Dhaka carried on a prosperous business with Southeast Asia and Europe.¹⁸ Crafts like Conch shell or Shankhashilpo, weaving, pottery, etc. continued in their traditional enclaves without any interruption. However, during the British colonization, the historic core consisted the lower class residential quarters whereas the high-class residential areas were settled upper portion of today's Bahadur Shah Park.¹⁹ The Chawkbazar, initially a Mughal interest to build Public Square for a captured city, gradually changed its identity from a retail center to a wholesale center. New retail activities were extended towards the north along Nawabpur Road and Islampur Road to serve the British bureaucrats, after 1757,²⁰ when for the first time East India Company captured any political power in Bengal, as well as India. On the other hand, business and administrative activities replaced the residential character of the riverfront with mixed used pattern from 1930's²¹. This is the time when large scale industries were being introduced related to the river transportation.

1.2 Problem Statement

Shakharibazar Road and Tantibazar Road, which was not focused as it should be from the vernacular settlement study and unique cultural collectiveness. These hidden orders need to be re-palimpsest and analyzed to understand the essence of context and tradition. The morphological transformations in old Dhaka require investigation over today's spatial dynamics in relation to its craft based socio-economic activities. Tantibazar and Shakharibazar together are such idiosyncratic historical community savoir-faire in the core of old Dhaka. These sites represent a glorious past for handmade products in well-sustained socio-economic status which still have a significant value despite of modern social life. Unfortunately, Tantibazar has lost its initial identity for forever. However, although Shakharibazar is continuing its originalities in some extent, but *Shakharis*, the conch artists are one of the most disadvantaged groups in old Dhaka's society. Although, the traditional settlement pattern with shop houses that sustained well in different localities of old Dhaka more than 400 years since pre-Mughal period till to date, is now experiencing a change over urban fabric due to rapid growth of city. Even, the known history of Dhaka is nothing compared to the consequence of its crafting practice and heritages that might belongs to at least,

¹⁸ Hossain, N.; (1980), pp. 197-223.

¹⁹ Islam, N. (2000), pp.135-162

²⁰ Ahsan, (1991), pp. 432-437

²¹ Mowla, (2010), pp.13-30

1000 years.²² This study is to search the remote past and its pattern, from existing examples according to collectiveness that had never been emphasized in the history. If not, then it means the nation is losing gorgeous culture and concomitant traditional values developed from thousand year's rural context of Dhaka.

Now, Scholars believe cities which are posed with heritage have some „Designer quality“.²³ This study will be a real opportunity to derive hypothesis for dragging out the rural base of today's huge metropolitan by the dints of collective memories and physical traces. In this paper the urban settlement patterns of the neighborhoods that present in Old Dhaka's fabric and their tangible and intangible excellence is attempted to be re-identified. Issues of cultural identity along with collective memories are one of the most reflective social significance in today's demand, and more importantly, what degree of preservation or conservation should be implemented; amongst a rapid but unplanned urban development of Bangladesh's economical context. Historic city's traditional districts are the providers of experience from which generations can gather knowledge for improving the future, as an educative city. This study will search for a real intriguing revision where collective tools might keep aspiration of a „totally“ diverted community in comparison with „inner“ diverted community. The goal of the study is to bring together all the possible resources related to these communities, but not to abandon its collective memory and again, also not to underestimate their changing needs with modern time.

1.3 Research rationale

Image of craft based rural community reflected in the early settlement patterns of old Dhaka, sometimes referred as early stage of „town like village“. The stories of working people's courtyards even brought the life experiences from village and transformed into vibrant cozy spaces at every city dwellings here, but in a shorter scale. Interestingly, it was very possible to shift a whole house by boats with the benefit of water connectivity through canals even century ago. It reveals a question that why population density in Bangladesh is so high. Proper flourishing of Neolithic villages from 250,000 years²⁴ was the key reason along with the natural water networking. Architecture of freedom

²² Shanewaz , (2010). available at (<https://www.youtube.com/watch?v=YKrGq0eyhFs>) accessed on 8 pm, 8th February, 2017

²³ Hosagrahar, Jyoti, (2012), Available at (<http://www.unesco.org/fileadmin/MULTIMEDIA/HQ/CLT/images/SustainableCitiesFinalENG.pdf>) Accessed on 12 pm, 6th May, 2017

²⁴ Desvaux, (2010) available at (https://www.populationmatters.org/wpcontent/uploads/green_history.pdf) accessed on 9 am, 12th April, 2017

and sharing in an intimate cluster; was never omitted in such township. Community cohesion was thus maintained in organic and spontaneous regional planning of old Dhaka. Clustered „in-between“ spaces of vernacular architecture then altogether created linear villages in multi directions. And again, connecting all villages beside water ways shaped those ancient civilizations. Such villages were created first, not the civilizations.²⁵

It is decent enough that this city is meaningful by naming, classifying and ordering in a hierarchy of different territorial units. Beneath the strangest twist of a lane, behind the most minimum fitfully bounded public space, these two roads are hierarchical as a few long lines passed through city's landscape in straight. Just like a linear collage in a city having coarse elements formed some „middle ground“ of nostalgia to constitute city dwellers' psychology at its intersections²⁶. Why not exemplification of a cultural corridor is proposed by taking a specific subject from lots of opportunities? One might be fascinated by colonial architecture within its urban settings, but for such research, their hundreds of year's practice which comprised the unique cultural identity; should be emphasized as these practices are becoming extinct. Death of any practice is same to the death of that society's distinctiveness. Therefore, perceiving from a theoretical outline that might follow a reconstruction of social attitude based on cooperative exposition. The thesis aims to have a contribution to the debate about urban heritage regarding practice of collective memories, from a third world's milieu. Feasibility study by imagery conception like sketches along with previous studies may help to develop a theoretical framework and an assertion to develop further urban design or planning guidelines for the unplanned organic city like Dhaka. Here development might always not be a concept from physical interpretation. Based on which purposes from the palimpsest of the past, writings here may try to find out and rationalize where a cultural corridor suits, or is it really needed or not.

1.4 Research questions

Organic areas like Shakhribazar and Tantibazar are generally developed according to the aspiration of their inhabitants craft skill, just like that of the historic city itself. The generic similarities of the „informal“ areas with those of the „indigenous“ ones draws attention in order to understand the morphology of age old city development and

²⁵ Ahmed, Sayed (2017), Arcasia Forum, Jaipur

²⁶ Collin Rowe, (1982), available at (<http://architectureandurbanism.blogspot.de/2013/12/colin-rowe-and-fred-koetter-collage.html>) accessed on 4 pm, 15th March, 2017

associated lifestyle. For Both sites, social structure and spatial structure represents one abstract and another material entity accordingly, but surely they are rationally interrelated. They are the part of an organic city, which again is a living organism in the coherent ensembles. Society played the basic role in the city formation. It is not always accurate that the traditional society has all the ingredients' in itself that can be proved as only possible solution for a successful settlement. Careful „collective reading“ of the socio- spatial matrix in traditional morphology may provide the clues for the urban planners; designers and policy makers to regenerate socially equitable urbanity in old Dhaka on the baseline of crafting identity.

From above discussions, several research questions of this study could be pointed out. Firstly, how one can trace the footprint of four centuries from the basic vernacular pattern of existing practice around the historic city? Secondly, is there any clue which can be revealed by the similarities and dissimilarities between these two distinct sites? And lastly, above all; why, how and by whom these sites are going to be valued according to the question of intangible conservation? For this, some collective aspects needed to be focused on for a sustainable framework in the future theoretical hypothesis. The principal research inquiry regarding identity of local craft practicing streets is explored here through a field survey in old Dhaka's context. Culture, history and human behavior as well as their psychology, is the main construct of the study and how such abstract phenomena layered with these shabby built forms to the linear spaces creating urban essence which possibly could be referred as Heterotopia. Contextual for both past and future, it is prior to investigate where they were from, what is going to happen next and also at which stage they are now.

1.5 Objectives of the study

Shakharibazar and Tantibazar both was cradle of economic activities in Dhaka's history. Such urban heritages are not intrinsic perception. The objective of the thesis has been set to find out this socio-spatial logic of the growth of craft based trade within the divergent urban morphology of Old Dhaka. Which is again over layered by its rural setting, very difficult to trace unless follow some assumed clues. Moreover, this thesis will also investigate the vernacular evolution at study areas to find out the development of urban collective memory considering functional and physical aspects in order to reveal the impact of transformation on built forms and urban settlement. They may physicality sustain or might fade away for forever or could be regained again by

enormous research efforts, but when practices die, it produces identity crisis. An organic linear road is about to be felt by a more humane measure rather than specific and conventional urban planning and architectural point of view. This study will examine how the informal communities with their heritage focused on particular roles and shaped traditional neighborhoods of Old Dhaka with the help of possible case studies and objective comparison between Shakhari Bazar and Tanti Bazar. The study may use „Grounded Theory Method“ from a qualitative research approach.

1.6 Scopes of the study

The scope of the research is limited to cover an investigation on the growth, morphological evolution of ancient trade districts and its resultant impact on the whole urban fabric from the rural grounded baseline, the vernacular architectural study and its possible transformation to adapt with a congested „town forming“ stage through different eras. The study covers three broad categories- city germination; craft based professional districts“ linear character and inhabitants“ collective memories that are still surviving though facing immense challenges. The two districts evolution concentrates on the entire Old Dhaka“s formation background in a broad overlapping sense. The possibility is only to identify the locations of the possible rural workshops from different historical periods and relate it with the accessibility within water bodies all around by the means of craft based trade, which was once local, then the network got regional and eventually got continental. The spatial logic of the growth, distinct organic arrangement of cultural corridor, coarse grains from bird“s eye view, exceptional street configuration amongst urban setting might be some clues for deriving hypothetical conclusions. Livelihood choices based on traditional and intangible heritage might offer some prospects for more inclusive city districts that recognize diversity within a unique value. Here continuity of practice is much more important than conserving the physical aspects of city.

1.7 Limitations of the study

The study has been impeded in some extent due to several limitations that is a subject to confess. Firstly, the extent of this study is only limited to analyze the hypothetical aspects of collective memories rather than typical functional and physical aspects of both Tanti Bazar and Shakhari Bazar as like previous researchers. Comparing those with the past studies to explore the morphological evolution of these areas. This research might include a base of schematic outline on memory rather than specific physical context and

problem associated with urbanism in practice. If included, then only within a little encompass.

Secondly, it is often difficult to collect and rely on the information regarding the previous history and maps, the current status of the building footprint during the field survey in both urban districts, that might have changed a little bit or in totality. So, exact configuration is also not contextual for us but surely it's a limitation. Detail floor plans of older row houses are required to study the evolution of the built forms were done in schematic level. Again, where the weavers, *Tantis* used to reside, such older shop houses do not exist in the present, anywhere in the country.

Thirdly, as the majority of people of the study areas belong to minority group of Hindus and a good number of plots of the area are *Devottor*²⁷ properties, so local people shows unwillingness and they are less co-operative as they were pressurized. Some are occupied by Muslims after every turning political stage that will also not provide exact scenarios. As the highest level of legislator body of state has summoned a rule not to destroy the heritage buildings, they are also frustrated after not being able to erect new ones according to their wills. Besides, due to the confidentiality restrictions, it is often difficult to collect the required data from different government and autonomous organizations.

Finally, due to the time constraints, limited numbers of subjects have been selected to conduct the study. For all above mentioned mottos and pros and cons, we have to consider that, Due to unavailability of a cartographic map of Dhaka in Mughal time period, many information are taken form the written documents, scholar's oral interpretation and best possible assumptions.

1.8 Method of study

1.8.1 Methodology

The notion of craft trade and its relation to overall city's internal architecture, development pattern in old town have been explored from the available literatures. In-depth knowledge from previous studies has been used to analyze the spatial properties of street's linear configuration existed from pre-Mughal period to find out the relationship that exists between the spatial arrangement of Old Dhaka and the

²⁷ Land bestowed by the name of Hindu God or Goddess

locational aspects of craft business. In order to identify the morphological changes of Shakharibazar and Tantibazar area, all maps and records have been examined meticulously. Besides, a field survey has been conducted to find out the present functional and physical status of these two areas in accordance to extract the collective memories.

As the objectives are set, utilization of some tools like mapping, community participation through field survey, vulnerability assessment, and heritage management in a proper framework needs to be adjusted according to reality of Bangladesh. Possible actions required for technical, regulatory and financial supports and specialists' comments. To derive an empirical and correlative analytical analysis in a combination the research focused on cognitive approach from accumulated data of secondary resources and primary data found in field survey. This might provide an acceptable investigation over collectiveness that is resulted from its socio-cultural pattern.

For the questionnaire survey five respondents were taken randomly from each study area. A structured graphic technique complemented by a verbal description was undertaken. Finally both the verbal and the pictorial responses of this cognitive study were synthesized and analyzed. The research method being inductive individuals' perception were accumulated and generalized to a bunch of findings. Such composition illustrates a robust representation of possible collective memory associated with spaces as perceived by the inhabitants of both areas. A comparison might represent the inner organizational pattern of different types of local areas according to the inhabitants' cognition and sign toward hereditary craftsmanship. The physical aspects like street, plot, built form, open space of urban form will be analyzed to understand the evolution of Tanti Bazar and Shakharibazar, but those will be only supportive for the study's motto. At the last end, the study will examine how urban heritage could be converted to a wider audience effectively, without any single built-up intervention. It's also possible to observe significance, understand the collectiveness and strong support beyond the artistic community. Performativity and curatorial strategies from the point of view of generation gap in neighborhood level also be evaluated. This can be used to protect and support their continued presence on hereditary basis.

1.8.2 Diagram of method

To achieve above mentioned objectives in methodology, a systematic study is followed and summarized into a flow diagram like followings (see Diagram. 1)

1.9 Structure of the thesis

The first chapter of the thesis will introduce the problem statement and give a notion to its new contributions to the knowledge along with proper background study. Second Chapter will emphasize the historical background, morphological evolution and patterns that have been germinated from vernacularism but ended up to a distinct linearity over the old city's organic collage. Chapter three will include literature reviews regarding collective memories and complexities of its different issues to accentuate over the Heterogeneity according to research questions. Comparative analysis of social, cultural, religious, psychological taxonomy to understand how built forms associated with memory oriented cultural spaces. Rolling back to a hypothesis of its imaginative rural context, all are reserved as a form of analytical findings in the chapter four. After analysis of founded data, Chapter five will try to answer some questions, indicate problems and make recommendations; which could be again formulate several research questions in every curious minds to defend or deny, but questions will certainly be raised, not answers: that will be the ultimate success for this thesis if it may reach to that point.

Chapter 2

Literature review: Origin of old Dhaka and vernacular pattern of the region

“By sensibly integrating housing with places of work, places of recreation, places of culture as a cohesive urban fabric.”²⁸

V. B. Doshi

²⁸ Doshi, (1995) p. 6.

2 Literature review: Origin of old Dhaka and vernacular pattern of the region

2.1 The enigma of old Dhaka's organic growth:

Dhaka's glorious history preserves some traces of almost all types of organic progression. It is composed of several physical elements which attain functional features also. The alternation of these elements results the evolution of a whole city or any part of it. Therefore, to understand the evolution of settlement, it is essential to comprehend its functional and physical components. But these two linear districts are „linear city within an organic city“ because of its plurality. Both study areas are also stratified to consolidate their own sectors as public suburb. In later periods, horizontal stretching and vertical uplifting could not replace its character rather reused the existing.²⁹

In old Dhaka, indigenous masonry skill was blended with the colonial architecture and created a pattern of „linguistic neighborhood“ from spatial orders. All of the built forms maintained the retained character, spatial hierarchy and social bondage within regional vernacular practice. (see Figure. 2) Moreover, the religious believe and the professional skill created a subterranean impact over the physical character. The layers contain a hidden morphological order and show an indigenous archetype, formed spontaneously.³⁰ These settlements were developed from a central axial spine of communication, acts like backbone to hold any vibrant community³¹ and scale is intimate by nature. Thus small Bazars developed spontaneously in a certain interval, facing the streets along the residential localities. Hence, Dhaka is called a city of „52 markets containing 53 lanes“ - a so heard proverb.

Now, because of its geographical location and administrative position, the city provided most of the physical, economical, and social advantages for receiving primary impulses for its steady growth. The pattern of is identifiable by intricate street network, even tortuous to an extreme degree in some places. The organic character is particularly distinctive because of the density of its built-up areas in comparison to the looseness of the later organic developments.³² Traveling around fifty Indian cities including Dhaka from 1915 to 1919³³, Sir Patrick Geddes designed Dhaka according to its own

²⁹ Olmo,(1991), p. 241

³⁰ Tabassum, (2010). pp. 215-229.

³¹ Tabassum/Tyne, (2015), pp. 47-62

³² Khan/ Nilufar, (2009). Available at

(http://www.sss7.org/Proceedings/05%20Spatial%20Morphology%20and%20Urban%20Growth/052_Khan_Nilufar.pdf)

accessed on 5 pm, 26th March, 2017

³³ Bradely-Birt, (1975). p. 159

morphology as he provided a garden belt. He described during his planning initiatives in 1917³⁴ that after partition of Bengal in 1905,³⁵ „a modern city has begun to rise“ in the northern outskirts of the historic Mughal core of Dhaka.

“The diagnostic survey [. . .] seeks to unravel the old city “ s labyrinth and discern how this has grown up. [...] The transition in an Indian city, from narrow lanes and earthen dwellings to small streets, great streets and buildings of high importance and architectural beauty, forms an inseparably interwoven structure. Once this is understood, the city plan ceases to appear instead as a great chessboard on which the manifold game of life is in active progress”.^{36,37}

In fact, Geddes’s contribution was to understand the „city stand“ instead of its nature. He was concerned with the relationship between people and settlements- how they affect one another which were known as scientific approach which was his main planning propaganda.³⁸

2.2 Historical synopsis over vernacular pattern in urban settlement.

In Bangladeshi village life has always been active through agro-based society. Architecture of this soil is essentially an expression of subaltern societies constituted the psychic of the amateur masons come craftsmen. Such agricultural society had plagiaristic approach in their lifestyle from the dust and mud, influenced their creation profoundly at self-effacing thatched huts made by mud, wood, hay, straw, clay and bamboo, etc. vernacular architecture got some variations but still every individual huts gain their own uniqueness. Yet, new elements of daily experience; knowledge, value and behavior are always allowed to absorbed into certain attitudes that is deep within the psyche of inhabitants“ collective consciousness and condition.³⁹ Such Indigenous architecture has a clear relationship with their collective religious behavior and norms. Subaltern dwellings respect the lattice of intensity and contextually.⁴⁰ From Indigenous settlements at the fringes of water bodies all around, the continuous demarcating land property had shaped the historic kernel of old Dhaka. Human behavior generated in diverse forms to its spatial re-presentation; indigenous public spaces like courtyard into workstation. Mohollas were the enclaves of different castes or craft groups derived morphological archetype around a courtyard and cluster of such forms ensured permeability to connect with. (see Drawings. 1a-1c)

³⁴ Tyrwhitt, (1947), p. 26

³⁵ Bradely-Birt, (1975), p. 261

³⁶ Tyrwhitt, (1947). p. 26-27

³⁷ Mowla, (2011), pp. 169-262

³⁸ Spreiregen, (1965), p. 37

³⁹ Haque, (2009), pp.129 -136

⁴⁰ Nilufar, (2004) pp.33-40

Now, when Italian traveller Manucci came to Dhaka in 1663⁴¹, he describes the city as neither strong nor large. It had many inhabitants and most of the houses were raw. Oral reference suggests, until the first part of the 20th century, most of the houses at old Dhaka's business districts were temporary cottage industries and are built with mud, structural system tacked by bamboo with thatched roofs, as direct replica of the rural vernacular settlements. With changing lifestyle and socio-cultural demands, smaller space formations were adapted, though the basic space formation remained similar. Taking advantage of the then new construction technology, houses became multistoried⁴² and as a highest option, only the rich might opt for brick masonry. Among the several typologies of residential building in old Dhaka, the courtyard houses always have a strong presence to accommodate the sociocultural preferences of particular community. The open courtyards are good examples of semi-public functions that successfully adapted into the congested urban fabric.⁴³ Even many of the houses have internal courtyards that may lead to rooftop or ground level temples.

Traditional shop houses in old Dhaka acted like a family enterprise which means the same shop house was used for the living and manufacturing of products by the craftsmen.⁴⁴ While many of the common spaces in the Mohollas were created to stage cultural and religious events as result of social cohesion. Historically, in the extremely stratified class structure of the Hindus, the members of each caste and occupational groups tended to cohabit in the series of own vernacular pattern which eventually created specific Mohollas. Such stratification often constituted cities within cities, which implied that each caste or sub-caste lived in separate social worlds.⁴⁵ As the households are subsequently subdivided through generations for ownership issues; even small scale architectural elements like staircases or courtyards had to be shared. A common social sharing in front of every house was only possible due to their community bond. There is a smooth transition from public to semi-public to private to sacred, expressed both horizontally and vertically.⁴⁶

⁴¹ Mowla, (2000); pp. 45-62

⁴² Mowla, *ibid*

⁴³ Khan, (2006), p. 9-15

⁴⁴ Mohsin, (1991), pp.64-73

⁴⁵ Karim, (1991), pp. 24-42

⁴⁶ Mowla, (1999) pp. 177-186

As we know, the rural house form is a cluster of covered shelters around a central court. Indigenous urban pattern of old Dhaka is basically characterized by „inward looking“ houses with a courtyard known as „introverted house“⁴⁷. Attached with the adjacent buildings they form a continuous facade along the narrow irregular roads. This introverted typology developed and transformed chronologically with the development of the various business cores. Besides, the enclosed courtyard type may refer as the most indigenous urban house form in Dhaka region as its rural counterpart had never been found here.⁴⁸

2.3 Waterway connectivity and transportation

Dhaka, the only second example after Rome, having five rivers all around its periphery; was always at center point of river trade in south Asia. Islam Khan, the first Mughal General and the Governor, added a canal or artificial trench in the topography of Dhaka to connect Buriganga River near Pukur Teer or Pakurtali with Dholai „river“. It was to protect the Mughal defense sectors as well as to create a short cut waterway to Lakhya River from Chandnighat Navy base.⁴⁹ The Dholai canal taking off from the Balu near Demra flowed south-westward through Dhaka and used to join Buriganga near Mill Barrack area. (see Figure. 3) The Balu rises from the Lakhya near Kapasia and joins the same river at Demra. These water bodies had shaped the periphery of Mughal Dhaka. Water channels like the Dholai canal, the Gerani canal, the Segunbagicha canal or the Begun Bari canal played an important role in the indigenous city life. Most of these canals lie in east-west direction, which used to serve an important purpose of intricacy in total communication. In Mughal period, Dhaka’s boundary was extended from Buriganga to Tongi, almost 12 miles⁵⁰. But the populous built up city was rather limited within two and half miles from river Buriganga. The English Surveyor James Rennel visited in 1765,⁵¹ and wrote about his findings during 1792:

*"The Kingdom of Bengal, particularly the eastern part is naturally the most convenient for trade within itself of any country in the world; [...] Situated at the center, Dhaka was able to command all these great water routes. This location gave advantage to raise various urban settlements during various points in history."*⁵²

⁴⁷ Ferdous, (2007), p. 95

⁴⁸ Ibid

⁴⁹ Karim, A. (1991), pp. 24-42.

⁵⁰ Khan/Atiquallah, (1965), pp.2-6

⁵¹ Rennel, J (1792). pp.201-229

⁵² Mowla, (2014), p.1

2.4 Identification of the collective tools in Socio-cultural background of the sites:

Introduction to two neighborhoods

2.4.1. Shakhribazar

In the 17th century⁵³ the Mughal rulers promised the famous *Shankharis* of Bikrampur to settle in better lands and gave them the ownerships only along with this road which allowed them to trade freely. This street is the only remaining tangible component of Old Dhaka's heritage as it still continues their traditional profession, and deserves to be conserved by all means with its intact pride.⁵⁴ Within its variegated scenarios, there is hope of glory and beauty, which needs to be tapped to maintain the roots of our national culture. (see Figure. 4) It's tradition that dates well before the age of these ruinous buildings, more than four centuries as sanctuary of a specific ethnic community of specialized craftsmen in conch shell ornaments. According to Hindu scriptures, Ogosto Muni killed a demon named Osur with an arm which was similar to the saw that used in this *Shankha* craft. However, the raw material of *shankha* is basically imported from Sri Lanka as James Hornell in 1912 wrote:

"In Dacca the shell-cutters quarter, known as Shakhribazar, is located in the heart of the city; it consists in the main of a long and narrow street, devoted exclusively to this one trade. Usually the preliminary processes and the work of shell-cutting are carried on in partly open sheds or verandahs at the rear, whereas the carving, lacquering, and finishing of the shell sections precede in rooms and verandahs open to the street [...] The houses appeared up to the average of working-class quarters of an Indian city".⁵⁵

Today it is comprised with ward 72 and ward 73 under the Kotwali police station. A huge population, nearly 10,000 people is living in 157 houses of 4.6 acres⁵⁶ of stretched land. It has grown over four centuries along a narrow 10-12 feet wide road, 600 feet long⁵⁷ which connects Islampur Road with Nawabpur Road. The row housing has approximately 9 feet width and 90 feet⁵⁸ flank length on the both sides of that narrow street. Many houses contain small temples on the topmost floors. The average ceiling height is varying from 7 to 8 feet⁵⁹. Most of the old buildings were built with load-

⁵³ Mamun, (1993), p. 251

⁵⁴ Imon, S. S. (2006), p. 128

⁵⁵ Sarkar, (1997), p. 5

⁵⁶ Ahmed, I. (2012), p.293

⁵⁷ Ferdous, (2007) pp. 71-90

⁵⁸ Imammuddin et al. (1989) pp.39-54

⁵⁹ ibid

bearing walls of 20 to 24 inches thick⁶⁰ and are built with brick, lime and mortar. The simple rule is, the smaller the brick size, the older the building. In general, 1.5 x 4 x 6 inch⁶¹ sizes indicate an early period. The leveled plinths, the triple arch of ground floor façades, the overlooking balconies and decorated parapets facing the street, all are the distinct identity of this urban district.⁶² (see Figure. 5)

Houses are divided into three segments, the commercial part facing the street, the residential area in the middle and the service in rear, consisting of toilets and washing areas. Access to the inner part of the house is through a narrow corridor placed at one side of the house and usually divided by a partition wall to provide access to other rooms and to upper floors through stairways and ultimately terminate at the service areas of ground floor. Upper floors are mostly used for residential purposes and there is no separate kitchen rather attached with bedrooms. Rooms are arranged within two parallel parry walls. Many houses contain small temples on the topmost floors. The ultimate result was a linier shaped building that was increased vertically later.⁶³ But there were also some „palace like” residences which had been perverted from its original state, like House no. 14 dated from 1890 and now occupied by 13 families⁶⁴; which was comparable to Hindu aristocratic premises like those of Wari, Narinda and Gendaria, obviously a late colonial architectural example.

Even though the business is getting tougher, many families are still carrying on this craft heritage. Only 12 shops import, manufacture and conch shell today. On 9th June 2004, a 5 storied building, House no. 81 collapsed and 19 people were killed.⁶⁵ The Government's decision was taken after preliminary survey to demolish the houses with high risk and 15 of these houses⁶⁶ have already been demolished or replaced by new houses, but ultimately heritage is gone.

2.4.2 Tantibazar

Mirza Nathan was a Mughal tourist or lieutenant, who wrote a manuscript about Dhaka in Persian language, Bahristan e Gaybi; later translated to Bangla by Khalekdad Chowdhury, where described that Dholai river were connected with Lakhya River in two

⁶⁰ Rahman, M. (2003), p.7-32

⁶¹ Ahmed, I.(2007), pp. 7-16

⁶² Abu H. I., et al (1990), p. 48

⁶³ Niger, M. (2010), pp 33-36

⁶⁴ Imamuddin et al. (1989), pp 126-128

⁶⁵ Daily observer, news on cover page on 10th June, 2004

⁶⁶ Bangladesh Gazette, 2009

locations, at north-east in Demra, toward Balu river and Khijirpur fort near Hajiganj today during the 1600 century.⁶⁷ There were ten bridges over this ring canal. In the junction of Tantibazar and Malitola, Islam Khan excavated another canal towards north which flooded the marshy lands of Motijheel during the monsoon.⁶⁸ During 1608-1610,⁶⁹ Mughal Subedar Islam Khan Chisti gave privileges for tax rebating for different professions to settle the new capital of Dhaka and weavers took the chance. Tantibazar was once known as the „Jamdaninagar“ as artisans used to produce precious Jamdani.⁷⁰ No doubt, the weavers were one of the most privileged groups. James Rennel in 1782⁷¹ also showed whole Tantibazar area as a marshy land in map. The Muslin factory was closed by the British rulers in 1817⁷², just because they desperately wanted to expand their Manchester cotton trade and ultimately, weavers abandoned Dhaka to seek employment in agriculture. Overtime, it had undergone with unplanned morphological changes and also in their trade as the inhabitants of Tantibazar are mostly goldsmiths now. Already they were practicing in Tantibazar since Mughal period, but in a small scale. The original habitat of goldsmiths and silversmiths of Old Dhaka were in Kamarnagar and Banianagar areas during Mughal period and they shifted here during the 1820"s.⁷³ (see Figures. 6a-6b)

On the other hand, over the finger edge of canal"s shoreline, Armenians were appointed as representatives by East India Company for their monopoly of salt business. But they settled earlier here after Mughal conquest of Bengal, probably during the 1700 century.⁷⁴ By the hundred years of other prosperous business along with salt, like Cloth, Beatle leaf and Jute; they became so rich that they purchased some land lordship. By this time, the edge of Dholai canal became so filthy that they requested very „active“ magistrate Charles Dawse to connect it with river Buriganga by artificial canal at Babubazar end in year 1826⁷⁵. It costs 5000 taka to excavate an artificial lake of 723 feet long, 16 feet deep and 18 feet width.⁷⁶ James Taylor wrote that Dholai canal becomes a water body nearly 15 feet width and only small boats can pass through in winter at his description of 1840.⁷⁷ Tantibazar was still a low water filled land

⁶⁷ Mamun, (1993), p. 134

⁶⁸ Dani, A.H. (1957) p. 69

⁶⁹ Ahsan et al. (1991) p. 432-437

⁷⁰ Hasan,(2008); p. 423

⁷¹ ibid

⁷² Karim, (1965), p. 62

⁷³ ibid

⁷⁴ Taifoor, (1956), pp. 15 - 264

⁷⁵ Mamun, (1993), p. 29

⁷⁶ ibid

⁷⁷ Taylor, (1840) p. 87

but later when the Buriganga River shifted to the south and the northern part of Tantibazar was started to develop rapidly as slum after 1864⁷⁸. From 1st April of 1867; the tax system was employed by British government and the annual profit was 2,724 taka.⁷⁹

However, Tantibazar is such a significant neighborhood with a narrow frontage axis. Such areas have no lanes and by lanes as the access are from single bazaar streets. Tantibazar was a unique example of whole south Asia, urban morphology for the weaving crafts of Dhaka's famous Muslin and Tussor, for at least 300 years⁸⁰ the finest cotton created by human in this world. In fact, the morphological evolution of Tanti Bazar is the evolution of the recurrent development of shop houses. Street networks of Tanti Bazar and surrounding areas were partly disconnected with the northern part of Old Dhaka due to the existence of Dholai canal before British period.⁸¹ From historical record, holding no 3 of Bashi Chandra Sen Lane is identified as last remain of weavers, *Tantis* resided along with their retail shops until late 1960's.⁸²

Tantibazar grown from the junction point of the English road, a filled up state of Dholai canal today and like a simple linear spine running in north-south direction,⁸³ it connected to Shakhribazar through Pannitola. The road is 1000 feet in length and 12-15 feet wide⁸⁴, with rows of densely built houses on both sides. Some of the parts of the streets are little bit wider than its normal width. Oral history suggests that those wider parts of the streets were used as the parking of horse driven cart, locally known as Tonga, when it was the only preferred vehicle for the citizens.⁸⁵ For information, the other main vehicles of the city were bullock and human driven push carts even in use, until the partition of India in 1947.⁸⁶

Shops at the road frontage and the residential unit are provided around the courtyards in a linear limitation. Three typology of courtyard was found, L-shaped for facilitate temple, U-shaped suits for business purpose and square shaped, especially for inner portion. (see Figure.7) The plots are elongated and sometimes an extreme but average

⁷⁸ Mamun, *ibid*

⁷⁹ *ibid*

⁸⁰ Fatima, (2013), p. 10

⁸¹ Dani, (1957), p. 69

⁸² Fatima, (2013), p. 73

⁸³ Tanima/Sharmin (2011), pp.143-155

⁸⁴ Fatima, (2013) p. 99

⁸⁵ *ibid*

⁸⁶ Huq, (1991), p. 69

configuration of 10feet x 100 feet and the building height varies from 2-3 stories.⁸⁷ The early house form of Tantibazar was observed as a thatched hut, from the picture of D'Oyly, titled as 'Indian Weaver of Dacca'.⁸⁸ (see Figure.8)

These traditional shop houses, exactly 78%⁸⁹ are having introverted and elaborate layouts focusing the courtyards have been transformed into compact and multistoried buildings. The houses are mainly divided into three segments like Shakhribazar but services, toilets, baths and washing in open courts at the rear used by the female folk for service activities. Its commercial hub created sharp edges for a good sense of enclosure and the quality of intimate urban space to enhance the community spirit and cultural activities at outdoor. The original building facades also imply a harmonious relationship through balconies and windows with the street level. From structural point of view, the shop houses constructed in earlier period have load bearing walls, wooden or steel beam/joist and purlins as the main structural system, frame structure have been introduced in new additional parts.⁹⁰ The settlement possessed a street facade proportion of about 1: 1 or 1:2,⁹¹ during initial stage, which is much more perverted now. Only the relationship between plot and street usually remained consistent here.

2.5 Aesthetical appearances

2.5.1 Urban aesthetics

Functional things are beautiful, but „function“ could be both tangible and intangible. Somewhat Luis Kahn called the measurable and un-measurable, the physical and the spiritual, symbolic or some people term it metaphysical insight, all reflects an aesthetics. Urban Aesthetics is rooted contextually, which varies from place to place like shifting axis of old Dhaka. Public spaces like courtyard known as Uthan, alleys known as Gali, node means Morh, raw markets called Bazar etc. were constituent elements of old Dhaka's urban aesthetics. (see Drawing. 2) Lifestyle is a combination of „leisure and work“. Dhaka's charm was derived from its natural settings all around; its landscape with natural greeneries; its sympathy with the water bodies; and finally how it involved its people in its development process.⁹² That's why, Kevin Lynch's five theory of the city's „Image making“ and the subject of urban aesthetics is expressed mainly by three terms.

⁸⁷ Muktadir et al, (1985), pp 115-130

⁸⁸ Taylor, (1840), pp-86-98

⁸⁹ Fatima, (2013), p. 75

⁹⁰ Fatima, (2013), p. 102

⁹¹ Nilufar, Farida, (1999) available at

(https://www.academia.edu/1940231/Transformation_and_growth_of_Shophouses_in_connection_with_changing_spatial_dynamics_of_Old_Dhaka) accessed on 13 th February, 2017 at 12 pm

⁹² Mowla, ibid

Firstly, there should be an interest in the possible connection between psychology and urban environment. Secondly, to understand a city, proper fascination with the aesthetics of the city landscape is a must. Thirdly, persistent wonder about how to evaluate a city will take you to your goals and at last, the hope of influencing planners to pay more attention: to those who live in that area, to actual human experience of a city and how it should affect the city's overall policy.⁹³ For this study, Lynch's second expression is directly concerned with urban aesthetics and was elaborated quite early in his „the Image of the City“ write up identifying five elements: Path, Edge, District, Node, and Landmark. (see Drawing. 3)

2.5.2 Linearity of streets

The pattern that exists in the old city is like a language, where sophisticated narrow street network guides a „ballet dancer“ to move. The front elevations defining the fabric of houses that incorporating these streets continuously. The dead-end passages sometimes cut deep inside the urban block presenting a series of sharp turns. These were found indiscriminately along in both the access roads and the alleys. Within the street network of Old Dhaka, the intersections were rather wide and irregular in shape. These nodes acted as civic space at local level as sense of enclosure of these spaces was very intimate.⁹⁴

Shakharibazar Road and Tantibazar Road were mainly the commercial interfaces over the residential use to comprise the character of „mixed use“ city, and such areas have no major lanes and by lanes; as the access are from single bazaar streets that are defined by closely spaced buildings.⁹⁵ Apart from this, within the closely knit medieval urban fabric, these open spaces acted as relief and were the activity spaces in a pedestrian scale, they are called „Chawks“⁹⁶ in Mughal Dhaka.

However, what was the advantage of linearity for the study areas? Because, they can find variations in a series of spaces next to each other, which helps any person to go for choice while purchasing. In an urban fabric their significance can also be emphasized by their location for the purpose of extension and growth: both are cumulative for Shakharibazar and Tantibazar from urban context in terms of progression while branch formed its connecting arms. In fact, such linear organizations

⁹³ ibid

⁹⁴ Ferdous, (2007), p. 95

⁹⁵ Khan, I. (1985), pp. 107-114

⁹⁶ Mamun, (1993), pp. 75-78

for these urban sectors were example of flexibility⁹⁷ and they allow an elevation collage to form urban aesthetics. Its organic character of the historic part is particularly distinctive with the densely built-up areas in comparison to the later developments. Thus, like most of the subcontinent towns, the historical spatial structure of old Dhaka remains as the relic of the national past. (see Figure. 9)

2.5 Socio-cultural Dynamics

2.5.1 Social structure

The societal structure of Old Dhaka is not homogeneous, people of different socio-economic status and religion live together in the traditional pattern forming an indispensable structure of ethnicity and occupation in complexity. Thus, the social formation of the old city has shaped in a heterogeneous society since the inception of urban development. In fact, in early Mughal Dhaka the social segregation was evident geographically.⁹⁸ Again, socio-cultural dynamics in these areas resulted in the formation of a spontaneous neighborhood, known as Para in rural term and Moholla in civic term, which turned as the basic spatial unit of the organic pattern in the whole urban web. Hierarchy of spaces and social relationship: courtyards, narrow lanes, nodes, and bazaars all together manifested the socio-cultural quality of urban life.⁹⁹ These Mohollas, the historic neighborhoods in old Dhaka, had a territorial base, which revealed a social segregation symbolized by geographical definition. It is crucial to identify the essential mechanisms of present urban morphology in order to sustain the continuation of our cultural quest. There remain three different types of territorial units in the cognitive image of the inhabitants of Dhaka: locality, neighborhoods like Para/Moholla and physical parts of Bazar in a local context.¹⁰⁰ The localities of the old town grew mostly in a spontaneous way and the resultant form is irregular, non-geometric, and organic, with an incidence of crooked and curved streets and randomly defined open spaces here and deep cul-de-sac forming sharp turns in the urban blocks with particular and confined land use pattern. The sociological aspect of community that living in the Mohollas is closely related to only specialized craft based trade, which imparts identity to all the neighborhoods. As the history of the city suggests, most of the Mohollas have undergone by a long and gradual process of social evolution, even though the physical fabric may have remained more or less intact. The close community living has enabled the residents to cope with changing sociocultural

⁹⁷ Ching, D. K. (1996), p. 198

⁹⁸ Kabir/ Fatema (2015) pp. 65-73

⁹⁹ Mowla, (1997), pp. 264-265

¹⁰⁰ Nilufar, (2009), available at (http://www.sss7.org/Proceedings_05.html) accessed on 4th may, 2017, at 9.15 am

needs.¹⁰¹ To any western observer this is often symbolized as a „chaotic grouping“ of urban retail growth. The apparent complexity of such social phenomena frequently indicates a lack of theoretical concepts available for their analysis.¹⁰² But in real function, this apparent chaos of the urban trade district in developing countries is more apparent than real.¹⁰³

2.5.2 Demography

When a community forms township? When a group of more than 1000 working people takes particular responsibility on behalf of the whole town where 30 to 50 families is of same livelihood sustains in a mosaic amongst other subcultures.¹⁰⁴ For additional information, if the inhabitation history of both areas is considered, this study finds a fluctuation in its population through stages of history. First of all, the city's boundary should be identified in this regard. Early records of the East India Company describe a town which has boundary on the basis of water transport: Buriganga in south, Tongi in the north, Mirpur in the west and Postogola in the east during 1786¹⁰⁵ Although it was the overall limit of the city by the end of the 18th century, the area lying to the north of Mir Jumla's gate, near today's Ramna was very sparsely populated. The population decline was started and reached at its lowest ebb when the population reduced up to 51,636 during the time period of 1764-1867.¹⁰⁶ It was the time from British conquest to just after Sepahi Mutiny. The population record shown a continuous growth and the municipality was formed to convert old town into a business city since 1872¹⁰⁷. Among all of these, there were 11,453 conch shell craftsmen in 1776¹⁰⁸ and the weavers were extinct from Dhaka when muslin factory was closed and they changed their profession with locations in agricultural lands around Dhaka after 1817.¹⁰⁹

2.7 Assessment of the cases in different urban settings

2.7.1 Panam Nagar at Sonargaon, Bangladesh

This section of research tries to find out the morphological character of the colonial architecture and urban settlement of Panam, a unique settlement in historic landscape at Sonargaon, the medieval Islamic capital in Dhaka region. In order to determine their

¹⁰¹ Ahmed, S. (1986) p.15

¹⁰² Mitchell, (1995), pp.108-133

¹⁰³ Paddison/ Findlay, (1990) pp. 3-15

¹⁰⁴ Alexander, (1977), pp. 47-55

¹⁰⁵ Khan, Karim (1964) pp.38-39

¹⁰⁶ Rennel, J (1792). pp.201-229

¹⁰⁷ Khan/Nazrul. (1964), pp. 1-41

¹⁰⁸ Mamun,(1993), p. 250

¹⁰⁹ Ahsan/Roise (1991) pp. 432-437

genotypic resemblance and define the linear orientations, this case would be a helpful explanation in the terms of social relations. Its special linear arrangement of buildings from the point of view of a lost inhabitant relationship, categories of spatial order; the functionality of spaces, followed by prevailing vernacular typology in Dhaka region which might help us to imagine what could be the possible morphological similarity of the study areas before 400 years ago. (see Figures. 10a-10b)

This case is also interesting in a sense, as popular history stated that some rich Hindu Businessmen started to live permanently in the Panam city with family and entertainment in the first part of the 20th century¹¹⁰, who got some connection with old Dhaka's clothing trade. It is important to examine the footprints of Panam for prevailing households and unveil how similar were these ancient settlements to those of Dhaka. However, to identify the social meaning of space-manifested layering, the genotype of Panam as union of linear sequence is not very common in the region. Rather ring oriented order was the major character on that time period. It can be interpreted as the need of privacy was low here and indicates that the buildings have less residential quality from the socio-cultural background of old Dhaka.¹¹¹ The suburb settlement of Panam is stretched along a narrow road and 52 buildings, ranges from single to three storied, were built along the road, which is important clue for this study and the street front houses of Panam are apparently seems to be compact in nature and introverted in type, following the indigenous pattern of commercial streets of Dhaka.¹¹² In addition, it followed a water body's shore line and did not touch it in right angle. From this understanding the paper will examine the urban settings of Panam in comparison to Shakhribazar and Tantibazar only to trace the cultural corridor aspects, although Panam is much later addition than these two, but within the range of the region. And could be verdict as business districts always like to follow linear road whether in transverse or in alongside in a relation with the water body.

4.2.2 Chitpur district, Calcutta, India

Chitpur Road, now known as Rabindra Sarani; marked the foremost transportation and economic corridor connecting the Kolkata city from north to the south, and of immense cultural importance as the seat of the Bengal Renaissance. Chitpur Road is a four km long historic corridor starting at Lalbazar Police Headquarters as its southern tip

¹¹⁰ Nulifar / Eshika, (2014), p. 7-10

¹¹¹ ibid

¹¹² Husain, (1997), p. 45

and terminating northwards at Bagbazar Ghat. Surrounded by a bazar economy, delineated along professional hierarchies, the spine emerged as the hub for local crafts, trade and traditional commerce, informal settlements of artisans as heterogeneous community. The site's inherent cultural economy further gains significance for some key factors. Firstly, local livelihoods based on this site for religious-ritualistic practices associated with cultural products. Again, the commercial artery also forms the cosmopolitan epicenter of the city revealing a dense ethnic diversity. And finally, mix of traditional artistry evolve with time and need, enhances the skill-set of the various skilled artisan. Its urban morphology and demographic distribution further strengthen this pattern. (see Figure.11a-11b)

However, here decorative products are made completely by hand or by simple tools. Expertise is often earned through the same apprenticeships and knowledge systems that their predecessors served to the society where the process of manufacturing was never mechanized. To name some, Classical Musical Instruments, Muslim artisans' small workshops specialized in Sherwanis and Kurtas¹¹³ and elaborate handcrafted Sarees¹¹⁴; Scent-makers and spice-traders, Wooden and copper utensil makers and so on. But today they remain threatened due to rapid decline of traditional craft products. This cultural heritage network of Chitpur has strengthened the vitality of Kolkata by playing a role as the most historic economic and cultural corridor of West Bengal¹¹⁵, like Shakhribazar of Dhaka in East Bengal.

¹¹³ Bridegroom ware

¹¹⁴ Bride ware

¹¹⁵ Bose, K. (2015) pp. 61-66

Chapter 3

Concept of collective memory and cultural spaces

“One can say that the city itself is the collective memory of its people, and like the memory it is associated with objects and places. The city is the locus of the collective memory. This relationship between the locus and citizenry then becomes the city’s predominant image, both of architecture and of landscape, and as certain artifacts become part of its memory, new ones emerge. In this entirely positive sense great ideas flow through the history of the city and give shape to it.”¹¹⁶

- Aldo Rossi

¹¹⁶ Rossi, Aldo. (1982). *The Architecture of the City*, Cambridge, MIT Press, Massachusetts, USA

3. Concept of collective memory and cultural space

3.1 Collective memory and cultural space

3.1.1 Collective memory

While concept of Tradition is embodied in the practices, activities and everyday survival strategies invented by the city dwellers, a dichotomy for cultural orthogenetic role.¹¹⁷ In fact, cultural conflict and contestation is like semiotic encode in the built environment and it provides material evidence that the public space and its spatial relations are nothing but cultural production of all the struggles till now for survival¹¹⁸ It's a huge collection of symbols and meanings, chosen to represent the local, cultural and social continuity in time and place inherited from the past.¹¹⁹ Besides, cultural elements other than built heritage, like rituals and festivals, both cultural and religious, are important to manage and sustain the built heritage.¹²⁰ Heritage is somewhat that blended and valued as such creation which comes from a group of people practicing culture in particular region, placing all together at the same point.¹²¹ Above all, time, space and person might not be captured as time flows like tide, space changes its quality and person dies, but only cumulative practices of hereditary within an area might remind us about previous era which already have left some notions.

Following the recent developments in theorizing architectural historiography, the understanding is seen as heightened awareness of the inherent ethnography within particular architectural settings. Urban morphology is understood here as a socio-cultural phenomenon rather than as a static and inert „object“ that can be studied only in terms of its formalistic characteristics. Until recently architectural historians have been reluctant to examine issues of collective memory for any race associated craft in the production of the built environment. New approaches to architectural history may be induced by studies in vernacular architecture, cultural geography and social history which has created fresh insights into a co-memorization based built environment. Such urban identity is intimately tied with memories as these places have some power to act like storehouses.¹²² This effort would be better served if the intellectual assumption like this research comes forward.

¹¹⁷ Redfield /Singer, (1954) pp.53-73

¹¹⁸ Low, (2000), pp 861-862.

¹¹⁹ Askew, (1994) pp. 85-116

¹²⁰ Giddens, (1990). pp. 10-32. Available at, (http://lifecourses.ca/sites/default/files/Consequences_of_Modernity%20-%20Chpt1.pdf) accessed on 12 April, 2017 at 1.30pm.

¹²¹ Clarke/ Johnston, (2003), p. 366

¹²² Hayden, D.(1995), p.43

The theoretical developments in subaltern studies of 'hegemony', to explain the culture and the resolve of cultural systems, provide the potential for questioning the space occupied in craft practice. Concept of living in togetherness is manifested a collective consciousness that creates a certain type of urban morphology from the palimpsest of rural vernacular form and space, truly a subject to feel the „Objectivation“ of social spirit.¹²³ In this sense, the deltaic urban fabric is not merely a visual object but a synthetic production of a local ecology, sociology and mythology which had only left some essence for us.

Influence over the collective consciousness of people through protagonist actions favoring some ideas or interpretation was never dominant in these two sites. Everything in the world is the product of a respective historical process. History from philosophical view makes history itself seem to be a „Blackbox“ that is unknown to the common people.¹²⁴ The interaction of history and philosophy sometimes has a positive impact by gathering the factual historical evidence, proved to be convincing to the people. And collective memory is the tool to judge or bridge history and philosophy.

Application of such representative and value oriented assertiveness, gave the society a sense of confidence and much needed feeling of self-sufficiency to facilitate the continuance to the envisaged life style, although we have a lot of limitations, which again, means that the subject is posed with opportunities. Because, vivid urban fabric like Shakhribazar could be compared as a „Living museum“.¹²⁵

3.1.2 Memory associated spaces

If come to the point specifically at Shakhribazar and Tantibazar, their neighbourhood pattern is perfectly responsible to generate collective memories. Generally these Mohollas here are initially divided into two layers: the Street fronts are craft shop comes first while the second layer right behind is the almost hidden residence which is done deliberately. Now, it is also common for both sites, that the utility services of water for quarrel to fetch the pure water and create a queue, the streets are the best places to create memory every day. Another thing is similar that these two areas offered accommodation to less fortunate groups of society to serve the „Served elites“

¹²³ Conzen, (1973), pp. 123

¹²⁴ Vashkor /Barua,(1988) p. 43-45

¹²⁵ Francesco, S., (2011). Available at

(http://www.getty.edu/conservation/publications_resources/newsletters/26_2/feature.html) accessed on 20 march, 2017 at 5 pm.

in every period of history, and when they could not fulfill their role, they vanished. It points main line of growth and defined scopes to expansion

In Tantibazar, the shop houses having 'roaks' and steps at the front of shops with covered walkway or shaded platform provide opportunity for the local people to spend time in gossiping. This is locally known as „roak er adda “¹²⁶ in old Dhaka. (see Figure 12) Usually, most of the people of this area are found to spend their leisure time by the street side while gossiping with their friends or reading paper on the „jimmi-kaji“¹²⁷ over the shops beside the street.¹²⁸ It's not important to know whether they are related to original state of weavers and cloth traders timeline or not, but it is still in practice. Surely these are transformed features from originality, when the district was wealthy enough to erect colonial style edifices. In Shakhribazar, such opportunities are not evident but shop come workshops are best alternatives. Still one can hear the noise of conch shell production and where also other craft practices are present, which are the places for collective memories. Of course, the stairs, dark corridors and light wells are obviously the intimate places for private daily life of Shankharis. But temples in the festivals are the power house for such collective spaces.

3.2 Characteristics of Collective memory

3.2.1 Physical or tangible aspects

„Place“ in urban district always means a conferred on particular spaces by particular ethnic groups of people throughout sustained association in various levels and also ages. In old Dhaka, the combinations of the small vibrant elements are like the individual parcel of land, of the whole urban form collectively with its building and open spaces.

At a first glance, two study areas of this paper might seem as dilapidated, narrow and cramped Mohollas; the most abrupt physicality to judge noticeably. Which have undergone several major social-political changes though their physical fabric and original function remains more or less intact, in most cases of Shakhribazar.¹²⁹ Why such built forms were evolved and who were the inhabitants to experience it first? Reason depended on their specialized skill to learn from each other or, Hindus as a minor community's desire to stick together in a bewildered context as they were

¹²⁶ Chat with friends

¹²⁷ Type of bay window

¹²⁸ Ahmed, I. (2012), p. 157-160

¹²⁹ Imammuddin, (1989), pp.39-54

brought here from Deccan, as they proclaims¹³⁰. This gave each cluster some distinct characters for their own, perfectly reflected in the physical form in Shakhribazar. Other superficial but also important collective elements are the physical layers over the built forms, adapted traditional style with late colonial architectural styles, use of materials and details, etc. As time passes, the layers; both physical and memorial signs are juxtaposed. Complexity raised and superimposed with the added new layers for the quest of ownership, but nothing or less deducted from collective experience.¹³¹ Eventually, they become so identical for each particular Mohollas which guided to its own essence.

How this memory-association with any place is developed? Orientation can play an important role in the development of perceptual sense of space. The coarse grain as well as the built forms, itself are unique to its conch shell counterpart, which is gold now for Tanti bazar accordingly, again with linear order, all follows a religious philosophy to set built form. From the area's functional point of view, by reducing the travel distance, compact spatial structure of Mohollas ensured easy access to the community goods and advantage of water transportation. Hierarchy of urban spaces ranging from Public Street to private terraces or light-wells ensures equality of rights by a system of space domain. Mix of housing in terms of size and shape indicates the social heterogeneity. And narrow, intricate, winding street pattern with shops promotes independent mobility by providing safe, secured and active pedestrian environment.¹³² Such order acts as „democratic spaces“ as everyone can access it and both the male and female, young and old members of the society can enjoy their equal rights by having their own spatial enclaves. It is claimed that the generalized functional growth pattern of Dhaka is concentric around the business districts.¹³³ For Tantibazar, the change of social dwelling settings are quiet distinct from its original roles and objectives. Thus actors and instruments are diversely manifold here, could be referred as „Changeable city“.¹³⁴

3.2.2 Intangible aspects

Sense of place comes from both a pragmatic and metaphysical interpretation of space relating to our cultural background and the influence of time period. Practicing community is such living component of any urban area to make it meaningfully vivid.

¹³⁰ Mamun, (1993), pp. 248-251

¹³¹ Lane, L.W. (1958), p. 44

¹³² Kabir / Khan, (2015), 65-73

¹³³ Chowdhury, N. (1981), p. 15

¹³⁴ Giorgi/ Germak, (2008), available at (http://porto.polito.it/1839965/1/99_craft_community_design.pdf) accessed on 3.30 pm, May 23rd, 2017

They actually conserve a major part of the living cultural heritage which values the traditional urban culture by creating and more importantly; reflecting the national and individual identities.¹³⁵ The term 'Living' heritage has two fundamental dimensions. Firstly, dealing with practicing aspects of tradition, like Shakhribazar; the craft of making conch shell *Shankha* and different surviving skills related to this and craftsmen's unique lifestyle. Secondly, dealing with some heritage components such as vernacular building systems, which still have 'continuity' evolved over time and are still surviving in similar or modified form. Now, the burning question is; what we understand about these two area's tradition? It is believed that organic order derived from long established cultural tradition and historical layering of the social contract and the results of a string of compromises between individual rights and the common motivation.¹³⁶

The intangible elements of sociocultural layer take shape with the community's everyday lifestyle, crafts, shared customs, meaningful signs, notions, and for this study; most importantly, their identity. The concept of distributive equity in terms of receiving social benefits and utilities can be distinguished spatially as their aim was to provide equal right to use or enjoy the urban services and controlled accessibility to private spaces. But, subconsciously; shared memories are building up in this physical existences every day. The collective stories may now seem archaic, yet they are basic.¹³⁷ Again, sometimes physicality cannot omit its intangible conceptuality, thus it's difficult to identify as they are complementary to each other.

3.3 Collective memories in two selected sites

A cognitive approach of behavioral type seems to be useful in delineating the territorial definition and related spatial character of the „local areas“ as perceived by the inhabitants in order to reveal the generic morphological rules in an organically developed city. Cognition mainly indicates how to understand the organizational order here in its pattern. It's a cluster of homogeneous peoples with variety.¹³⁸ In this section, the study will focus from the small scaled home temple to religious serving institutions in the study area and its impact overall to a large city context.

¹³⁵ Bhatta, (2008), pp. 7-23.

¹³⁶ Kostof, (1991). Available at (<http://jsah.ucpress.edu/content/54/3/356>) accessed on 22nd April, 2017, at 4.50 pm.

¹³⁷ Simonds, (1983), pp. 275-288

¹³⁸ Rapoport, (1977), pp. 8-20

3.3.1 Religious spaces as memory associated space

„Event image“ is generated over time both by repetition and by re-enactment; in this study it is observed from religious point of view in broad sense. Meaningful space is possible by treating events as gestures towards the creation of public space and humanization.¹³⁹ For example, there is too strong interest on abstract notions for associating memories with temporary „Place-making“ like „Puja Mondap“¹⁴⁰ is much more effective in the actual nature of the festive city. And this may be also a reason why virtual world seems so appealing, in fact in the colorful festivals like Holi. On the other hand, its historical utility services and its potential but falsified beautification over colonial architecture and urban 'nicety' become to be used in a formal way.¹⁴¹ However, manipulation of people's sense by such event in a designed space does always not necessarily provoke a true sense. To be successful, memory association must be created spontaneously. Hence, it is argued that in modern cities social grouping is inconsequential today since people live in a „non-place realm“. The manufactured event can be seen as a somewhat artificial method of stimulating a sense of those festive places. This event, both ritualized and repetitive, should not have to be extraordinary, but it must be able to captivate and motivate people, and indeed they are. Every night is also special in this regard for those two areas. And temples in the second floor are much dominant element for Shakhribazar's context. (see Figures. 13a-13b)

On the other hand, the internal structure of a city emerges as a mosaic of local areas, which in fact mirrors the divisions and inequalities of society. Such pattern of spatial separation characterizing the mixed used areas of cities can also be considered as a particular situation for operating territoriality, but religious places are totally aloof from that. For example, it is their need for identity of places to format memories: Shiv Temple and Kali temple, the religion might be same but not their essences or influences over space are not of similar aspects. These are actually the 'local communities', which are mainly formed through concentration and centralization of grouped people with some common characteristics.¹⁴² So far, it is suggested that community in the modern city is a small social system with its roots and ties to a certain locality.¹⁴³

¹³⁹ Mowla, (2003) pp.145-170

¹⁴⁰ alter of the worship

¹⁴¹ Habib, K. (2010) available at (http://n-aerus.net/web/sat/workshops/2010/pdf/PAPER_habib_k.pdf) accessed on 4th may, 2017 at 4.35 pm

¹⁴² Herbert / Raine, (1976), pp. 325 -338

¹⁴³ Pahl, (1965), pp. 81-100

3.3.2 Work places of two streets according to ethnical identity

Social perceptions, influences and relationships are a cognitive framework comprised of ethnic characteristics to simplify the process of social impression. This is a facilitation that occurs most readily for strong responses in several motivating situations of ethnical learning. When peoples of common folk tend to confirm the collection of norms and values, the society had already established reasons like comparisons, ambiguities, punishment and acceptations: to do's and not to do's,¹⁴⁴ all acts like a basic framework of ethnical identity. Exactly that was crucial for sun oriented activity of weavers in past and hidden working cores of Shakhari today. Why physical spaces continue to have much relevance for them? If understanding of one's world continues to diminish, it is believed that one will experience the loss of place or simply experience displacement. If sense of place is lost, there might have lost something fundamental to our sense of self. Loss of place leads to a loss of the sense for security.¹⁴⁵ In fact; it is result of a long stratification of „well-fixed“ standards of these societies eventually led to a less social integrity with its surroundings. The detailed ethnographic studies of these urban communities support such proposition of social segregation¹⁴⁶ and reflected over spatial isolation over city context by its linear shape. (see Figures. 14a-14d)

3.3.3 City as collective memory itself

To be exact, Cities are products of the changing circumstances, culture, societies, politics and economy of their origin and growth. The commercial activities in a city are as old as the city even was not there. The explanation of urban spatial forms and their social meaning requires an investigation of the continuing forces that shape cities within the process of urban evolution.¹⁴⁷

How to understand complex environments like cities by the dints of sense, while every city contains at least three cities in it? The first city is; the Artifact: physical, indisputable, the web of streets and urban voids and solids that surround and define them. The second city is perceptual which introduces the human presence to the urban conglomeration. It is a negotiation between the artifact and the human being, limited in form but redefined by the human senses. City can be sensed as brilliant or depressing, glorious or terrifying, odoriferous or fragrant, loud or quiet, so on - the realm of how it seems like. Finally, there is the third cognitive city, the product of the human brain and

¹⁴⁴ Morgan et al, (1993), pp. 367-377

¹⁴⁵ Mowla, (2006), pp. 23-32

¹⁴⁶ Webber, et al. (1964), pp. 79-153

¹⁴⁷ Mumford, (1970), pp. 486-493

experiences between the inhabitants and their built structures; their perceptions that link them to a psycho-physical networking.¹⁴⁸ This perceptual sense is linked to a development of our memory-association with surrounding places. So, all these three cities of the „parallel cities“ are directly connected with collective memories.¹⁴⁹ However, without content or vision, precious past cannot build any prosperous future which also fits a new conception, „Kinetic City“. It indicates that, cities in South Asia region are different, and should be so. These cities could be characterized by physical and visual contradictions that amalgamate in a setting, especially landscape of incredible pluralism.¹⁵⁰ If „place-world“ is to remain relevant, it must be considered on these multi-levels of kinetic consciousness.

¹⁴⁸ Treib, (1993), p. 88

¹⁴⁹ Mowla, (1999), pp. 177-186

¹⁵⁰ Mehrotra, R (2009), pp.141-149

Chapter 4

Analytical findings: social and physical aspects in memory associated spaces

*"The saving of earth, the reception of sky (heavens), the initiation of mortals into their death, and the awaiting/remembering of divinities [...] Still human lives poetically"*¹⁵¹

Martin Heidegger

¹⁵¹ Nader El-Bizri, 'On Dwelling: Heideggerian Allusions to Architectural Phenomenology', *Studia UBB Philosophia* 60 (2015)pp. 5–30

4.1 Research findings: Identifying the collective memory spaces

4.1.1 Field Questionnaire survey consequences

From field survey (see Drawing. 4) we find some similarities and dissimilarities between these two urban corridors. Firstly, Shakhribazar's inhabitants are 80% demanding that they are from pre Mughal era, while 60% of Tantibazar inhabitants are migrants from other districts of vicinity like Bikrampur, Comilla and Sonargoan. 70% people told that Shakhribazar's identity is only for its craft practice and community cohesion within homogeneous religious belief, Hinduism. Tantibazar only preferred community cohesion in a heterogeneous religious environment which has tied them in a collective source of best „goldsmith family“ of the country; Hindus and Muslims are like „brothers“ here. The streets are themselves a „stage“ for both urban context, especially for Shakhribazar 43% and the survey reflected to major temples for both sides, Shiv temple for Tantibazar and Kali temple for Shakhribazar are their favorite gathering places respectively. For collect memory, Durga puja is such major Festival that constituted this two area's identity following exact taxonomical notions. Apart from this, Shakhribazar identically creates its memory associated spaces with its craft practice. For a secular event, this two sites don't show any exception, the first day of Bangla year's calendar, as it is widely practiced after 1990's and being a UNESCO world cultural heritage, the festival follows Ganesha, elephant god of wisdom (see Figure.15) and business offerings and it is held here 15th April, instead of 14th April according to Hindu calendar.

Conch shell was the prior benchmark for the collective memory for Shakhribazar. They want to obey the tradition only for their ancestor's memory and want to conserve for a long run at any cost. Temples are their only urban space to adopt with and mid aged Bijon Banik of 77 no Tantibazar, requests the youth of Tantibazar at least pray in one day at any temples in the area. Several respondents have identified temples as a sign. They will be always independent as a unit, because they find inner peace here, not anywhere else, sense of belongingness will be missed and recurrent festivals revive them always and all are relatives here. They are aristocrat in the sense of ancient inhabitation. Hari Nath, aged 60 and resident of 86 no house even want to die in earthquake rather shifting anywhere else; the Moholla is his life support. Migrant like Nuruzzamman told that he becomes nostalgic when it rains, a vital sign how rural experience still imprinted in every bodies" mind. Comparatively young respondent like Sowpan Ghosh of 34 years of age, from 39 no. Kotowali road, wants to conserve the

inner court houses and for his area he admits that change is unpredictable and his main cohesion is peer groups to have chats on streets and „roak“ verandas, a collective memory generating place. Lot of vertical palimpsest (see Figure.16) are present and will be exposed and covered by new structures, but the utility line waters could be resistant horizontal palimpsest that might not be possible to erase. (see Figure. 17)

The survey posed some options for the respondents to let them express their own views. Three questions regarding collective practice, signs of memory and nostalgia have been asked to extract the positive aspects. On the other hand, natural calamities like earthquake, conservation issue which they don't want totally and waning practice of craft and indifference about it in upcoming generations will guide to the challenges that coming ahead or simply negative aspects in reality of rapid urbanism. On the other side of these positive comments, there was only one person, Jayanti Nag, aged 50 and resident of 92 no house; who gave her consent to conserve old premises, otherwise everybody were fed up with conservation and urban heritage issue. For example, Shokti Sarkar of 27, Kotwali road asked a vital question that what's left for conservation. He added that all the business had been shifted to Gulistan's Baitul Mukarram national mosque, the edge between old and new Dhaka. Majority want to educate their children and abandon the craft or even area to the planned areas of Dhaka metropolis. Some gave suggestions to import bangles from India rather producing it here, and traditional tools are already extinct. For, Tanti bazar's gold trade, monopoly of gold mortgage is shifted now, which they are worried about. But they are happy that they can at least build new multistoried houses, which their neighbors cannot. However, the first five questions were of qualitative approach and the first three questions shown results in totally different or may be opposite manner for two sites. (see Chart 1, 2)

4.1.2 Analysis of Literary findings

4.1.2.1 Urban Morphology

The integral relationship between inherited built-form and environment is also the key point to perceive complex organization, from simple clustering to complex patterns, and finally by forming a deltaic city based on different crafts. Such Deltaic morphology implies the disposition of isolated building in a fabric of occupational footprint. Clusters are formed by grouping pavilion „unit“ in a series, or around an amorously interiorized space as well as courtyard. An understanding of deltaic development lies, not in the

dense labyrinthine fabric of western cities, but city formed in the „cultural corridor“ matrix, where the distinction between urban and rural morphology has not been so oppositional, and building took their place in the natural milieu with minimal turmoil, adapting with respective professional background. It is known that Patrick Geddes was pioneer for his multi-disciplinary approach of „evolving city“ concept which he tried to apply here for planning „new green belt“ for Dhaka as an evolution of ecosystem. This was something „added“ value that includes acknowledgement history, aesthetics and functionality which he referred as „spirituality“ from the philosophical influence of Camillo Sitte. But to criticize him, he actually failed to implement his „conservation surgery“ for his planning attitude adopted in 1917. Moreover, as a botanist; he found interest over local flora but did not properly juxtaposed this soil’s own character, rather created suitable networking to erect European Bungalows in the Ramna green, just because being patronized by the British rulers, no reflection of social welfare like magistrate Charles Dawse to connect canals.

4.1.2.2 Justification of Linguistics

The rural term Para or area is something referred as Moholla or neighborhood as a transformation in compact urban environment. But this Mohollas are distinct by character and only belongs to small community who practices common trade. From history, first enlighten cities were erected in northern part of the country where rivers are less in number, to name, Pudra Nagar. Then trade centers are established at every suitable nodes of water way, known as *Ganj*, River port; the word literally means permanent trade center on the bank of holy Ganges. Today, all the modern districts around Dhaka include this „*Ganj*“ word as a suffix. This *Ganj*’s had some extensive sub centers while huge gathering for all kind of purchasable things are sold only twice in a week called *Hat*. And in-between *Ganj* and *Hat*, population grew their inhabitation that resulted in slums. Now, to fulfill their daily needs, they established a *Bazar*, a daily market place only to serve the in-between particular community. It is small by scale and purpose. Dhaka is combination of such *Ganj*, *Hat* and *Bazar* where the traders and producers or craftsmen need not to come from distant parts rather stay within the city and serve.

4.1.2.3 Vernacularism in colonial architecture

Different spaces of traditional built forms were used for different purposes and the segregation of different functions was done by horizontal layering. For example, front

shops and workshops used for marketing and manufacturing of products placed adjacent to the street, courtyard for sorting, store behind the shops and domestic services were placed next to courtyard or in the rear part of the plot. A sequence from the street i.e. shops at the front, residences at the middle and domestic services at the rear of the plot. An urban juxtaposition followed by rural zest, seen as a common influence beyond the notion of stylistic architecture of historic cores, rather responsive to geomorphology and topography.

4.1.2.4 Social status and traditional Ornaments

There are some roles to play by the city dwellers to form a class deviation. Mughals never influenced the inhabitants' psychic and the British ignored Dhaka totally from the fear of its rebellious character. Then who comprised its character? The rural people in an urban context continued their legacy; agro based society shifted from surrounding villages and became educated with European education later to comprise the elite class. While the weaving, crafting, food and medicine traders followed them and a mixed used pattern, abode or den; developed from European zest. All focused on business and they outnumbered their agriculture rooted „rivals“ by every means. Again, Problem for the weavers was that they became irrelevant during the transformation of industrialization in British period, but why Shakhribazar survived? Ornamentat is vital for the old Dhaka's social context and the weavers left their tradition and followed Shakhribazar, but completely with different materials: gold and silver, who wanted to survive. The Shakhribazar was always contextual; still it is as the female Hindus of whole eastern India believe to wear this bangle in hands for health and social status of marriage. But Tantibazar are converted to their neighbors as traditionally this part of the world has fascination for ornamenting crafts, from dress to jewelry. Here, Goddesses are important and may be agro-based society continued their indebt to the foremothers who sew the first seed to start agriculture, from nomad to a Neolithic settlers. And Dhaka got enough weaving villages around it to support its clothing need by that time. Tantibazar's character extinction was thus obvious and after playing a vital role, they disappeared, again from the demand of time.

4.1.2.5 Muslin Trade: placement or replacement

So, did Mughals bring weavers here to populate this newly conquered city or they were there from time immemorial? Both are true. And the water quality of *Dholai* canal suggests that it was a natural branch river of *Shitolakhsya*, not excavated or at least

shaped to fortify water way that they got from the Afgan settlements. Contamination of canal from Mughal period to British period, and connecting it with river Buriganga in 1826, means the death penalty for the industry as the water lost its quality to produce muslin's next generation weaving, Jamdani. Pictorial evidence suggests that during 1860's still the weavers present there, but does not mean that production with large scale compared to Sonargoan and Narshingdi was sustaining and sheltering place to craft practitioners, while it was capital city of rebels also. The word Tantibazar means a market place, not traditional production center at all. So, it is possibly true that when the political changes were recurrent, the weavers moved for a better practice place instead of Farashganj *Aurang*. It is also possible that production stopped or came into a small scale due to distance with *Narinda* where washers were still washing muslins.

Now, two important aspects we need to point out from all these information about Tantibazar. Did connection to river *Lakshya* helped the weavers to settle here because only that river's water and mineral component, coolness of its water and humidity in shoreline with particular vegetation posed a perfect combination to produce the finest cloth of the world, Muslin. The water contained siliceous and calcareous earth mixed with iron, both suitable for cultivation of Karpass¹⁵², is perhaps the oldest commercial crop of Bengal¹⁵³ and muslin washing. Again, the Karpass cotton, was cultivated around the Tantibazar area as raw material? There is a bazar for cotton near to this area named Ruihatta.¹⁵⁴ And probably, these weavers were Jamdani cloth producers because they designed patterns in muslins by handloom.¹⁵⁵ It is also evident in the writings of traveller Tome Pires, who was in India around 1510 AD¹⁵⁶, wrote people of Bengal who were successful wholesalers and a large number of Persians, Turks and Arabs, and merchants from Armenia live in Dhaka for clothing trade. Again, the neighborhood of Narinda was famous for the best „muslin washer“ settlement in this greater region and they used the perfect environment of Dholai canal as the name itself also suggests the term „washing“ in Bangla. An English cotton factory was shown in map of this area in 1735¹⁵⁷, probably to compete with the traditional craft or to make the craft extinct deliberately as their cruelty is still evident in this region. Again, the Narinda area is an ancient high land like *Dabekka* in *Narayanganj* and *Sen Parbata* around it which means a later development of locality is very possible over its ruins.

¹⁵² *Gossypium Herbaceum*, scientific name.

¹⁵³ Roxburgh (1832) p.184

¹⁵⁴ market for cotton

¹⁵⁵ Ghosh/Akter, (2005), pp.1-12

¹⁵⁶ Peres (2005) p. 88

¹⁵⁷ Atiqullah/Khan, (1965), p.6

If the material is considered, the region around Rajendrapur on the bank of River *Shitwalakshya* is still called *Kapasias*, reminds the link to this place with Karpass cotton.¹⁵⁸ In fact, the cotton production found its most fertile ground in the regions around the connecting points between the Old Brahmaputra and the Meghna Rivers.¹⁵⁹ European travelers suggested that a special kind of cotton fiber named *Desi*, had been produced in the northern part of the Dhaka region¹⁶⁰ where if the soil is loamy and contains maximum moisture and heat.¹⁶¹ The British attempted to cultivate the Karpass elsewhere in 1790 to 1791¹⁶² but failed completely. Important is, river Lakhya, never overflowed as Brahmaputra took the lead to pass the Himalayan flash floods. Recent interview with today's practicing weavers have confirmed that pre-dye cleansing of cotton thread in the water of Shitalakhya and Meghna brings such a glaze in today's Jamdani which is not possible in any other region. Again, steps of weaving which were dependent on the right level of humidity and moisture, lack of humidity could be a cause of warp breakage¹⁶³ and nature from where the weavers got their design elements to weave Jamdani or Muslin, could be seen as cousins. Dacca city's annual export of cotton goods in the 18th century through the English East India Company alone amounted to about 30, 00,000 Rupees and London Exhibition displayed that Jamdani Scarfs in 1862.¹⁶⁴ So, it is sure that thin-textured Muslin and flowered fabrics were manufactured by Muslim and Hindu weavers in the town of Dhaka exist from pre Mughal era.

4.2 Cognitive elements as Signs

4.2.1 Physical signs

4.2.1.1 Regional importance of sites

Surely, these two linear roads introduced a pattern, created distinctive mosaic line and defined zoning and assured accessibility, still today a planned city does not offer. For distance, it is to consider that a 10 minute¹⁶⁵ walk can lead us from one edge to another of these two districts. From primary survey of this study, it is found that with a normal speed of local ergonomics, Shakhribazar took 8 minutes to cross a distance of 500m and Tantibazar took nearly 9 minutes for a distance of 450m, while google map shown 6 minutes for each. This was not only true within the distances of these two districts,

¹⁵⁸ Ghuznavi (2006) p. 38

¹⁵⁹ Talukdar (1987) p. 57

¹⁶⁰ Hunter (1877) p. 84

¹⁶¹ Allen (1912), p. 8

¹⁶² Glassie,(2000), pp. 307-313

¹⁶³ Basu (1955) p. 75

¹⁶⁴ Iqbal, I.; (2014) p.19

¹⁶⁵ Alexander, (1977), p.170

but also to the nodes of the main urban core, Banglabazar. That ancient river port, somewhere around today's Sadarghat was the main gateway for all kind of economical drive within 1 mile¹⁶⁶ or 1.61 km range where no such other central district is situated nearby, to justify its importance. Again, other craft centers in surrounding areas of this ancient region are within the range of 10 miles¹⁶⁷ means a radius of 16 km. Soanargoan, especially Panam Nagar is exactly 26 km from Tantibazar and Bikrampur is nearly 28 km from Shakhribazar. It means, these two craft centers are self-supportive to sustain livelihood with their unique base for utilizing local industries, nearly 10km more than benchmark, just for difficulty to cross waterways with human force.

Here we can imagine a group of people wanted to practice their crafts from the chaos or hassle-bustle of the dyke come river shore road's traffic and waterway's noise within a fortified area. Every craftsman are preserving independence in own workshop but coordinating efforts for others also. This is a best example of „decentralization“ to find its way for huge craft production by a small work oriented group in particularity. For socialization, learning was the basic motto, not for teaching the next generations; but masters and apprentices can meet here. Another success of such individual workshop come exhibition and retail stall are just about 50 square feet, very effective and never become bland, even if it changes its function or get rented. But it is 20 times less from the benchmark of 1000 square feet¹⁶⁸. Not only that, such layering of shops provided successful by the means of keeping the evening streets alive. It is also well practice today to have a node of „T“ junction rather than having a node of four roads. These two sites intersected in a „T“ junction at Islampur end while the vehicles were completely of different mode on those days. It reveals the sustainability of organic city's resistant streets. (see Drawing. 5)

Now, what were the supportive factors? Its Nature and degree of built-forms in the city's morphology where two characters were preserved meticulously when this town was built. This practice was again evolved from Buddhist Vihara adjacent trade centers all around this region. However, on the opposite bank of river Buriganga a garden house tradition for aristocrat Mughals was present with agricultural belt. And secondly, surrounding the canal, the „blueprint“ of marshy land was left intentionally for the

¹⁶⁶ Alexander, (1977), p.61

¹⁶⁷ Alexander, (1977), p.109

¹⁶⁸ Alexander, (1977), p. 207

survival, fishes in rivers and animals in the jungles of north.(see Drawings. 6a, 6b) Even in 1865¹⁶⁹ at Mogbazar, some 5.5 km away from those sites, a local newspaper reported that some youngsters had captured three tiger cubs and their eyes were still not opened. They are given cow milk to feed. Access to wild nature from all around made this region well balanced. The in-between area became „grey“ by urban texture, which were subject of continuous change and possibly were organic slums, where again each built forms are a „root reminder“ from a rural transformation to a trade center. The haphazard character that we see today were developed in looped way to convert the entire community „lived-in“ as population grows to „black flow“. This represents poor compensatory procedures and irrational relationship¹⁷⁰ in-between and around two study sites.

4.2.1.2 Guideline of Spinal growth of the city

Historical and morphological overview revealed that due to unplanned growth at vast territorial expansion, old Dhaka's all crafting districts has undergone radical vertical changes, rather than horizontal; not only in whole sprawl but also through its internal physical transformation. Since historical time, organic growth characterized the spatial structure. The articulation of this unplanned craft based corridor areas as a „part of the whole“ system. In the process of transformation, the latter planned areas also have gained strong focus on its own local road spine; at the same time these two roads seem to attain abrupt importance to a certain degree. Such parallel road development toward north was the first basic guideline for Dhaka how it should be developed and today, it is a city of two spines which still stretching towards north: Mirpur road and Tejgoan road, the second one established first, around its later added tribes of Manipuri and Rakhain mosaics¹⁷¹ to melt with. As a result, the city scale commercial function tends to grow a mixed residential pattern. This sort of land use transformation beyond any modern rigid planning rationality seems has „robust“ influence from the organic nature. In fact, the long survival of those two linear districts is a proper slap over the disappearance of meaningful social relationship in later planning practices of new Dhaka which is stretching toward north, is a mad rush.

¹⁶⁹ Mamun, (1993) p. 187

¹⁷⁰ Reys, (1964) p. 123.

¹⁷¹ Mamun, (1993), pp. 117-123

4.2.1.3 Urban development from craftsmen's interior

In fact, the organic grid configuration determined the distribution of urban form in such a way that these respective linear roads along the craft shops generated movement in the half-circular island that engulfed with canal and river. The area had better accessibility with the other areas of the city and further trade centers of the Ganges delta. That is why the craft-based districts were selectively located themselves in Tanti Bazar and Shakharibazar. Although historically it is true that road intersections and bends observed more prone to the commercial use because of their convenience from all directions.¹⁷² But here, the footprint of the shop houses has also increased in individual plots. Eventually, during Mughal period, the city's economic life was based on handicraft industries organized on house hold basis and mixed used developments which eventually penetrated into the residential parts of the city.

Again, survey in today's context at Tarabo, Narayanganj; found that maximum 20 traditional handlooms are possible to allocate in a thatched hut while two workers can sit for weaving. This takes nearly 90 feet, exactly the least possible ownership pattern as a built form observed in the Tanti bazar's urban morphology. Apart from this, it is also found the frontal elevation of handloom is fixable within 9 feet. This constitutes the plotting of ownership which have ensured road front for every weavers before 300 years along a muddy path. (see Drawing. 7) During this survey, a worker named Kabir Hossain, aged 55; shown the seven steps of weaving where five steps are easily done in indoor or courtyard but for 3rd and 5th stage they need a space of 75 feet before they go for designing the draft over their handlooms at last. Third stage named „*Tana Hotam*“ a wrapping process of ligaturing the stings in 20 sticks. The fifth stage combines two tasks; first „*Ari badhani*“ a beaming job of three-person task to roll the yarn by fixing two horizontal bamboo rods at a distance of 20 feet. Then a person at the middle organizes „*Suta Bichani*“ a reed process to lose the fixed yarn and shape additional stings after performing beaming. This could shape either the rectilinear courtyard at the middle or at rear as Tantibazar had vast vacant land behind it. But this is not a real important fact, the ultimate result is, activities were quiet manageable around 90 feet, which is the unit grain of today's Tantibazar's urban morphology. And Shakharibazar is so rigid for its row housing pattern that has kept its originality for forever.

¹⁷² Mowla, (1999), pp.52-65

The stretched morphology of these two sites which reveal some „sinuous fingers“ over the collage. As Shakhribazar and Tantibazar are distinctive subcultures, the rest of the city need to be ready for the adaptation with this two growth „fingers“. (see Drawing. 8) There could be two reasons: first one is density, which maintains urban interaction and workshops adjacent to it. Secondly, orientation that was decided by their religious believe related to their craft practice. This religious fact is nothing but an ethical relation with their well-known topography through religious rituals. Again, this ethics somehow felt first by the first steward“s own individual instinct, intuition and inheritance but approved collectively. That“s why human is great artist when he draws over his soil. Now, these two city fingers were stopped at exactly right angle on their common edge. But Tantibazar formed a different suburb where its finger opens up as a country finger just at the right angle to the canal. Really contradictory human settlement pattern rural Dhaka. Along roads, on both sides the weaver“s lot stretched nearly half acre¹⁷³ to form row house clusters and was mother of laces which were country streets.

The study only finds a comparable, even busier parallel road of Goalnagar in comparison to Tantibazar. Because, it was the center of dairy production to serve the city and the inhabitants graze their cattle in northern pastures for wild grass or building farmlands. In fact, magic of great city like old Dhaka comes from its specialization guided by anthropological efforts. Such collective regional policies evolved by every „marginal“ group of societies for their regional policies had restricted the unnecessary growth of core downtown of south. (see Figure. 18)

4.2.1.4 Rationality behind Orientation

Linear organizations like to turn to have orientation for capturing sunlight and views. Its order related the built forms in its context surrounding and also enclosing in a piece of active open field. Initially, both roads were intermediate paths to link the most remote or quite parts of the cities with the central busy districts. This linearity could be a possible result of its special urban texture comprised of linear coarse elements arranged on both sides, which are identifiable from a bird“s eye. This linearity is legible only to local inhabitants than strangers. Unlike Panam, permeability is much more restricted as being a mixed used come residential neighborhood.¹⁷⁴ Why sun orientation was important for Tantibazar, but not for Shakhribazar? Orientation is such a logic which is visibly evident. Linear ownership pattern was the primary concern; but surely; religious

¹⁷³ Alexander, (1977), p.31

¹⁷⁴ Ferdous, (2007), p. 135

concern toward facing the sun for starting of a new day played a vital role for craft practice. So, gold business has converted their lifestyle and achieved the same height, only resistant road and its east-west elongation as orientation left the trace of weavers. A Hindu weaver from Tarabo in Narayanganj, named Ratan Kanti Dey, aged 67, during the survey said that it is always auspicious to face the sunrise. Tantibazar had shown such adjustment of a craft community pattern to sun orientation and air movement. It's a growth of „isle path“ first, then chronological development on either side along with east-west stretching; over a low marshy land. On the other hand, Shakhribazar's settlement pattern prioritizes its location in the lee of all possible air currents, and a protective land above the level of tide. Thus it was precious land and center of transition before rapid urban development.

4.2.1.5 Land use pattern for utility

When each single land has to be subdivided to provide multiple families for the ownership question of next generations, each plot have to get street frontage and back service, thus got rectilinear shape. With the establishment of the piped water services in around 1864,¹⁷⁵ right after the establishment of municipality, the houses were no longer dependent on services in rear, which led to the more elongated development of built form with more segregation. There were still water sources like well for bath and daily needs in Shakhribazar but Tantibazar enjoyed its proximity to the canal, although possibilities of pond cannot be omitted or filled much earlier without any trace. Then it started growing vertically which is destroying the indigenous settlement character.

4.2.1.6 Vibrant Nodes

The natural belt of the path and the overlapping point of Tantibazar and Panitola became the Moholla promenade and became the main socialization point. Interesting and lively spaces have nodal activity at a maximum distance of 300 m along their length. It is observed throughout the linear road both for Tantibazar and Shakhribazar, especially at the shop frontages and natural bents serving as assembly place. Again, pedestrian relationship through tertiary roads known as Lane, are more vibrant with overlapping activities such as mutual communication, social assemblies. This is somewhat Alois Reigel told about carpenters joining, but surely here scale is different thus it might be a series of knots. (see Drawings. 8a-8c) Although this study cannot

¹⁷⁵ Taifoor, S. (1956), p. 15

recognize as well as, that could be an untraceable fact also. What could be the function of node created by these two spines almost right angular intersection? The neighborhoods of two strips were neither totally commercial nor totally residential; rather of a determined density for mixed use pattern. Probably craft selling or auction center, propaganda hearing center, village fair, center of cockfight or bullfight, musical performance or traditional opera in winter, etc. Later, Mughals might have shifted such sort of activities in Chawkbazar, in a grand scale. However, a vibrant node ranges between 45-70 feet¹⁷⁶ and in our study area; it only exists at the entry of Tatibazar. At study area, it is now a loop of 650 feet in perpendicular dimension and 195 feet in parallel dimension, that's why it becomes a slum in the next stages. Maybe whole Kotwali node was a vibrant node for interaction and its foot print also reflects on another edge where „ghostly“ Bahadurshah Park is a landmark node to connect Lakhshuibazar, a street of variety established after Plessey conquer of British in 1767.¹⁷⁷

4.2.1.7 Row housing pattern

It is found from the literatures that initially the craft factories located themselves in the integrated lines of the city in and around the commercial core and on the long commercial lines during pre-Mughal period. Why these two streets are straight enough? Among other reasons discussed above, another well-established idea is row housing on straight road are more public by nature. Such Cluster formed only because manual production and business tied the individual workshops where they can come down to workplace or vice versa within 3 minutes¹⁷⁸ in entire built form. It is such interlace, responsible for forming a unique locality surrounded by other communities. What number of row workshops can we imagine about such localities? A successful community at least comprised of 30 workable shops¹⁷⁹ having the road in front was the original cluster of rural setting. These were surely abutting for Shakhribazar, but for Tantibazar, the cluster was scattered but linear. As a comparison, Shakhribazar is only a row housing option; but Tantibazar, after losing its character and lifestyle, its footprint remained but some were developed into central courtyard typologies, common practice for aristocrats. May be a hypothesis this research can develop that the rich goldsmiths owned the weaver's collective market places and erected edifices of own, the rests were developed as like Shakhribazar's character by maintaining typical

¹⁷⁶ Alexander, (1977), p. 165

¹⁷⁷ Mamun (1993) p. 234

¹⁷⁸ Alexander, (1977) p. 119

¹⁷⁹ ibid

linear ownership pattern. So, the „better“ ratio of common space and private space was achieved at Tantibazar’s several places according to Christopher Alexander’s benchmark, but Shakhribazar is seen as vertical row slum, some buildings might not even reach to a minimum livable standard now.

4.2.1.8 Ecological factors of two sites

4.2.1.8.1 Vegetation

Personalities of old cities are reliable over a boarder vocabulary depending upon natural „image“ framework.¹⁸⁰ Before Dhaka achieved its township, there should be some common vegetation that is *Dhak* tree¹⁸¹, known simply as Palash¹⁸², Landform and nature of the city was characterized by waterway and swampy soil for it. Here native canopy trees adapted with micro ecosystem, mainly monsoon of 6 to 8 months. This gave it a character which is the best location from every aspect of subtropical urban settlement in the world.

4.2.1.8.2 Waterways

The character of livability of a city is determined by surrounding nature and its arrangement accordingly. Here, possibilities include river edge, „Blue ways“ like floodplains and marshy land of resources. The first germinated urban cores could be imagined as a ring which got edge with river shore with free flowing dyke roads which again intercept and distribute the main traffic flow.¹⁸³ The Buriganga River or some sort of extinct water bodies around these two sites were main sources of services, transportation and communication shown dependence of indigenous settlements on other natural services of water. In fact, Natural settings set by the canals are an interconnected natural drainage ways in monsoon and in winter they become cohesive open space system as they dries. These „Blueways“ create walking opportunity, vacant trails and natural preserves.¹⁸⁴ (see Drawing. 10) The indigenous urban fabric reflects the rural pattern of life, which yet had to adopt and transform to fit in the more congested urban environment. Tantibazar is such example and it is thought that the southern part connected to Shakhribazar is developed at first then gradually the northern part of the street stretched and extended up to Dholai canal, presently the English Road. From every aspect, Dhaka was the best suitable location to erect a floated city, later known as „Venice of the east“ while canals formed not only a natural

¹⁸⁰ Paul, (1965), p. 53

¹⁸¹ Mamun, (1993), p. 94

¹⁸² *Buttea Frondosa*

¹⁸³ Simonds, (1983), p. 423

¹⁸⁴ Simonds, (1983), pp. 280

ring road of trade connectivity but also a very effective natural drainage system. Compared to Shakharis, weavers of Tantibazar utilized their own unhampered physical and ecological boundary, the canal as their need for production. And it hits the canal just at right angle, just perfect and contextual even for today's urban planning. For Shakaribazar, it is parallel to „eventful“ river front and tangent road intersections on its edges made it busiest trade district for all kind of transportation, (see Drawing. 11) especially later extension of Lakshibazar and path connection via Sutrapur, carpenters“ village which was the zone of wooden ship dockyard for international trade for centuries, the import of conch shells was one of the prior item for merchandising from Sri Lanka and Indonesia.

4.2.1.8.3 Natural calamity

It is really interesting that flood-prone city like Dhaka, its older parts are often the driest as they were built on higher ground, in fact the least possible height of Madhupur garh“s last end is 20 feet;¹⁸⁵ compared to well-planned sectors of northern new extensions, which suffered lot during the major floods of 1988, 1998 and 2004¹⁸⁶. The ancient crafts men choose the place for such height for flood protection. Compared to Shakharibazar, tantibazar was low and it means that it was a straight path island during its initial stage. Again, Architects and engineers should learn the value of traditional construction techniques in contributing to seismic resilience in row housing systems of Shakharibazar as they are like a chain to transfer the shakes and distribute load uniformly as Dhaka is not stricken by major earthquake since 1897. Ring water way was too much helpful to protect us from seismic disaster.

4.2.2 Cultural signs

4.2.2.1 Ethnical diversity

Shakharibazar and Tantibazar are homogenous by their origin and micro level speculation but from an organic pattern they were surely a race and occupation based status „ghettos“. The different layers that found around historic cores are mosaics of various anthropologies like Pathans, Mughals, Armenians, Greeks, Portuguese, French, Dutch, and British and at last; Migrated Indian Muslims after British

¹⁸⁵ Harun-Er-Rashid, (2015) available at (http://en.banglapedia.org/index.php?title=Madhupur_Tract) accessed on 6th June, 2017 at 12pm

¹⁸⁶ M Aminul Islam (2012). available at (<https://www.revolvy.com/main/index.php?s=Floods%20in%20Bangladesh>) accessed on 6th June, 2017 at 12.30pm

colonization; all these nations were responsible for recurrent shifting of the city's centralization. Banglabazar developed in Hindu period, Girdakilla was Pathan central core, Binot Bibi mosque is a pre Mughal center, west front of Lalbagh fort was a Mughal administration center and eastern expansion during British rule with industrial mills. Those British mills are gone with time but Shakhribazar survived just it was not an imposed one, rather evolved from the natural settings. Their demand to be „south Indian“ is not true, and both Tantis and Shakharis are brought here from Bikrampur as they were facing challenges in 9th century. Today, though Hindu dominant, Muslims are also present there, especially in Tantibazar like half-half equation.

4.2.2.2 Religious landmark and intangible festivals

Why the temples were built in their homestead? The two areas worshiped to different deities for their craft, Shakaribazar for Osgaysta Muni and Tantibazar for Ganesha. Another important clue could be the Dhakeswari Temple becomes a distant inconsequential destination for them when they were developing themselves by population, which led to a social concentration and such landmark faded for the self-centralization of city's different craft based districts got complexes. Landmarks through the street are to elevate some physical climb. This was the study's attempt of visual survey, while collective conditions always cannot be measured. Survey for old district is only amenity of cultural environment. (see Figure.19) Secular Carnivals like Sakrain, Pohela Boshakh and religious carnivals like Eid e Miladunnabi, Jonmashtomi, Durga puja etc. are the vital source of collective memory. (see Figures. 20, 21) Here fanatic dream of old Dhaka and inner force of every individual integrated to form a ritualistic collection. This could be referred as subconscious process to build a city. When the civilization reaches its peak and carnivals already got theirs well accepted form; food culture exposed in hand to hand with boosted economy, colors appears in religious and political processions with madness in mind dance in body movement. These streets turn into live theater or some may say ballet; during these festivals while rests of the time the corridors are living museums.

4.2.2.3 Panchayet /Stewardship

Ancient stewardship turned into today's Panchayet, probably this system became effective after Mughals arrived. They never wanted to mix them up with locals. But their presence was some sort of patronization to locals which fulfilled their motto to populate this craft village to overcome the pride of its rival's capital Sonargoan. The headman

ship was already raised within the craft based villages here in rural Dhaka¹⁸⁷. The local peoples were the first to face the pirates if attacked if the river forts are failed, and they were skilled with boat rowing, while Mughals used to live in fortified palaces and waterway was always a problem for them to control Bengal. The scattered workplaces were resultant of tax incentives, because Mughals allowed them to stay and practice without any revenue, later the British rulers disagreed as they could not provide any authentic document regarding this. Because prohibition of large industries in the „Blue zones“ actually balanced their family and working life which eventually balanced their crafting trade.

4.3 Social signs in built form

4.3.1 Signs in built form

A temporal parameter has been set that 75% private and 25% common space is needed to sustain any prodigious social system within a built environment,¹⁸⁸ for a compact urban pattern, these common spaces and corridors are the alternative toddlers“ space and that why the people are well socialized and intricate from their early peerhood. Hierarchy of spaces from the public domain to private domain creates a meaningful sequence because enormous number of voids in build form helps to interact distinguishing the indoor outdoor relationship. Mixed land-use pattern as working place along with living spaces also increases their belongingness.

Each corridors act like „zen view“¹⁸⁹ by creating the tapestry of light and shade-shadow, felt well when the floors are interleaved in ground. Such sort of distance is known as „nuisance distance“ not for their decision, but for the maximum ability of masons in that era to construct brick masonry with wooden beams to rest the brick mortared slab. Also the cost of the construction was a major fact. To support above reasons, we can also consider that small scale developments and pedestrian distances in both sites are in preferable state in terms of social dimension.¹⁹⁰ Vision, idea and content, all are interpretation of such townscape and such mixed land uses of craft based industries had reduced the need for additional roads, vehicles, and transportation, indeed.¹⁹¹ From two selected typologies in the study’s field survey, to analyze also the volumetric scale; that how these premises of old era are still sustainable. For a linear arrangement, 89 no household of Shakhribazar has shown exact 26% of its ground

¹⁸⁷ Khan, M., S. (1966), pp. 32-36

¹⁸⁸ Mumford; (1968) p. 26

¹⁸⁹ Alexander; (1964) p. 79

¹⁹⁰ Jacobs, *ibid*

¹⁹¹ Cullen, (1961) pp.97-105

floor as interactive spaces, that comprise of two inner courts. They still work for light wells. Again, in the 2nd floor, it is a terrace toward the courts which is resultant of intimate scale and its pyramidal progress is felt properly in the section. (see Drawings. 12, 13) When it is a term of the built volume, the 23.54% of its rigid mass is used for various communicative activities either by open to sky or semi-outdoor functions, while courtyard seems to be the prior conduct. So, unless structural viability and proper air-light quality have been ensured, according to the bench mark Shakhribazar set a goal for minimum livable space-communication characteristics and it is more or less followed by all the grains in this urban corridor.

Now, for Tantibazar, it is really difficult to realize a true essence as transformation was rapid and typologies varies. It was a question all about for social up gradation. As they wanted to show their economic bloom and demanded better status, they converted their workshop based dens into a mold of agro based aristocrat architecture. Though only one possible survey was made here, but it shows how they kept the goldsmith's workshop on road front and managed a courtyard to achieve similarity of Ruplal House, an ideal example for old Dhaka's the then spatial order for residence. However, from dimensions ast the 27 no house at Kotwali road, in Md. Abdul Salam Talukdar's house; the study found 31% of total area are of communicative common spaces, neither critical nor excessive; just a perfect combination of verandas for vertical and plinths and *roaks* in front of roads at horizontal scale around a live courtyard. Again, from sectional elevation, it is observed that 62% of sectional volume is common spaces and open to courtyard is the prior constitute of this section. (see Drawings. 14, 15)

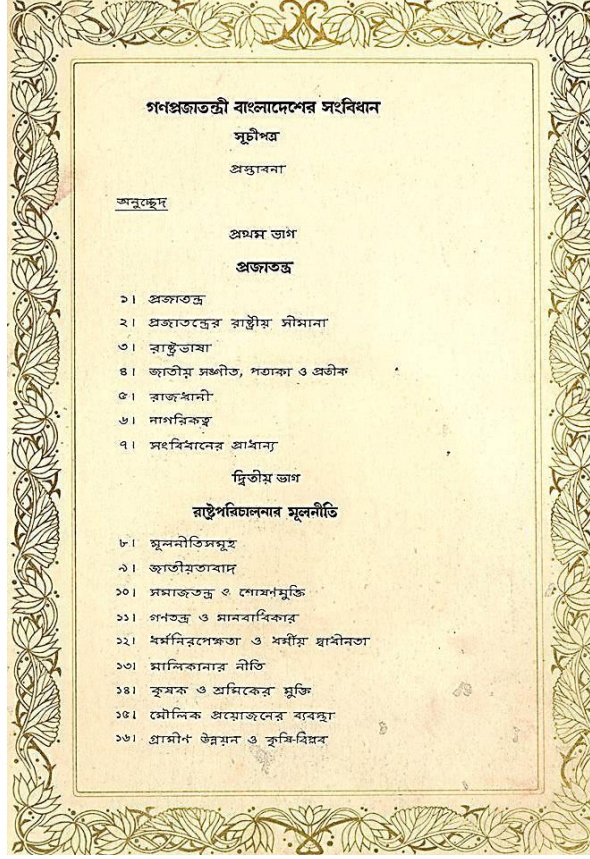
4.3.2 Signs in collective cognition

The idea of a collective history has yet to be explored in any great sense in old Dhaka, which is a real opportunity for researchers. Dhaka now suffering from absent of memories and does not have a deep enough realistic understanding of its potential as a city of historical vitality. This is not history retrospection in order to be a tourist attraction but an attempt so that its people do not forget their heritage and remain connected to the city's pride. Dhaka must look carefully at whether now is the time to conserve its history or left these unprotected and exposed to the vulnerability of alarming earth quake. The heavy-handed signing of projects has left us with no understanding of the city's history or its peoples, demolition of several historic mosques

in recent times are a challenging notification. Thing to notice, the long lasting socio-cultural elements become cultural heritage; while the physical elements prominently, the building typology become the architectural heritage. Such „Signs“ are secondary device to measure the essence of collective memory: Conch shell, weaving machine and goldsmith’s hopper, smell of local traditional foods of *Monipuris*, *Bakarkhani* or *Khasta-ruti*, (see Figures. 22,23,24) all the semiotics that constructed their world. Such cognitive signs associated with memory might help us to decipher its glorious past and we need the last survivals of witness to avoid any deceits for documentations, after knowing that it’s going to be lost in near future. Above all, we are surely „homo-significant“– the meaning makers. We usually meet with different five sensual layers of signs rather than a single sign. The parameter that is called Pierson’s taxonomy is contextual but only a few from thousands is identified (see Table 2)

Chapter 5

Discussion and conclusion



Handwritten 1st Constitution of Peoples Republic of Bangladesh,
1972¹⁹²

২৩। রাষ্ট্র জনগণের সাংস্কৃতিক ঐতিহ্য ও উত্তরাধিকার রক্ষণের জন্য ব্যবস্থা গ্রহণ করিবেন এবং জাতীয় ভাষা, সাহিত্য ও শিল্পকলাসমূহের এমন পরিপোষন ও উন্নয়নের ব্যবস্থা গ্রহণ করিবেন, যাহাতে সর্বস্তরের জনগণ জাতীয় সংস্কৃতির সমৃদ্ধিতে অবদান রাখিবার ও অংশগ্রহণ করিবার সুযোগ লাভ করিতে পারেন।

২৪। বিশেষ শৈল্পিক কিংবা ঐতিহাসিক গুরুত্বসম্পন্ন বা তাৎপর্যমন্ডিত স্মৃতি নিদর্শন, বস্তু বা স্থানসমূহকে বিকৃতি বা অপসারণ হইতে রক্ষা করিবার জন্য রাষ্ট্র ব্যবস্থা গ্রহণ করিবেন।

¹⁹² Rare photos of Bangladesh.

5.1 Cultural corridor

This study derived three kinds of Psycho-physical components for the conception of a cultural corridor regarding its values. First of all, urban morphological components and their essences that constitutes the regional importance of these particular sites in whole city. Such perception postulates the daily but religious activities allocated largely depending on street network and urban fabric. Rare availability of open spaces might guide to an imagination of the past character in districts" spatial order. Secondly, components of perception, known as signs, will lead to the sense of contained and container, degree of enclosure and historical layering. Third and lastly, collective memory depending on density, scale for neighborhood, ethno-religious practices with micro cultural sphere and social interaction in a community.

5.1.1 Challenges identified based on findings and analysis

5.1.1.2 Collective memory of crafts

For intangible things like craft practice, modern technologies replaced the traditional one, those instruments are rare now even extinct. Observable original craft practices are on wane or about to fade away in the area of perpetual and unique sources. The threat of cultural identity today posed with because such neighborhoods formed with heterogeneous groups at a large scale that minimized the scope of social stability, which was not felt before. Multiple meaning of the same site is also confusing. Tantibazar is perverted in a sense; because its function varied with different generations and finally came to a point for goldsmith's destination while Shakharibazar is on characteristic transformation. Images of past is only conveyable now by socio-religious rituals performed every day, known as recollection of knowledge from particular cultural perception.¹⁹³ But definitely the roles of Shakharis are mocking as production is absent and they mostly import from Calcutta. But somehow, they are still city districts of craft and also will be in future, city found its stability in craft. (see Diagram. 2)

5.1.1.2 Density

It is a great problem here, Person-room ratio was 7.5 in the residential quarters and the area lacks in open spaces and parks as less than 17 acres of open space for over 10,00,000 people.¹⁹⁴ New extensions of up to four to five stories over old foundations of one to two stories are frequent and thus experienced collapse that resulted in death of

¹⁹³Connerton, (1989), pp. 41-71

¹⁹⁴ SFYP. (1990), p.99 available at

(https://www.unpei.org/sites/default/files/e_library_documents/Bangladesh_Sixth_Five_Year_Plan_Part3_Statistical_An nex_Technical_Framework_2011_2015.pdf) accessed on 14 march, 2017 at 3.30 pm

many people. From infrastructural point of view, about 42%¹⁹⁵ of the premises overall in old Dhaka have no sewer connections. Again, Complex tenure arrangements, rental for mid-income issues, official apathy, lack of public incentives for maintenance of old buildings, nodal choices, poor quality of infrastructure, unplanned transport networks leading to location obsolescence of our study areas, and deficient waste management all render standard conservation opportunity into a mammoth task. Thus requires simultaneous action on legal, institutional, financial, educational and technical supports. (see Drawing. 16)

5.1.1.3 Development or destruction?

Global consensus over „so called“ developers patronized by „Passionate“ local peoples is a threat, where role of contemporary architecture and urban inclusions should be restricted first. In reality, planner’s role is only to facilitate decisions of higher authorities. Such endeavor could be contentious and controversial as different stakeholders” cannot find them in a position of slated occupancy. The ultimate practice is to compromise, selected demolition of government for protecting some „first degree“ heritage aspects! While allowing rest others to be demolished, this might change with political reverses. Historic urban quarters of old Dhaka are often strongly misinterpreted by environmental degradation and many of them are now facing destruction or built forms are losing their original characteristics of colonial for addition due to public negligence.

5.1.1.4 Seismic challenge

A major earthquake is also the greatest threat for these corridors as Bangladesh is on cyclic alert of huge shakes in every century at its last decade. To remind, last major occurrence happened in 1897¹⁹⁶ which changed even foremost rivers” directions and tide flow. Collapse in 2004¹⁹⁷ is also a sorrow to these incidents. (see Figure. 25) Social destruction in 1947, riot in 1965, and massacre during liberation war in 1971; all had its root into the religious fundamentalism as a political ideology. Though pathetic, but they also created important part of collective memory. In fact, Shankharibazar is a seismic proof urban settlement. Such plot shapes was evolved from specific factors: trading could be practiced together, threats of burglary or robbery from Portuguese and Mugs, may have encouraged Shankharis to build closely-packed houses along narrow streets

¹⁹⁵ Rashid, (1994). p.3

¹⁹⁶ Chowdhury/Khan, (2015). available at (<http://en.banglapedia.org/index.php?title=Earthquake>) accessed on 6th June, 2017 at 1.30pm

¹⁹⁷ Daily Observer, ibid

whose only two openings could easily be sealed, unexpected stairways, were perhaps deliberately designed to confuse intruders.

5.1.1.5 Traffic load

The concept of pedestrian was totally absent and the modes of traffic had been changed as they were designed for such vehicles which are extinct now. As a result, today's mode of transportation causing traffic jams and working hours are spoiled over roads.¹⁹⁸

5.1.1.6 Who will take care of whom?

And finally, there are some contradictions amongst authorities. For example, National Building Code, NBC act of 2013 inscribes that maximum 3 meter radius from any historical building should kept well protected in an urban context. But Dhaka Metropolitan Building Construction Code of 2008 states it should be in a distance of 250 meter and article 8 states about a „special testimonial“ is to be taken for any kind of development in this range. But there is no guideline for such heritage impact assessment. Again, Bangladesh antiquity act, 2014 divided this 250 meter radial area into two segments; first 100 meter for intensive protection, the rest 150 meter area for special protective area¹⁹⁹, as well as buffer zone. Besides, Capital Development Authority, (RAJUK) giving permission to erect any building in heritage area without any discussion from Department of Archaeology, DoA; as they are not reliable to do so.

5.1.2 Recommendation

5.1.2.1 Design phase

The indigenous pattern should be the clue, how the roads and streets have to be developed in the unique urban fabric and character. Traditionally, urban spaces are mainly corridors where built forms are like „rooms“ for dwellers that is interlaced with corridors from the view point of cityscape.²⁰⁰ The importance of historic cities is like engines of growth and centers of innovation and creativity for both of its tangible and intangible components of culture. Social cohesion fosters economic development and sustainable use of urban spaces through a balanced symbiotic and nurturing relationship. It is such a heritage-sensitive approach where plural, gentler, and more contextually responsive modes of development could be achieved by emphasizing

¹⁹⁸ Mowla, (2008), pp. 33-38

¹⁹⁹ Akter /Jahangir, (2015), pp. 233-245

²⁰⁰ Simonds, (1983), pp. 275-288.

locality, context, historical continuities, and identity.²⁰¹ In Future, Shakhribazar may be developed as attractive civic and cultural corridor. But Tantibazar provides no more option. A pedestrian friendly environment should be created and all the neighborhoods should be in walk-friendly stage. The main street of Shakhari Bazaar should be converted into pedestrian walkways to extend the tourists' experiences that are enjoyable, respectful and educational while watching the Shakharis at work. To facilitate tourists with the previous experience of a craft based city, Vehicular entry should be controlled, traffic flow should be checked and material change in the street will be used for demarcation of accessibility. All these are known as Deradamento.²⁰²

5.1.2.2 Complexity of authorities

Government and non-government organizations should work as joint hand. If government introduces heritage acts then the private organizations should invest their capital. Problem is government has some lacking regarding taking care of heritage due to skilled employment shortage. Thus private organizations should come forward with technical and mechanical support. If development of „buffer activities“ with proper but minimal infrastructures are introduced then non-government companies can see the management of property, advertisement and tourism sectors. That's why; It's a need of time that all the authorities should clarify the radial area in a same point for overall old Dhaka's context. If needed, the different cases should be assessed differently and it might be reduced or either increased if desirable for any kind of compromise. Within the radius of 100 meter, only limited residential use could be allowed. Urban Carrying capacity and user guide for tourists may be implemented.

5.1.2.3 Conservation tools

A detailed technical study of the listed, vulnerable buildings should be the first and foremost job is to be done by restoring structural safety without demolition of whole building. It is known that, conservation and development are not mutually exclusive purposes,²⁰³ such endeavor could be also a part of a single planning process for improvement of earthquake resistance security. Urban areas of old Dhaka like Shakhribazar and Tantibazar, seismic projects needed to be scheduled to improve of the civic awareness about seismic risk and civil protection culture; DAP planning

²⁰¹ HUL, UNESCO (2011) , available at (<http://whc.unesco.org/en/activities/638>) accessed on 12 march, 2017 at 1.55 pm

²⁰² Jacobs, ibid

²⁰³ Jigyasu, (2003), pp. 277-282. available at (<http://unesdoc.unesco.org/images/0023/002317/231755E.pdf>) accessed on 23rd March 2017 at 6.40 pm

should include anti-seismic Urban Plan with well-trained conservation architects for anti-seismic buildings adjustment. If major earthquake happens, then the possibilities for major streets as safety areas as post-earthquake gathering centers and the pre-formation of voluntary associations along with existing civil protection should be judged meticulously. The height limit for new erected buildings in the sites should include a profile line to preserve the historic height profile that silhouetted against the sky.²⁰⁴ The most efficient pattern is not to build new and abandon the inner portions for tourism. If someone think about the recent collapse, or vulnerability of earthquake, one have to bear in mind that traditional buildings are not endangered for their shared wall construction of row housing pattern. It is risky just because for the new structures above and all around. It could also be possible to convert these districts" well state old colonial buildings into living cultural units. Such unites will then comprise together an urban cultural corridor, where both examples of lost and sustained craft practice will be exposed then to the international tourists. Tantibazar is an example of changed but integrative and participatory functions that was converted in a wrong way, or maybe we cannot check its tide for the changing demand of the city. But for Shakhribazar, we can still expect mono-disciplinary character should continue with enhanced values. Here, conventional norm of the sameness is found in a broad fabric. But still a whisper of change from internal collectiveness is also present.

5.1.2.4 Safeguarding Management

For all these solutions, generally a Conservation Management Plan is a tool, which is nothing but a documentation that explains why a site is significant, and how that significance will be retained in the future. Such document sets out what is significant in a region, what policies are appropriate to enable in future use development. For most places it deals with the management of change.²⁰⁵ A complete list of each building"s heritage information should be categorized, documented, mapped and a web portal could be created for these area"s historic buildings. This might include materials, shape, size, historical value and their impact over sites. It is needed because with the character and function of each buildings its conservation technique changes. The expense to maintain such procedures need to be calculated meticulously and in the national budget there should be specific allocation for annual maintenance. This economic planning should be reviewed in a 5 years of interval.

²⁰⁴ Kriken et al. (2010), p. 141

²⁰⁵ Kerr, (2000) , p.36

5.1.2.5 Community participation

Quality of the living cultures and environment of the host communities for original citizens should be incorporated into preservation plans to promote urban services by ensuring the continuation on their cultural practices and integrity in attitudes of solidarity, respect and interest for the common good.²⁰⁶ This is somewhat referred to the Educative City, defined a complex system of considerations that express the priority of cultural growth and prospects for citizens as training progresses.²⁰⁷ For community participation, „National Heritage conservation award“ could be started from now. For successful rehabilitation, current rate of land should be considered instead of registry time’s land value. This will introduce the social educative purpose in these districts. For true educational benefit, Specialists can be created by including working and technical aspects of conservation in Architectural curriculums. Local knowledge of techniques should not be omitted there. (see Drawing. 17)

The nodes and intersection of these streets have to be considered as places of larger culture of intangible domain. These streets can be the places for community gathering, chatting, shopping and such noise, chaos and diversity creates a „street ballet“, activating streets at different times of the day.²⁰⁸ Cozy spaces by following the next stage after these roads are known as the traditional Chowks as market square.

These are the places where memories create every day and faded away and new memories to replace. So, a city without memory cannot survive just as a human who don’t have any identity.²⁰⁹ It may need to nurture again the ability to deal with variation as a creative force, and to think of structures that incorporate heterogeneous elements as a challenge to be met by innovation to conserve urban heritage. The core idea is based on how accumulation of cultural attributions over time is obliged, known as „Genius Loci“²¹⁰ the research in a position to think about the origin of the old Dhaka, something that may come from within the memory associated spaces, a collectiveness that we tease out of those tangible materials as we allow their intangibilities to have their say in the future that now we are creating for the next generations.

²⁰⁶ Barcelona declaration, (2014), available at (<http://iaec2014.bcn.cat/en/congress-conclusions/declaration>) accessed on 23 May 2017 at 5.00 pm

²⁰⁷ Barcelona declaration, (2014), available at (http://www.edcities.org/en/wp-content/uploads/sites/2/2014/11/Congress-Declaration-2014-EN_DEF.pdf) accessed on 23 May 2017 at 5.50 pm. Pp. 1-7

²⁰⁸ Jacobs, (1961) p. 151

²⁰⁹ Rossi, (1982) pp.46-48

²¹⁰ Schulz, N. (1984) available at (https://marywoodthesisresearch.files.wordpress.com/2014/03/genius-loci-towards-a-phenomenology-of-architecture-part1_.pdf) accessed on 25th march 2017 at 10 am, p. 18

5.1.2.6 Value of Colonial Vernacularism

The traditional as well as vernacular pattern suggests us the way how places can be intuitively related to the culture, values and activities. Even today, under enormous pressure of rapid urbanization, these two sites could be an integral part of the built urban environment that can enhance the quality of life and contribute to the sustainability and formulation of civic identity. Therefore, for the livability of Old Dhaka City has become imperative to develop adequate amount of quality for conservation especially at the time when public interest to conserve both tangible and intangible culture, collective memory all are under challenge. (see Figures. 26-31)

5.1.2.7 Adaptive reuse

For managing forces of change and continuity, a sensitive sustainable approach is needed rather conservation.²¹¹ This study tried to understand the various processes of conservation in these two historic urban settlements. The processes include having appropriate attitudes, developing greater community participation, preparing detailed documentation of the study area, identifying core/peripheral aspects of culture and built-form, and cultivating financial and institutional support. Overall speculation is to define some possibilities for establishment of a cultural corridor to encourage leveraged investment from the private sector. Here, a built conception of inherited property commemorates the distinct religious rituals. This is something „where memory crystallizes and secretes itself“.²¹² If needed, a special cultural citizenship may be introduced to nurture collective memory in shared territories only for living craft based district inhabitants of old Dhaka under DCC.

5.1.2.8 Optimistic Ecological regain

Excavation of Narinda and Dholai canals may be a mammoth task from all forms of the legislative authorities from the perspective of Bangladesh. But if done, than the historic value will be increased as it will then be combined with the natural feature. All around the world, there is some good examples regarding this.²¹³ An ecological master plan is possible regarding the green and water body as which minimum ratio of water body might be effective and is it really possible to bring back the Dholai canal instead of English road? How viable it could be while the road is so beneficial collector road in

²¹¹ Vienna Memorandum, 2005, available at: (http://www.patrimoinebati.umontreal.ca/documents/table_ronde_2006_proces_verbaux.pdf) accessed on 30th may, 2017, at 2.20 pm, pp. 21-25

²¹² Nora, (1989) pp. 7-24

²¹³ Kriken et al. (2010) pp. 140-147

today's context? Again, old Dhaka is on earthquake region-2, means mid risk area for earthquake, so all the retrofitting methods in old buildings should be implemented without harming the original character.

5.1.2.9 Is Tourism feasible?

This can capture the economic characteristics of the heritage and tie together these for conservation by generating funding, which could be subsequently reinvested to preserve historic characters of each individual building one by one on a priority basis.²¹⁴ There should be four components regarding modern practice: economic improvement of craft business, traditional stewardship encouragement, educating the youth community and influencing public policy for interpretation of conservation. Being a generic component of mixed use development, this kind of effort will play an important role in terms of the land use in Dhaka for the upcoming future. Tourism and learning in an integrated way of collective construction, which this study wants to proclaim as „urban showcase“. The notion of cultural corridor empowers people to define and construct public attitude through their actions, reactions and interactions. A good sense of public involvement will suggest the way how community people can relate themselves with the place and culture and accept tourists and seen as a continuous and permanent process. The promotion, distribution and sale of local crafts and other products should provide a reasonable return to the community. But not in a typical western idea of „zoo“ tourism as the problem is different here. Courses of educative tour and crafting workshop will be the suitable in reality and context.

The collective findings of this research makes useful contribution to the knowledge of planning and development to adjust the practical decisions for developing a sustainable craft based cultural corridor through tourism. In this process, any new but minimal planned interventions within limited scope can be introduced for possible transformation and can also be planned to retain the touristic character before it turns into an unlivable state. New technologies, such as augmented reality or virtual reality additionally offered to urban heritage research, for tourism and documentation purpose.

From international point of view, this study wants to convey a message that UNESCO's „fixing same law for all contexts“ is an outworn idea and should be amended according to regional basis. From the proposal of Lalbagh fort, Bangladesh is still suffering from a

²¹⁴Bayer et al. (2010); pp 200-205

indecision for its buffering and core zoning demarcation complexities according to its rules for a successful application while UN habitat recently declared Dhaka as the most dense city of the world, which means any buffer zone creation is not possible in reality and even core area is not secured from encroachment.

5.1.2.10 Potential economic opportunities

Both Shakaribazar and Tantibazar road retains the highest concentration of historic trades representatively from 10th century and 16th century's economic context of this Dhaka region, in overall Bengal that are still relevant today. Ranging from cultural, recreational, artistic, and religious – a broad range of economic activities unfold developed in a road pattern of transverse or nodal cross manner, that explains its original state as a rural settlement. This commercial artery also forms the cosmopolitan epicenter of the city – revealing a dense ethno based employment diversity that is differentiated by trade expertise in the past – as one vital drive to form the kernel of our history. Shakaribazar still got some potential for cultural tourism and brand value enhancement for each individual trade and associated artisan communities that enhance their livelihoods and working environment. That's why, small-medium enterprises may greatly contribute to local livelihoods, most of who also live in and around the area; survival of heritage might need some economic improvisation from Government and NGOs. Thus, each historic trade/craft practice retains a critical mass of practitioners and ancillary services to create an ecosystem that cushions it from extinction, but the burning question is, how long to continue? Whether, infrastructural demolition is also deserting away its collective memory.

If accomplished, improvements in their live-work setting would automatically have a positive impact on the urban and architectural fabric, possibly triggering holistic conservation initiatives in the future. The mixed-use commercial-residential nature of occupancy might attract multiple international heritage stakeholders and a heritage-based cultural economy could be beneficial to the global fame of Dhaka, while simultaneously restoring these historic „streetscapes“. Built form Preservation is always feasible when historical buildings are in retail use which is still alive in Shakaribazar corridor. A direct connection between historic value and identity is also present to establish compatibility of scaled historic core. Another option could be adopted, is called Third World Cities, TWC from Istanbul declaration of ACAA in 1978;²¹⁵ which

²¹⁵Stefano, B. (1978), Available at (<https://archnet.org/publications/2617>) accessed on 3rd March, 2017 at 8.25 pm

guides to preserve the traditional pattern and values, and maintain confront of government with insurmountable problems if destructed or abandoned.²¹⁶ TWC, successfully adopted in Fez, Morocco;²¹⁷ had taught us how to improve infrastructure, collective facilities, transportation, public investments and conveniences, along with cultural activities within the existing texture with new constructions designed according to traditional principles to revive or conserve and educate the people.

Protection of urban historical sites is to be achieved legitimately through different procedures: cataloguing, inventorying, regulations, municipal taxes exemptions, income tax rebate, soft loans and incentives regarding cultural interest and expropriation for proper conservation. Also, Special financial schemes need to be devised for repairs and renewal of significant architectural style both for short or long term plans. It was inscribed in Charter of Aalborg in 1994²¹⁸, though originated in European context but its goals to ensure objectives like social justice, economic and environmental sustainability- these all are well enough to follow as guideline in old Dhaka.

5.1.2.11 Rehabilitation for civics

The dynamic elements of movement, hierarchy of spaces, activities, culture and life styles are as integral to the configuration of the city organism corresponding history, culture and context. Here, Social and cultural commitment must be evaluated first and tried to implement in the planning proceedings instead of so called „physical“ solutions. These areas are somewhat where family life, avoidance of social isolation, peace of mind or social mobility all have assured the mitigation of „enormous physical problems“ as the primary source of study, survey data have proved such verdicts. So, Stabilizing of three cultural elements of study areas, , craft needed to be improvised, creating employment opportunity for craft related field and explore some new dimensions for heritage built-form conservation issues, all are true for gold and conch shell based community.

Removing the blighting influences like noxious air and modernize minimum „nuisance use“ and controlling the accessibility with vehicular restriction in the site and also

²¹⁶Holod, Renata, (ed) (1980), Available at (<https://archnet.org/publications/3496>) accessed on 3rd March, 2017 at 9.52 pm

²¹⁷Mowla, (2012), pp.76-77. Available at: (https://www.researchgate.net/publication/282576002_%27An_Outline_Strategy_for_Old_Dhaka_Redevelopment%27) accessed 5th June 5, 2017 at 2.35 pm

²¹⁸Grazia, (2012), pp 141-149

change of materials in carpeting the roads, pedestrian friendly paving materials used be introduced. For that, firstly identification of scopes and then develop accordingly their unique and useful ornamented enclaves beside these roads. Any kind of extension or modification should be sympathized with its originalities and there should not be any compromise. As government took the decision to demolish selected vulnerable buildings, the rests should be under go with harmonious restoration to fill the voids in between to continue its communal „Edge“ character. Such experimentation of the urban rehabilitation in these two historic districts with social, economic and vulnerability problems might be sort out in a chart. (see Table 3)

5.3 Epilogue

Urban heritage is a common cultural good and human right which needs to be conserved but first of all; you need to identify its essence from metaphysics. Artistic, performativity in spaces which associated with memories have been developed for centuries to convey the significance of certain places and practices within these particular communities at two different neighborhoods. This research is the first important step to identify the entire spectrum of cultural collective memories that are native to the city's street ethos, its communities, mechanism and processes that are sustaining and also threaten previously, but continued its transformation for the future. This brief content of the different types of craft based bazar spaces that existed from the pre-Mughal, engulfed Mughal and distinct in British colonial growth of old Dhaka tries to reflect the physicality of collective memory of the social concern of those memory associated spaces at that context. The indigenous space has continuously been re-constituted by both organized and spontaneous forms of linearity, re-appropriation and thus has responded to different conceptions of cooperative urban life in past. Behind the chaos, there exists an order, surely organic but intimate in scale. The study reveals that such spaces in-between indigenous and urbanity- is loaded with dynamic socio-cultural collective actions, attitudes and more importantly, signs in symbols which are still in action, some might be passive.

From western concern, the historic preservation movement is the most important change to be occurred in architecture and urban design since the modern movement. The study illustrates the significance of these symbolic spaces for the formation and maintenance of thousand years" cultural identity. It also shows the historical meanings that are encoded in its built environment and behavior that manipulated through special

representations. Here, Physical and social structure must be complementary to each other, otherwise they could have been collapsed. Simultaneously, the lack of conservation from both intangible and physical values in Dhaka's dense urban context still left some notions potentials for craft based cultural propositions so that next generation might celebrate the outlet for ostentation. However, strategies are meaningless without proper understanding of humane culture which existed here. Survey analysis and the compilation of an inventory were vital in terms of deriving any conclusion and may be not enough. In addition to that, further research can emphasize on the options, how to protect and reuse adaptively the traditional structures from transformation and rebuilding, which was not responsibility of this study. Debate may continue but perhaps, the solution lies in collective culture and its best possibilities for adaption with the changing realities of modern lifestyle and how adequately these policies could be coordinated as authorities are not in a single umbrella. Again, the role of oral history played during the field survey was appropriate method and tools for data collection regarding the cultural collective memory were quite cohesive for community participation. It is such sort of curating of urban heritage „from below“ that have been successfully tried and tested in different cultures. From today's reality, are not these collective essences enough for being used to protect and support their continued presence? Answers are not always important, but a question is asked today, to create the path in future-that is important. Let the city perform accordingly.

6. References

6.1 Archives

Imperial Gazetteer of India, (IGI), (1908) Vol. 11, Oxford at the Clarendon press, pp.105-116.

Peoples Republic of Bangladesh Government" s Gazette, 12th February, 2009

Rare photos of Bangladesh, Online archive: (<http://banglagamer.com/showthread.php?76123-The-Bangladesh-of-the-Past-Rare-pictures>)

Rennel, J. (1792). *Memoir of a Map of Hindostan*, 2nd Ed., Home Miscellaneous Series, Vol. 815. (HMS 815), Royal Society, London, pp.201-229

Taylor, J. (1840). *A Sketches of the Topography and Statics of Dhaka*, G.H. Huttman,(ed) Military Orphan Press, Calcutta, p. 87, Bengali translation: Asaduzzaman, M.; Company Amaler Dacca. (Dhaka in the reign of East India company) Bangla Academy, Dhaka in 1978

Taylor, James. (1840). *A Sketch of the Topography and Statistics of Dacca*, Military Orphan Press. India. pp-86-98

6.2 Bibliography

Ahmed, Iftekhar (2012), *A study of architectural heritage management by the informal community bodies in traditional neighborhoods of old Dhaka*,Chapter 5: Formal heritage conservation in Dhaka, unpublished PhD thesis, National University of Singapore, Singapore. pp. 204-210.

Ahmed, Iftekhar (2012), *A study of architectural heritage management by the informal community bodies in traditional neighborhoods of old Dhaka*,Chapter 5: Formal heritage conservation in Dhaka, unpublished PhD thesis, National University of Singapore, Singapore. pp. 157-160

Ahmed, Iftekhar (2012), *A study of architectural heritage management by the informal community bodies in traditional neighborhoods of old Dhaka*,Chapter 7: Case studies of heritage management in old Dhaka, unpublished PhD thesis, National University of Singapore, Singapore, p.293

Ahmed, Sharifuddin, (1986). *Dacca, A Study in Urban History and Development*, London: Curzon Press Ltd, p.15.

Ahsan, Majid and Rosie. (1991). *Dhaka: Past, Present; Future*, Chapter 1: Changing Pattern of the Commercial Area of Dhaka City, in Sharifuddin Ahmed (Ed.), Dhaka, pp. 432-437.

Ahsan, Majid. Rosie. (1991). *Dhaka: Past Present Future, chap-Changing Pattern of the Commercial Area 01' Dhaka City*, inSharifuddin Ahmed (ed), The Asiatic Society of Bangladesh, Dhaka: pp. 432-437.

Ahsan, R. Majid; (1991); *Changing Pattern of the Commercial Area of Dhaka City; Dhaka Past, Present& Future*; in Sharifuddin Ahmed (ed.), The Asiatic Society of Bangladesh. Dhaka: pp. 396- 414

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

Alexander, Christopher. (1977) *A pattern language*, Oxford University press, New York p. 119

Alexander, Christopher. (1977) *A pattern language*, Oxford University press, New York p. 79

Alexander, Christopher. (1977), *A pattern language*, Oxford University press, New York p. 165

Alexander, Christopher. (1977), *A pattern language*, Oxford University press, New York p. 207

Alexander, Christopher. (1977), *A pattern language*, Oxford University press, New York p.109

Alexander, Christopher. (1977), *A pattern language*, Oxford University press, New York p.170

Alexander, Christopher. (1977), *A pattern language*, Oxford University press, New York p.31

Alexander, Christopher. (1977), *A pattern language*, Oxford University press, New York p.61

Alexander, Christopher. (1977), *A pattern language*, Oxford University press, New York pp. 47-55

Allen, B.C. (1912). *Eastern Bengal District Gazetteer: Dacca city*, The Pioneer Press, Allahabad, India, p. 8

Askew, M. (1994). *Cultural identity and urban change in Southeast Asia: interpretative essays*, in Logan, W. S. (Eds); Geelong, Victoria: Deakin University Press.pp. 85-116

Basu, T. N. (1955). *Taan o Rang (Loom and Colour)*. Dacca; p. 75

Bayer et al. Michael, Nancy Frank and Jason, Valerious, (2010). *Becoming an urban planner*, John Willy and sons publishers, NJ, USA, pp. 200-205

Bradley-Birt, F. B. (1975). *Romance of an Eastern Capital*. Metropolitan Book press, Delhi: India; p. 75.

Bradley-Birt, F. B. (1975). *Romance of an Eastern Capital*. Metropolitan Book. Delhi. p.159

Chowdhury, A. H. M. & Faruqui, Shabnam (1991), *Physical Growth of Dhaka*, in Sharif Uddin Ahmed [ed.], *Dhaka Past Present Future*. The Asiatic Society of Bangladesh, Dhaka: pp.43- 63.

Chowdhury, Nizamuddin (1981), *The Central Business District of Dacca -A Structural Change with the Growth of the City*, Unpublished M.Sc. Dissertation, Uppsala University, Uppsala, Sweden, p. 15

Connerton, Paul (1989). *How societies remember: Commemorative ceremonies*, Cambridge university press, MA, USA. pp. 41-71

Conzen M.R.G (1960). (2nd revised edition, 1969), *Alnwick Northumberland: Study in Town Plan Analysis*, Institute of British Geographers Publication, London, No. 27, pp. 122-131

Conzen M.R.G (1960). (2nd revised edition, 1969), Alnwick Northumberland: Study in Town Plan Analysis, Institute of British Geographers Publication, London, No. 27, pp. 123

Cullen, Gordon, (1961). *The Concise Townscape: General studies*, Architectural Press, London, UK; pp.97-105

Dani, A. H. (1956). *Dacca: A Record of Its Changing Fortune*, The Asiatic Society of East Pakistan, Dhaka: pp. 31- 48

Dani, A.H. (1957). *Dacca: the city: Past, Present and Future*. The Asiatic Society of Bangladesh, p. 69

Dani, A.H. Dani, A. H. (1956). *Dacca: A Record of Its Changing Fortune*, The Asiatic Society of East Pakistan, Dhaka: pp. 213

Fatema Meher Khan, (2013), *A morphological study of Tanti bazar area in old dhaka with particular attention to the development of shop houses*, unpublished master thesis, BUET p.10

Fatema Meher Khan, (2013). *A morphological study of Tanti bazar area in old dhaka with particular attention to the development of shop houses*, unpublished master thesis, BUET, p. 102

Fatema Meher Khan, (2013). *A morphological study of Tanti bazar area in old dhaka with particular attention to the development of shop houses*, unpublished master thesis, BUET, p. 73

Ferdous, Farhana (2007). *A morphological analysis of indigenous sapatial pattern in old Dhaka with particular emphasis on cultural spaces*: Unpublished M.Arc thesis, BUET, Dhaka. pp 71-90

Ferdous, Farhana (2007). *A morphological analysis of indigenous sapatial pattern in old Dhaka with particular emphasis on cultural spaces*. unpublished M.Arc thesis, BUET, Dhaka. p. 135

Ferdous, Farhana. (2007). "A Morphological Analysis of indigenous spatial pattern in Old Dhaka with particular emphasis on Cultural Spaces" Unpublished M Arch dissertation, Department of Architecture, BUET, Dhaka. p. 95

Ferdous, Fatema; (2007). *A Morphological Analysis of indigenous spatial pattern in Old Dhaka with particular emphasis on Cultural Spaces*, Unpublished M Arch dissertation, Department of Architecture, Bangladesh University of Engineering and Technology, BUET, Dhaka: p. 95

Ghuznavi, S.R. (2006). *Jamdani: The legend and the legacy in textile traditions of Bangladesh*. National Crafts Council of Bangladesh (NCCB), Dhaka. p. 38

Glassie,H. (2000). *Traditional Art of Bangladesh*; Bangla Academy (First Edition), pp. 307-313.

Hasan, Delwar (2008). *Commercial History of Dhaka*, Dhaka Chamber of Commerce and Industry (DCCI). Dhaka. p. 423.

Hayden, D (1995): *The Power of Place.-Urban Landscapes as Public History*. Cambridge MA: MIT Press, p.43

Hunter, W.W. (1877). *Statistical Account of the District of Dacca*. Trubner & Co, London, UK; p. 84

Huq, A.T.M. Zahirul, (1991). *Transport Planning For Dhaka City*, Sharif Uddin Ahmed [ed], Dhaka. p. 69.

Husain A. B. M. (1997). *Sonargaon-Panam*, Asiatic Society of Bangladesh, Dhaka: Dana Printers, p. 45

Hussain, Nazia (1980). *The City of Dacca, 1921-1947: Society, Water and Electricity*, in Kenneth Ballhatchet and John B. Harrison (eds.), *The City in South Asia: Pre-Modern and Modern*, Centre for South Asian Studies, School of Oriental and African Studies. London, UK. pp. 197-223.

Imon, S. S. (2006). *Sustainable Urban Conservation: Role of Public Participation in the Conservation of Urban Heritage in Old Dhaka*, PhD. Dissertation, the University of Hong Kong, p.128

Iqbal, Iftexhar; (2014). *Protecting Bangladesh's GI Interests: Case of Jamdani*, Research Report by Department of History, published in CPD, University of Dhaka, p. 19

Islam, N.; Khan, M. M.; Nazem, Nurul Islam; and Rahman, M. H. (2000). *Reforming Governance in Dhaka, Bangladesh. In Urban Governance in Asia: Sub-regional and City Perspectives*, in Nazrul Islam (ed.), Pathak Shamabesh. Dhaka: pp.135-162.

Islam, S. (1991). *Social life in Dhaka, in 1763-1800*, in Sharif Uddin Ahmed (ed), Asiatic Society of Bangladesh, Dhaka.

Jane Jacobs, (1961). *The Death and Life of Great American Cities*, Random House and Vintage Books, New York: USA, p. 151

Karim, A. (1991). *Origin and Development of Mughal Dhaka in Dhaka: Past Present Future*, ed. Sharif Uddin Ahmed: Dhaka: Asiatic Society of Bangladesh. Dhaka: pp. 24-42.

Karim, A., (1964). *Dacca: The Mughal Capital*, Asiatic Society of East Pakistan, Dacca, Dhaka. pp.38-39

Karim, Abdul (1965). *Dhakai Muslin. Dacca*, Bangla Academy press. Dhaka, p. 62

Kerr, J. S. (2000). *Conservation plan: a guide to the preparation of conservation plans for places of European cultural significance*, (7th edition) Sydney: National Trust of Australia, NSW. p. 36

Khan, F. Karim and Atiquallah, M. (1965). *Growth of Dacca City, Population and Area, 1608-1981*. Report of Social Science Research Project, Department of Statistics, University of Dacca, East Pakistan. pp. 2 – 6

Khan, I ,M (1985). *Livability in Old Dhaka-Evolving Residential Patterns in Mohallas*, in Powell, R., [Ed] *Regionalism in Architecture, Exploring Architecture in Islamic Culture* Concept Media Pvt Ltd for The Aga Khan Award for Architecture, Singapore, pp 107-114

Khan, M. Siddiq (1966). "Panchayet System in Old Dhaka", in Azimusshan Haider (ed.), *A City and Its Civic Body*. Dhaka: Dacca Municipality. p. 32-36.

Khatun, Habiba (1991). "Pre-Mughal Dhaka" in Sharif Uddin Ahmed (ed) *Dhaka Past Present Future*, Dhaka: The Asiatic Society of Bangladesh, p.634-636.

Kriken, John Lund; Enquist, Philip and Rappaport; Richard. (2010). *City building: Nine principles for the twenty first century*: chapter V; Compatibility, Princeton architectural press, New York, pp. 140-147.

Lewis, Mumford; (1968). *The urban prospect*, Harcourt, Brace and World publishers, New York, USA, p. 26

Low, S. (1996). *Spatializing Culture. The Social Production and Social Construction of Public Space in Costa Rica* ", in American Ethnologist no 4, vol. 23, pp 861-862

M. Atiqullah and F. Karim Khan (1965). Growth of Dacca City: Population and Area (1608–1981). Social Science Research Project, University of Dacca Press. p. 6

Mahmud, Akter and Jahangir, M., (2015). *Dhaka for future generations: our actions*, CDC seminar paper supported by German embassy at Dhaka, Bangladesh institute of urban planners (BIP) pp. 233-245

Mamun, Muntasir; (1993). *Dhaka: the city of memories and obscurities*, Ananya publishers, Dhaka, p. 29

Mamun, Muntasir; (1993). *Dhaka: the city of memories and obscurities*, Ananya publishers, Dhaka, p. 94

Mamun, Muntasir; (1993). *Dhaka: the city of memories and obscurities*, Ananya publishers, Dhaka, pp. 75-78

Mamun, Muntasir; (1993). *Dhaka: the city of memories and obscurities*, Ananya publishers, Dhaka, p. 105

Mamun, Muntasir; (1993). *Dhaka: the city of memories and obscurities*, Ananya publishers, Dhaka, p. 134

Mamun, Muntasir; (1993). *Dhaka: the city of memories and obscurities*, Ananya publishers, Dhaka, p. 250

Mamun, Muntasir; (1993). *Dhaka: the city of memories and obscurities*, Ananya publishers, Dhaka, p. 251

Mamun, Muntasir; (1993). *Dhaka: the city of memories and obscurities*, Ananya publishers, Dhaka, pp. 248-251

Mamun, Muntasir; (1993). *Dhaka: the city of memories and obscurities*, Ananya publishers, Dhaka, p. 234

Mamun, Muntasir; (1993). *Dhaka: the city of memories and obscurities*, Ananya publishers, Dhaka, p. 187

Mamun, Muntasir; (1993). *Dhaka: the city of memories and obscurities*, Ananya publishers, Dhaka, pp. 117-123

Mehrotra, R., (2009). *Kinetic City. Issues for Urban Design in South Asia*, in Shannon, K. and Gosseye, J. (eds.), Reclaiming the Urbanism of Mumbai, SUN, Amsterdam, Netherlands, pp.141-149

Mohsin, K.M, (1991). *Commercial and Industrial Aspects of Dhaka in the Eighteenth Century* in Sharif Uddin Ahmed (ed) Dhaka: Past Present Future, The Asiatic Society of Bangladesh, pp.64-73

Morgan, C. et al, Thomas, King, Richard and Weisz, Schopler (1993). *Introduction to psychology*, 7th edition, chapter 9, *Social perceptions, influences and relations, introduction to psychology*, Tata McGraw-Hill, New Delhi, India, pp. 367-377

Muktadir, Mohammad. A., Hasan, Dewan. M. (1985). *Traditional house Form in Rural Bangladesh-A case study for Regionalism in Architecture*, master's thesis. pp 115-130.

Mumford, L., (1971). *The Culture of Cities*; Harcourt Brace Jovanovich, Inc.; New York. USA: pp. 486-93

Olmo, Carlo. (1991). (eds) *Architettura e Urbanistica Torino, 1945-1990*, Turin, Italy. p 241

Paddison, R., Findlay, A.M., (1990). *Retailing Environments in Developing Countries*; in Dawson, J. A.,(ed.); Routledge; London, UK. pp. 3-15.

Pahl, R. E. (1965). Trends in Social Geography, in R.J. Chorley and P. Haggett (eds.), *Frontiers in Geographical Teaching*, London, p. 81-100

Paul D. Spreiregen, (1965). *Urban design, the architecture of towns and cities*, McGraw Hill, New York: p. 37

Paul, D. Spreiregen, (1965). *Urban Design, the architecture of Towns and cities*, McGraw-Hill, New York, USA; p. 53

Peres, T. (2005). *Suma Oriental of Tome Pires*. Asian Educational Services, Delhi, India, p. 88

Rapoport, Amos (1977). *Human Aspects of Urban Form - Towards a Man - Environment Approach to Urban Form and Design*, Pergamon Press, Oxford: pp. 8-20.

Sarkar, Shipra (1997). *Sankhasilpo (Conch-Shell Art in Bangla)*. Dhaka: Bangla Academy; p. 50

Simonds, John Ormsbee, (1983). *Landscape architecture: a manual of site planning and design*, 2nd edition, McGraw-Hill, New York, pp. 275-288.

Taifoor, Syed Muhammed (1956). *Glimpses of Old Dhaka*, Second Edition, Saogat Press. Dhaka: pp. 15 – 264

Taifoor, Syed Muhammed. (1956). *Glimpses of Old Dhaka*. Pioneer publishers. Dhaka. p. 15

Talukdar K. (1987). *Bangladesher Lokayito Shilpokala (Folk Arts of Bangladesh)*; Bangla Academy. Dhaka, p. 57

The Daily Observer, news on cover page on 10th June, 2004

Trelb, M (1993). Tokyo: Real and Imagined in Yelavich, Susan (Ed.) *The Edge of the Millennium* New York: Whitney Library of Design, New York: p. 88

Tyrwhitt, Jacqueline [ed.] (1947). *Patrick Geddes in India*. London: Lund Humphries, pp. 26-27

Tyrwhitt, Jacqueline [ed.] (1947). *Patrick Geddes in India*. London: Lund Humphries, p. 26

Vaskor, Ashik Mannan and Barua, Sudipta (1988). *Indigenous Architecture as Basic Architectural Design, Anecdote of Bengal vernacular spaces*, pp. 43-45

Webber, M. M., (1964). *The urban place and the nonplace urban realm*, in Webber, M. M. (ed) *Explorations into Urban Structure*, University of Pennsylvania Press, Philadelphia, PA, USA. pp. 79–153.

6.3 Journals/articles

Ahmed, Iftekhar, (2007). *The heritage of Shankharibazar: peoples participation in the conservation process to promote cultural tourism*, BRAC University Journal, Vol. IV, No. 2, Dhaka. pp. 7-16.

Ahmed, Sayed, (2017). *Happiness in Bengal architecture: vernacularism of courtyard spaces*, 19th Arcasia forum journal, Jaipur; India

Bhattashali, N. K. (1936). *Bengal Past and Present*, Dhaka, Vol. 33, pp. 27-29.

Bose, Kamalika (2015). *Cultural Economies in a Colonial Metropolis: Leveraging the heritage value of Kolkata's Chitpur Road*, Asia-Europe Network of Urban Heritage for Sustainable Creative Economies journal, Indian National Trust for Art and Cultural Heritage (INTACH) New Delhi, India, pp. 61-66.

Ghosh, Suntu Kumar and Akter, Md. Shahriar, (2005). *Handloom Industry on the Way of Extinction: An Empirical Study over the Pre-dominant Factors*, BRAC University Journal, Vol. 2, No. 2, pp.1-12.

Grazia de Paoli R., (2012). *Urban heritage and methodologies of renewal*, Regional Science Inquiry Journal, Vol. IV, issue 1, DASTEC Department, Mediterranean University of Reggio Calabria. Italy. pp 141-149.

Haque K, H (2009). *Dhaka and the contestation over the public space*, City journal, volume 13, issue 1, pp. 129 -136

Herbert, D.T. & Raine, J. W. (1976). *Defining Communities within Urban Areas*, Town Planning Review, Vol. 47, No. 1, pp. 325 - 338.

Imammuddin, Abu H; Hassan, Shamim Ara and Alam, Wahidul (1989). *Shakhari Patti: A Unique old City Settlement*, Protibesh, Journal of the Department of Architecture, BUET, vol. 3, issue 2, pp.39-54

Imamuddin, Abu H. I., et al. Shamim A. H. and Wahidul, A. (1989). *Shakhari Patti: A Unique Old City Settlement, Dhaka*, Architectural and Urban Conservation in the Islamic World journal, Dhaka. p. 48

Imamuddin, Abu, H. Shamim Ara Hassan, Wahidul Alam, (1989). *Shakhari patti, an unique old city settlement Dhaka*, journal of architectural and urban conservation, Dhaka. pp. 126-128.

Islam, S, (2011). *Dhaka: Through history of 400 Years*, Journal of Itihas (history) Academy, Itihas Academy, Dhaka. Vol 1, no 1, pp. 33-38.

- Kabir, Saimum and Khan, Fatema M. (2014). *Traditional Urbanity and Social Equity: Learning from Old Dhaka*, The AIUB Journal of Science and Engineering (AJSE), Vol. 13, No. 1, pp. 65-73
- Khan, F. Karim and Islam, Nazrul. (1964). *High Class residential Areas in Dacca City*. The Oriental Geographer, Vol. 8. No.1, pp.1- 41
- Khan, F. Karim.,Islam, Nazrul. (1964). *High class residential areas in Dacca city*, Oriental Geographer, Vol. 8, no. 1, pp. 1-41
- Khan, I. A. (2006). *The Rural Bangladeshi Courtyard*, in BRAC University Journal, Vol. 3, Dhaka: p. 9-15
- Lane, L. W. (1958). *The Planning Problems of Central London*, Journal of the Town Planning Institute, page 44.
- Mitchell D. (1995). *The end of Public space? People "s park, Definitions of the public and Democracy*, Annals of the Association of American Geographers, Vol. 85, no. 1, page108-133
- Mowla, Qazi Azizul. (2008). *Redevelopment Strategy for Old Dhaka: An Analytical Debate*, Jahangirnagar Planning Review, Vol. 6, June; Jahangirnagar University, Savar, Dhaka. pp. 33-38.
- Mowla, Q, A. (1997). *Settlement Texture: Study of a Mohalla in Dhaka*.Journal of Urban Design, London, UK: Vol.2, Issue 2, pp. 264-265
- Mowla, Q. A (1999). *Spatial Manifestation of Social Norms: A Case of Urban Design in Bangladesh*. Khulna University Journal, Khulna. Vol. 02, pp. 177-186.
- Mowla, Q. A. (1999). *Contemporary Urban Morphology of Dhaka – Lessons from the Context*, Oriental Geographer journal, Vol.43, Issue 1, pp.52-65.
- Mowla, Q. A. (2010). *Role of Water Bodies in Dhaka for Sustainable Urban Design*, Jahangirnagar Planning Review, Savar, Dhaka: Vol.08, pp.13-30
- Mowla, Q. M. (2011). *Urban Aesthetics: A Study on Dhaka " in „The History Heritage and Urban Issues of Capital Dhaka " , in Sharif Uddin Ahmed, Roxana Hafiz and A.K. M Golam Rabbani, (Eds) Asiatic Society of Bangladesh, (to celebrate the 400 years of Capital Dhaka). Vol 3, Urbanization and Urban Development, pp. 169-262*
- Mowla, Q., A., (2000). *Colonial Urban Morphologies: An Inquiry into Typology and Evolution Pattern*. Journal of Khulna University Studies, Khulna University, Khulna: vol. 2, no. 1, pp. 45-62
- Mowla, Q. A. (1999). *Contemporary morphology of Dhaka – lessons from the context*, Oriental Geographer. Vol. 7, Issue 2, pp. 22-38.
- Mowla, Q.A. (2006). *Memory Association in Place Making – Understanding an Urban Space*, Protibesh, Journal of the Dept. of Architecture, Bangladesh University of Engineering and Technology; BUET, Vol. 10, no. 1, pp. 23-32.

- Mowla, Qazi Azizul (2003). *Urbanization and the Morphology of Dhaka -A Historical Perspective*, Journal of the Asiatic Society of Bangladesh, Dhaka: Vol. 48, no-1, pp.145-170
- Mowla, Qazi Azizul (2014). *Dwindling Urban Water-bodies of Dhaka and the City Fabric: A Post-mortem*, Protibesh, journal of department of architecture, BUET, Dhaka, p.1
- Nader, El-Bizri, (2015). *On Dwelling: Heideggerian Allusions to Architectural Phenomenology*, Studia UBB Philosophia 60 pp. 5–30
- Niger, Maher; (2010). *Preserving Urban Roots: The Case of Shakhari Bazaar, Dhaka, Bangladesh*, Nakhara journal, Thailand. pp 33-36
- Nilufar, Farida, (2004). *Hidden Morphological Order in an Organic City*, Protibesh, Journal of the Dept. of Architecture, Bangladesh University of Engineering and Technology; BUET, Dhaka, pp.34-41
- Nilufer, Farida. (2004). *Hidden Morphological Order in an Organic City*, Protibesh, Journal of Department of Architecture, Bangladesh University of Engineering and Technology; BUET, Dhaka: Vol 10. pp. 33-40
- Nulifar, Farida & P Eshika, (2014). *Searching the genotypes: Architectural morphology of urban houses in the ancient city of Panam*, Journal of Department of Architecture, Bangladesh University of Engineering and Technology; BUET, Dhaka: pp. 7-10
- Rahman, Mahbubur (2003). *Multiple Coutyard Mansions of Old Dhaka*, Journal of Research in Architecture and Planning, Vol.2, p.7-32
- Rashid, H. (1994). *A basis for Culturally Responsive Environment for Living*, EARTH journal, Vol. 1, No. 1, p 3
- Redfield, R., Singer, M, (1954). *The cultural role of cities, economic development and cultural change*, Vol 3, pp.53-73
- Roxburgh, W. (1832). *Flora Indica (Description over Indian Plants)*, Vol. 1, W. Thacker and Co. SreeRampur, India, p. 184
- Tabassum, Saniya; Ameen; Intisar and T., Tyne, (2015). *An Overview of the Heritage of KalicharanShaha Street: Approach to the Area Conservation*. Asian journal of Arts and Humanities, (AJHAL) Vol. 2, No 2, pp. 47-62
- Tabassum, Tanima (2010). *Analyzing a Traditional Neighbourhood Pattern of Old Dhaka: A Case of Tantibazaar*, Journal of Sustainable Architecture and Urban Development, pp. 215-229.
- Tabassum,T. and Sharmin,S. (2011). *The Heritage of Tantibazar: Approaching for Area Conservation*, Journal of Itihas Academy, Itihas Academy Dhaka, Vol 1, no. 1, pp. 143-155
- Tanima Tabassum, (2003). *Sustainable Architecture and Urban Development*, BRAC University journal, Dhaka: p. 220

V. B. Doshi, (1995). *Architecture and Society*, EARTH journal, vol. 2, No. 1, p. 6.

Websites

Barcelona Charter on the Educative City, Barcelona City Council, Spain. available at (http://www.edcities.org/en/wp-content/uploads/sites/2/2014/11/Congress-Declaration-2014-EN_DEF.pdf) accessed on 23 May 2017 at 5.50 pm

Barcelona Declaration for the 13th International Congress of Educating Cities, (ICEC), (2014), available at (<http://iaec2014.bcn.cat/en/congress-conclusions/declaration>) accessed on 23 May 2017 at 5.00 pm.

Bianca, Stefano. (1980), Fez: Toward the Rehabilitation of a Great City". In Conservation as Cultural Survival, Renata Holod (ed); Aga Khan Award for Architecture, Philadelphia: PA, USA, Available at (<https://archnet.org/publications/2617>) accessed on 3rd March, 2017 at 8.25 pm

Chowdhury/Khan, (2015) Sifatul Quader Chowdhury and Aftab Alam Khan, (2015), chronology of earthquake in Bangladesh, available at (<http://en.banglapedia.org/index.php?title=Earthquake>) accessed on 6th June, 2017 at 1.30pm

Clarke, A. and Johnston, C. (2003). Time, memory, place and land: Social meaning and heritage conservation in Australia, in ICOMOS 14th General Assembly and Scientific Symposium on "Place – memory – meaning: preserving intangible values in monuments and sites", on 28 - 31 October, Victoria falls, Australia, p. 366

Collin Rowe, (1982). Available at [<http://architectureandurbanism.blogspot.de/2013/12/colin-rowe-and-fred-koetter-collage.html>] accessed on 4 pm, 15th March, 2017

Desvaux, Martin; (April 2010) A Synopsis of CLIVE PONTING, S A GREEN HISTORY OF THE WORLD OPTIMUM POPULATION TRUST JOURNAL Volumes 10, in Andrew Ferguson [Ed] MIT Press, Massachusetts, USA. P.8. Available at (https://www.populationmatters.org/wp-content/uploads/green_history.pdf) accessed on 9 am, 12th April, 2017

Francesco, Siravo, (2011). Conservation planning: the road less traveled, conservation perspectives, fall 2011, historic cities, Getty conservation institute, Los Angeles, CA. USA available at (http://www.getty.edu/conservation/publications_resources/newsletters/26_2/feature.html) accessed on 20 march, 2017 at 5 pm.

Giddens, A. (1990), The Consequences of Modernity, California, Stanford University Press. Available at (http://lifecourses.ca/sites/default/files/Consequences_of_Modernity%20-%20Chpt1.pdf) accessed on 12 april, 2017 at 1.30pm. pp. 10-32

Habib, Kishwar, (2010) The Post Colonial Public Spaces and its Cultural Diversity: The Case of National-Cultural Representative Public Spaces of Dhaka, OSA (Research Unit Urbanism and Architecture) Department of Architecture, Urbanism and Planning (ASRO), Katholieke Universiteit Leuven, Leuven, Belgium. Available at ([Page 86](http://n-</p></div><div data-bbox=)

aerus.net/web/sat/workshops/2010/pdf/PAPER_habib_k.pdf) accessed on 4th may, 2017 at 4.35 pm

Harun-Er-Rashid, (2015). Madhupur tract, Banglapedia available at (http://en.banglapedia.org/index.php?title=Madhupur_Tract) accessed on 6th June, 2017 at 12pm

Holod, Renata, (ed) (1980): Aga Khan Award for Architecture, (AKAA) conference; (1978). „Conservation as Cultural Survival“ , Seminar proceedings of Architectural Transformation in the Islamic World, Istanbul, Turkey, 26 to 28 September, available at (<https://archnet.org/publications/3496>) accessed on 3rd March, 2017 at 9.52 pm

Hosagrahar, Jyoti, (2012). Culture“ s Contribution to Achieving Sustainable Cities, conference on Sustainable Urbanism International, Integrating Culture and Development: Framing UNESCO“ s Engagement with Culture and Development (UNESCO Culture Sector). Columbia University, New York. Available at (<http://www.unesco.org/fileadmin/MULTIMEDIA/HQ/CLT/images/SustainableCitiesFinalENG.pdf>) Accessed on 12 pm, 6th May, 2017

HUL, UNESCO. (2011); General Conference resolution for Recommendation on Historic Urban Landscapes November, available at (<http://whc.unesco.org/en/activities/638>) accessed on 12 march, 2017 at 1.55 pm

Islam, M. Aminul, (2012). Floods in Bangladesh. Available at (<https://www.revolvy.com/main/index.php?s=Floods%20in%20Bangladesh>) accessed on 6th June, 2017 at 12.30pm

Khan, Nayma and Nilufar. Farida (2009). Spatial Logic of Morphological Transformation: A Paradigm of Planned - Unplanned Areas in Dhaka city, Proceedings of the 7th International Space Syntax Symposium (Eds) Daniel Koch, Lars Marcus and Jesper Steen, Stockholm: KTH, Sweden. Available at [http://www.sss7.org/Proceedings/05%20Spatial%20Morphology%20and%20Urban%20Growth/052_Khan_Nilufar.pdf] accessed on 5 pm, 26th March, 2017

Kostof, Spiro, (1991), The City Shaped: Urban Patterns and Meanings through History, Thames and Hudson, London. Available at (<http://jsah.ucpress.edu/content/54/3/356>) accessed on 22nd April, 2017, at 4.50 pm.

M Aminul Islam (2012). Flood record of Bangladesh, available at (<https://www.revolvy.com/main/index.php?s=Floods%20in%20Bangladesh>) accessed on 6th June, 2017 at 12.30pm

Mowla, Qazi Azizul, (2012), „An Outline Strategy for Old Dhaka Redevelopment“ in Sustainable Living Urban Model (S.L.U.M): Asian Mode, Edn.7, Available from: https://www.researchgate.net/publication/282576002_%27An_Outline_Strategy_for_Old_Dhaka_Redevelopment%27) accessed 5th June, 2017 at 2.35 pm. pp.76-77

Nilufar, Farida (1999); Spatial Structure of Urban Core and the Process of Transformation in Dhaka, Proceedings of the 6th International Seminar on Urban Form [ISUF], UNIVERSITA DEGLI STUDI, Dipartimento di Progettazione dell' Architettura, Firenze, Italy, poster. FM2.23-2.26. available at (https://www.academia.edu/245134/Structure_of_Urban_Core_and_the_Process_of_Transformation_in_Dhaka) accessed on 9th February 2017, at 8.35 pm.

Nilufar, Farida (1999); Transformation and growth of Shophouses in connection with changing spatial dynamics of Old Dhaka, Available at (https://www.academia.edu/1940231/Transformation_and_growth_of_Shophouses_in_connection_with_changing_spatial_dynamics_of_Old_Dhaka) accessed on 13th February, 2017 at 12 pm.

Nilufar, Farida (2000), Hidden Morphological Order in an Organic City, International Seminar on 'Megacities 2000', Centre for Architecture and Urban Design for China and Hong Kong, Department of Architecture, The University of Hong Kong, 8-10 February. Available at (<http://fpd-bd.com/wp-content/uploads/2015/06/Hidden-Morphological-Order-in-an-Organic-City.pdf>) accessed on 10 pm 19th April, 2017

Nora, Pierre, (1989), Between Memory and History: Les Lieux de Mémoire, Representations, No. 26, Special Issue: Memory and Counter-Memory. pp. 7-24 available at (<http://links.jstor.org/sici?sici=07346018%28198921%290%3A26%3C7%3ABMAHLL%3E2.0.CO%3B2-N>) accessed on 5th March, 2017 at 3.33 pm

Rohit Jigyasu. (2003). Protecting and Managing „Living“ Heritage in South Asia: Issues and Challenges. International initiatives for disaster risk management of cultural heritage: Where we are and where we need to go! Paper presented at ICCROM Living Heritage Sites Program Strategy Meeting, held in Bangkok, Thailand. Available at (<http://unesdoc.unesco.org/images/0023/002317/231755E.pdf>) accessed on 23 march 2017 at 6.40 pm, pp. 277-282

Schulz, Norberg-Christian (1984) available at (https://marywoodthesisresearch.files.wordpress.com/2014/03/genius-loci-towards-a-phenomenology-of-architecture-part1_.pdf) accessed on 25th march 2017 at 10 am. Rizzoli, New York P. 18

SFYP. (1990). Second Five Year Plan, Planning Commission, Government of Bangladesh, Dhaka, available at (https://www.unpei.org/sites/default/files/e_library_documents/Bangladesh_Sixth_Five_Year_Plan_Part3_Statistical_Annex_Technical_Framework_2011_2015.pdf) accessed on 14 March, 2017 at 3.30 pm. p. 99

Shanewaz A. K.M, (2010). Ekattor television documentary on 400 years of Dhaka, available at (<https://www.youtube.com/watch?v=YKrGq0eyhFs>) accessed on 8 pm, 8th February, 2017

Simonds, John Ormsbee, (1983); Landscape architecture: a manual of site planning and design, 2nd edition, McGraw-Hill, New York, pp. 280

Vienna Memorandum on Heritage and the Conservation of Historic Urban Landscapes

(2005), available at: (http://www.patrimoinebati.umontreal.ca/documents/table_ronde_2006_proces_verbaux.pdf) accessed on 30th May, 2017, at 2.20 pm, pp. 21-25

6.5 List of the sources of Figures

All the photos that are not enlisted here are taken by the author during field survey. The historical photos collected from websites are listed below:

Figure 2: Dholai Canal, (1904) Source: British Library. Available at (www.dhakadesigners.com/old-pictures-of-dhaka/dholai-khal-bridge-lohar-pool-bridge-1904) accessed on 2nd June, 2017 at 3.33 pm

Figure 3: Chowkbazar (1885) Source: British Library Available at (https://www.slideshare.net/mobile/h_uddin/old-dhaka-pictures/) accessed on 22nd June, 2017 at 4.23 pm

Figure 8: 'Indian Weaver of Dacca', painting of D'Oyly. (1827) Source: British Library. Available at (<https://www.pinterest.com/pin/301530137523912851/>) accessed on 10th June, 2017 at 3.33 pm

Figure 10b: Panam Nagar (1875). Source: British Library. Available at (<https://www.pinterest.com/amp/pin/325525879297721861/>) accessed on 13th June, 2017 at 3.33 pm

Figure 11a: Chitpur, Kolkata, painted by William Simpson (1867). Available at (https://upload.wikimedia.org/wikipedia/commons/a/a5/Kolkata_Chitpore_Road_old.jpg) accessed on 7th June, 2017 at 3.33 pm

Figure 11b: Chitpur, Kolkata. Available at (https://farm8.static.flickr.com/7399/10144963236_c066af74ab_b.jpg) accessed on 12th June, 2017 at 3.33 pm

Figure 21: Holi festival of Shakhribazar. (2012), collected from photographer Avijit Nandi.

Rabindranath Tagore in berlin, 1930 Available at (<https://s-media-cache-ak0.pinimg.com/236x/9c/9a/26/9c9a2671c4fb1b86b9de802c821a3613.jpg>) accessed on 11th June, 2017 at 2.30 pm

1st Constitution of Bangladesh (Hand written) 1972 Available at (https://upload.wikimedia.org/wikipedia/en/3/39/Constitution_of_Bangladesh.jpg) accessed on 12th June, 2017 at 3.33 pm

Shankharibazar Massacre, 27th March 1971; by Kishore Parekh. Available at (<http://www.thedailystar.net/what-i-saw-and-heard-in-dhaka-17325>) accessed on 12th June, 2017 at 3.35 pm

7. Annexes

Annex A: Abbreviations

AKAA	Aga Khan Award for Architecture
ASB	Asiatic Society of Bangladesh
BBS	Bangladesh Bureau of Statistics
BIP	Bangladesh institute of Planners
BPC	Bangladesh Parjatan Corporation
C.S	Cadastral Survey
CBD	Central Business District
DAP	Detailed Area Planning
DCC	Dhaka City Corporation
DLR	Directorate of Land Record
DMA	Dhaka Metropolitan Area
DMDP	Dhaka Metropolitan Development Plan
DoA	Department of archaeology
GOB	Government of Bangladesh
IAB	Institutes of Architects Bangladesh
ICCROM	International Centre for the Study of the Preservation and Restoration of Cultural Property
ICOMOS	International Council on Monuments and Sites
IUCN	International Union for Conservation of Nature and Natural Resources
NGO	Non-Governmental Organization
R.S	Revenue Survey
RAJUK	Rajdhani Unnayan Kartipakkha (Capital city development authority)
TWC	Third World Cities
UN	United Nations
UNDP	United Nation Development Program
UNESCO	United Nations Educational, Scientific and Cultural Organization

Annex B: Format of Questionnaire

Anhalt University of applied sciences, MMH

Dessau, Germany

Title: The urban settlement study of distinctive districts in old Dhaka according to vernacular pattern; the possibility of urban cultural corridor according to its collective memory before 400 years of its known history.

Questionnaire format

Interviewer: Sayed Ahmed

Name
Date
Address

Age:

Sex: MALE / FEMALE Religion: _____ Occupation: _____

1. How long you are living here: _____ Local /

Migrant

2. Reason behind the VALUE (both culturally and economically) of this district? a) Craft profession

b) Ancestors

c) Community cohesion

d) Others, _____

3. Which are the lively/vibrant/gathering spaces in this area?

a)

b)

c)

Is it enough? YES / NO

4. Please mention most favorite traditional activities in this area on priority basis. (Which reflect lifestyle of the urban corridor; rank them from your preferences?)

a)

b)

c)

5. Please mention most important events in this area on priority basis.

(Which reflect collective memory of this locality, rank them from your preferences)

a)

b)

c)

6. Reasons or things that give you pleasure for living here, after knowing the vulnerabilities?

7. What are the things that give you the essence of memory associated spaces?

8. What are the collective past activities that are replaced by youth as a result of generation gap?

9. Suppose, you are not living here, what will make you nostalgic? (Answers might include both tangible and intangible aspects)

10. Opinion from your part regarding urban conservation issues?

Your own view which is missing above or you want to add.

Thank you

Annex D: List of illustrations

Chapter 1

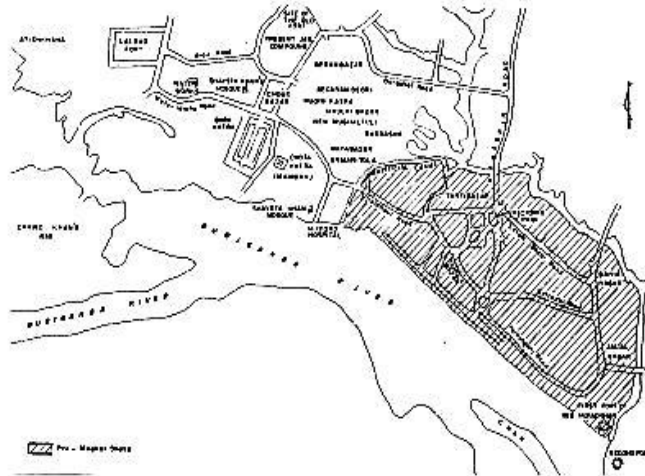
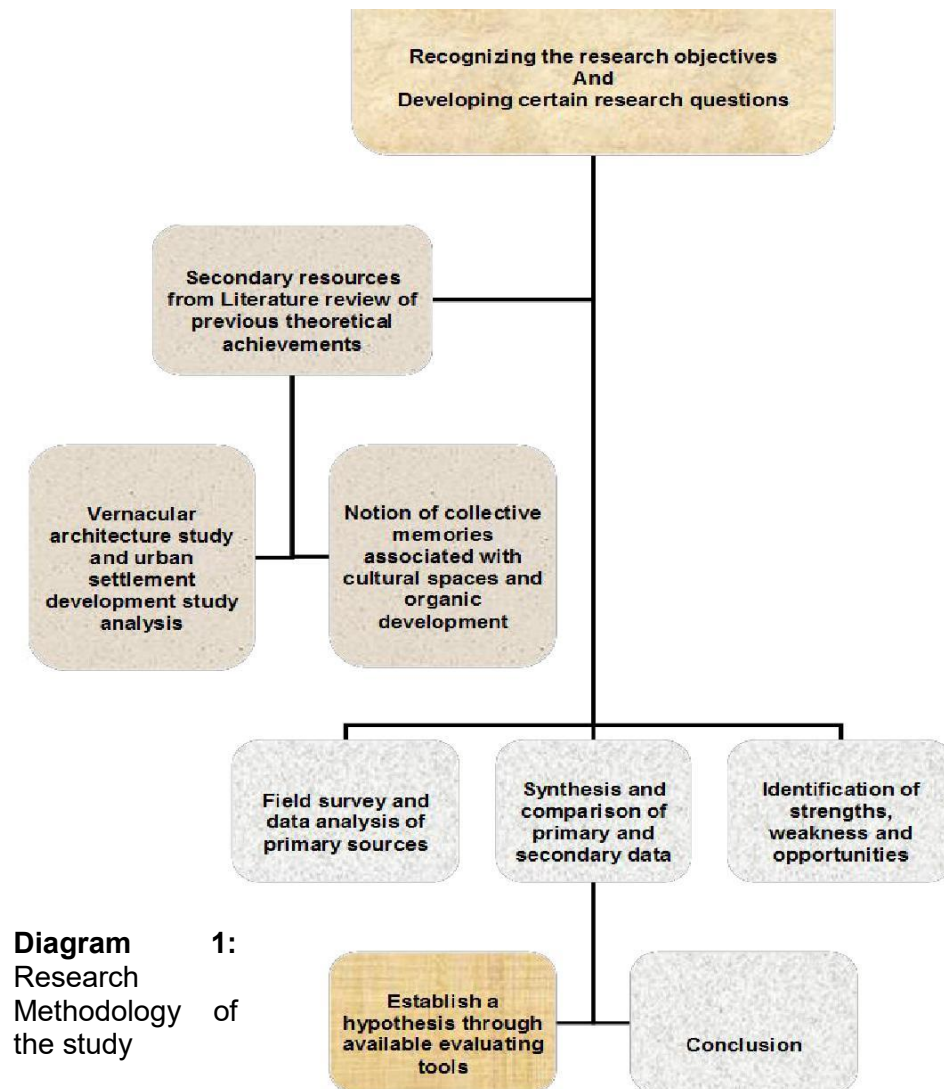


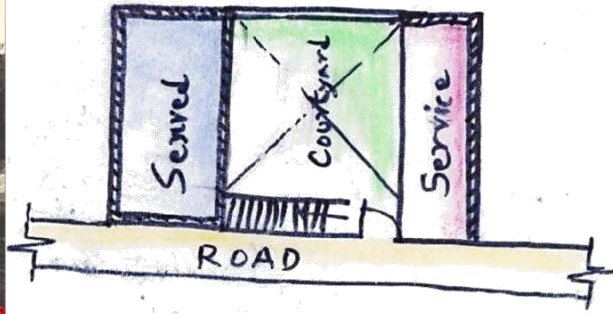
Figure 1: Core of old Dhaka. Source: Dani, (1962)



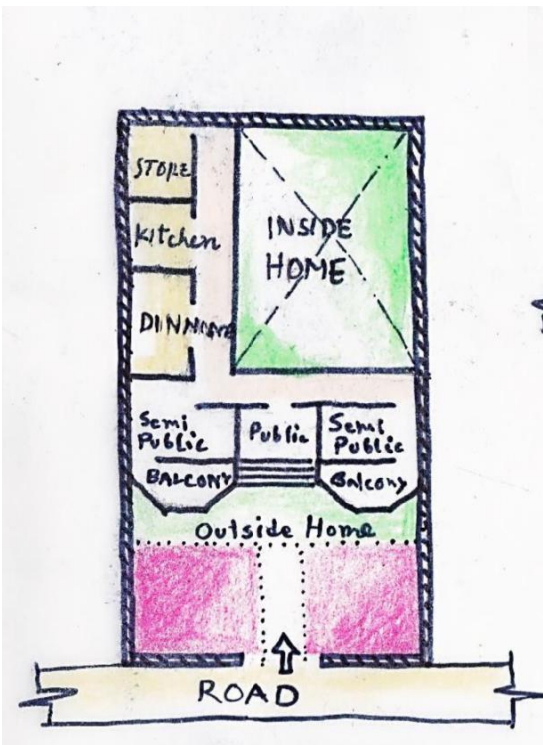
Chapter 2



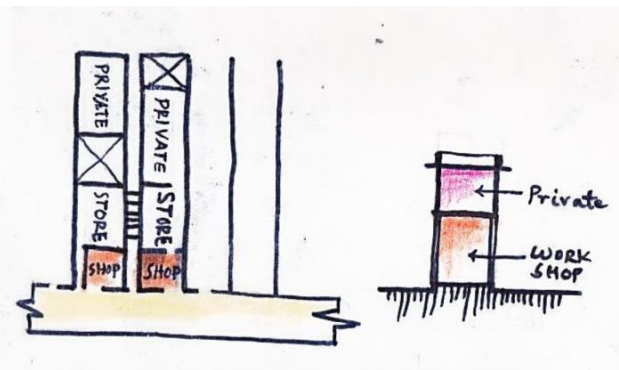
Figure 2: Dholai Canal 1904
Source: British library



Drawing 1b: Settlement typology 2
Agricultural for background. Sketch by Author



Drawing 1a: Settlement typology 1 from Agricultural background. Sketch by author



Drawing 1c: Settlement typology for craft background lower class, Sketch by author

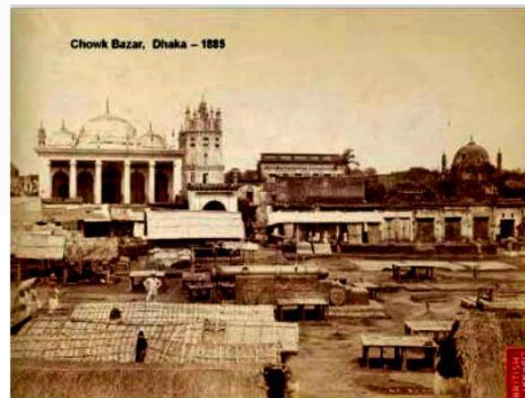


Figure 3: Chowkbazar in 1885, vernacular establishment. Source British library



Figure 4: The national heritage corridor, Shakhribazar



Figure 5: Fusion in colonial architecture, now abandoned. 135 Shakhribazar



Figure 6a: Traditional pattern of vernacular architecture, a cluster around a courtyard, Tantibazar in 1800's, Source Hasan, (2008), page 423 and cited at Fatema, (2013)



Figure 6b: Cotton crushers (Dhunaris) in 1860: Source, Hasan, (2008), page 259 cited at Fatema, (2013)



Figure 7: Borobari of Tantibazar, encroachment

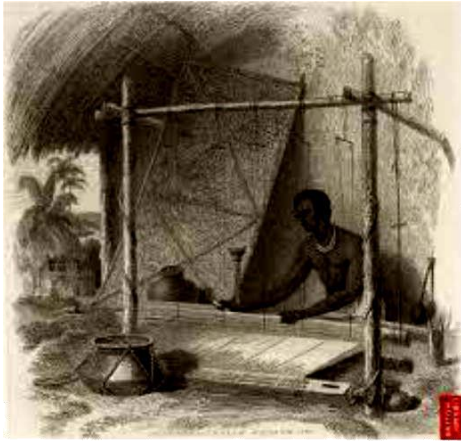
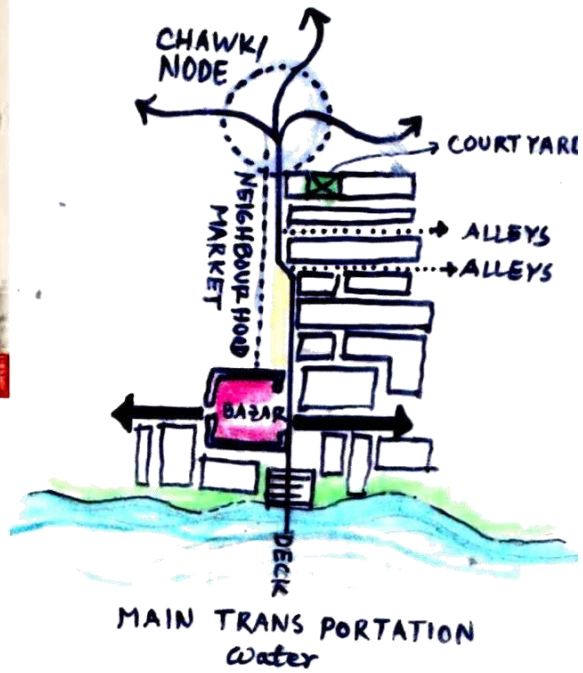
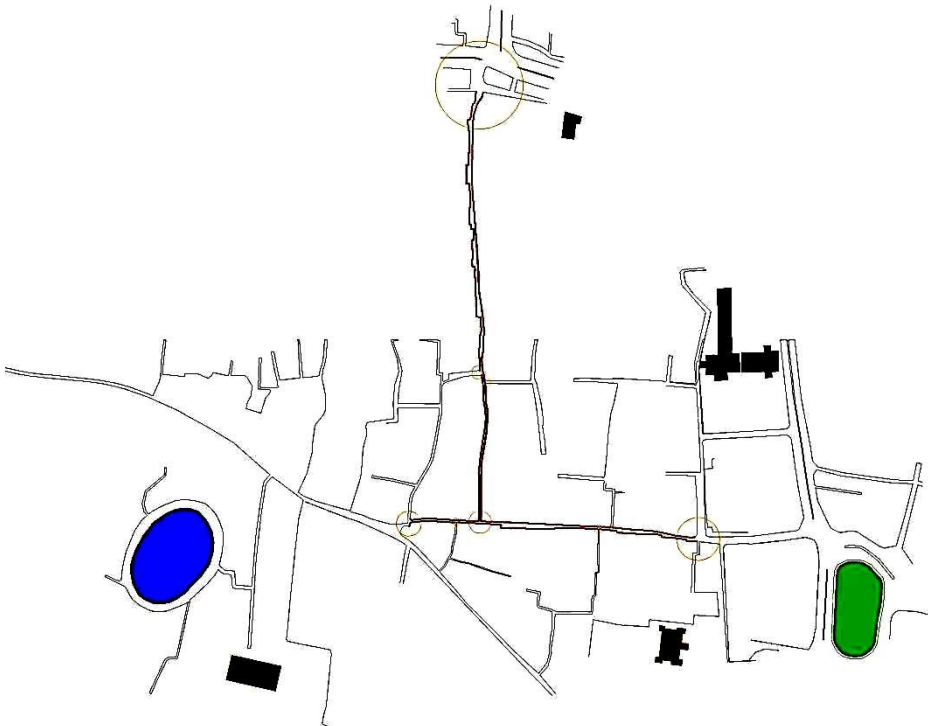


Figure 8 : Painting of D'oyly, 'Indian Weaver of Dacca', Source: British library



Drawing 2: Moholla morphology, Source: Mowla, Q.A (1997). redrawn by author



Drawing 3 : Image of the city: path, node, edges, landmarks

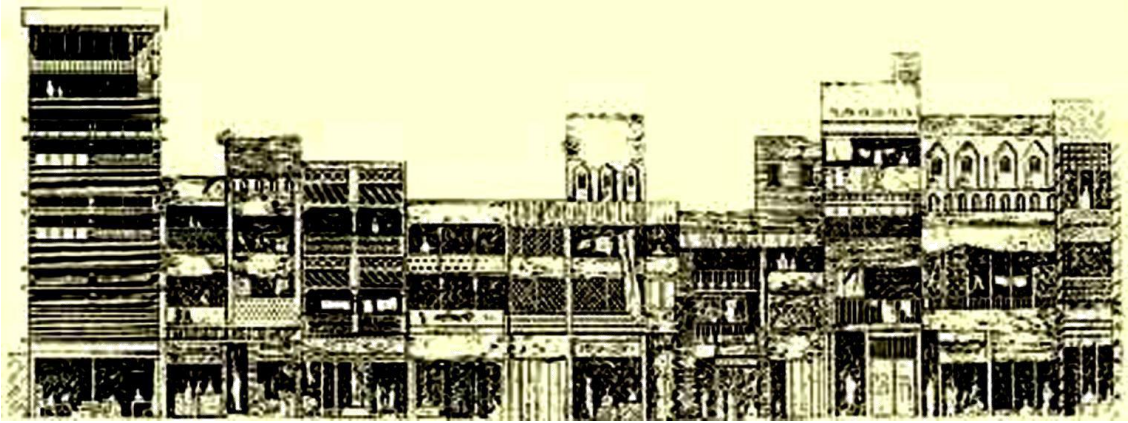


Figure 9: Elevation of Shakhribazar. Source: Architectural and Urban Conservation in the Islamic World, Source:

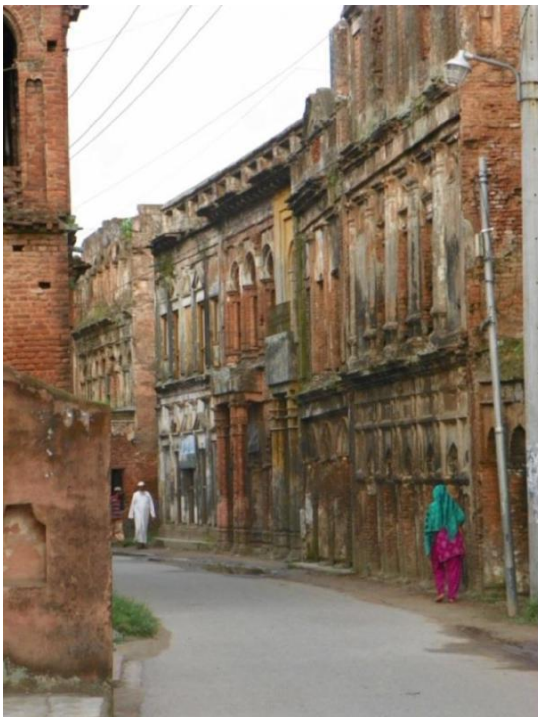


Figure 10a: Panam Nagar in 2017



Figure 10b: Panam Nagar in 1875, Source: British library



Figure 11a: Chitpur, Kolkata, painted By Simpson William in 1867



Figure 11b: Chitpur, Kolkata, today

Chapter 3



Figure 12: 'Roak er adda', chat on the platform



Figure 13a: Collective memory in religious space, at day in Shakaribazar



Figure 13b: Collective memory in religious space, at night in Tatibazar Shakaribazar



Figure 14a: Collective memory in workspace, in Tatibazar Shakaribazar



Figure 14b: Collective memory in workspace, in Shakaribazar

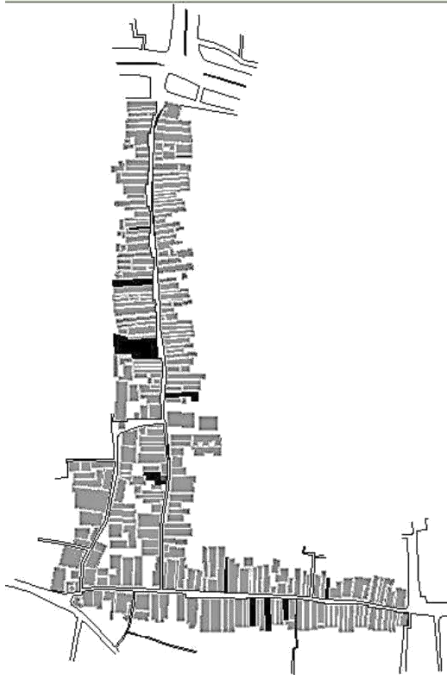


Figure 14c: Collective memory in workspace, in Shakaribazar



Figure 14d: Collective memory in workspace, in Shakaribazar

Chapter 4



Drawing 4: Surveyed built form in Tantibazar and Shakharibazar



Figure 15: Ganesha in new year's eve, Bangla year of 1424



Figure 16: Vertical Palimpsest in Shakharibazar



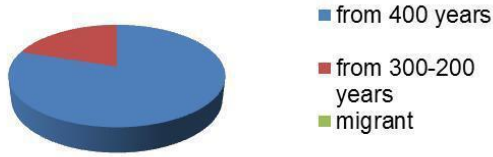
Figure 17: Horizontal Palimpsest in Tatibazar



Drawing 5: Most resilient streets for T-junction development

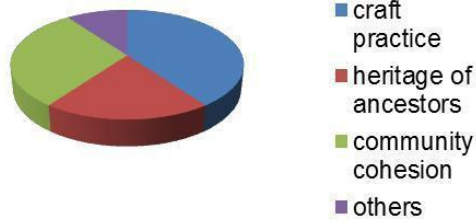
Chart 1: Shakharibazar , survey finding

How long your ancestors are living here in Shakaribazar?



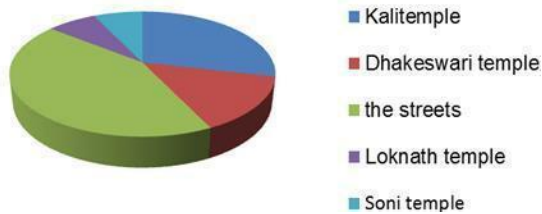
0% migrant

Cultural and economic value of urban site?



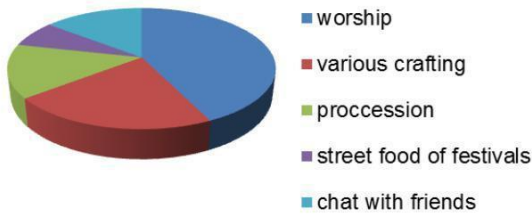
40% for craft community

Favourite urban gathering spaces?



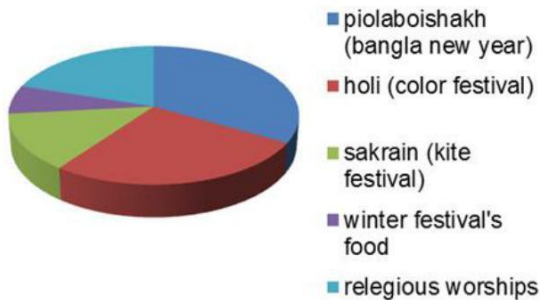
31% love their own street

Favourite traditional activity in this urban corridor?



43% enjoys Durga puja in street

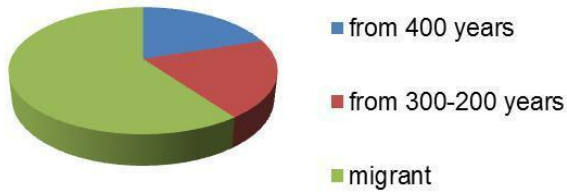
Most secular collective events?



35% consider Poilaboishak as secular event

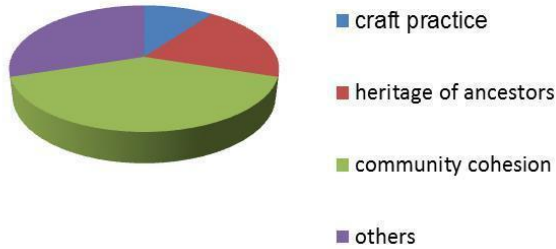
Chart 2: Tantibazar survey findings

How long your ancestors are living here in Tantibazar?



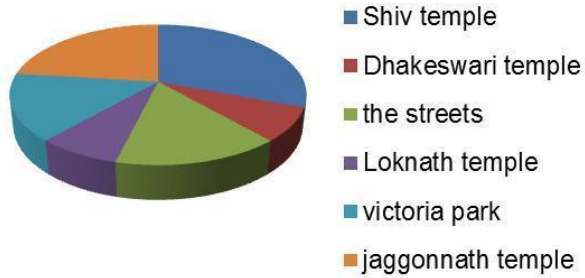
60% are migrants

Cultural and economic value of urban site?



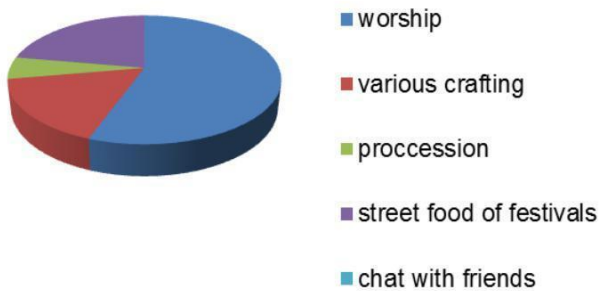
40% for communal cooperation

Favourite urban gathering spaces?



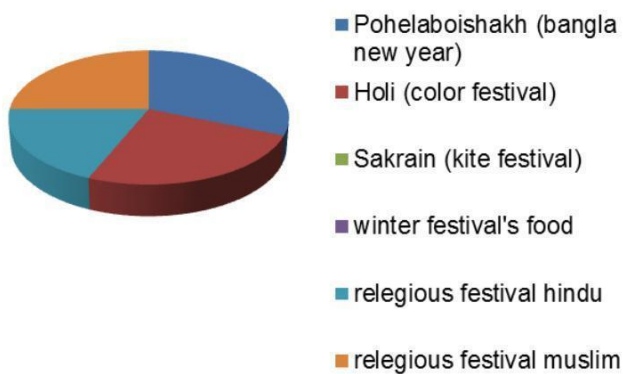
31% go to their own community temple

Favorite traditional activity in this urban corridor?

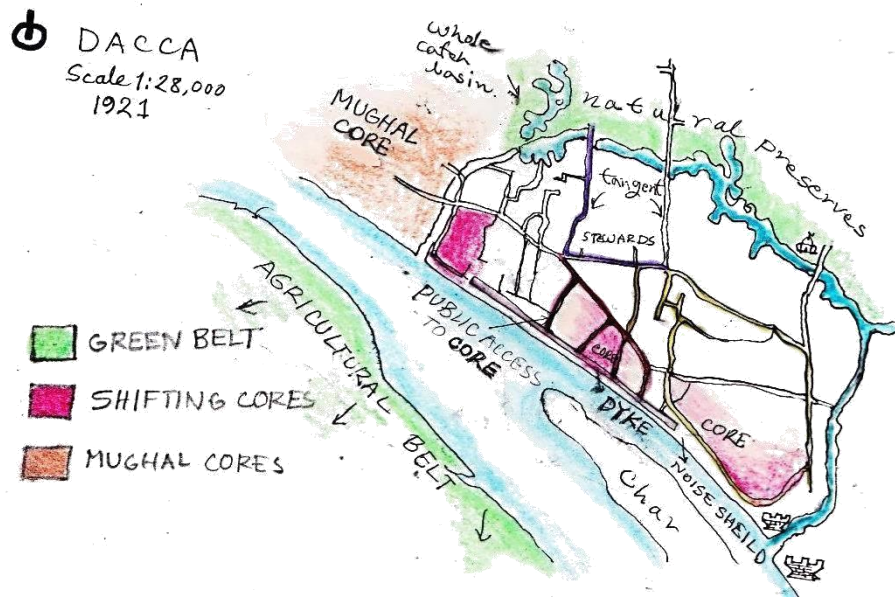


56% enjoys Durga puja in road

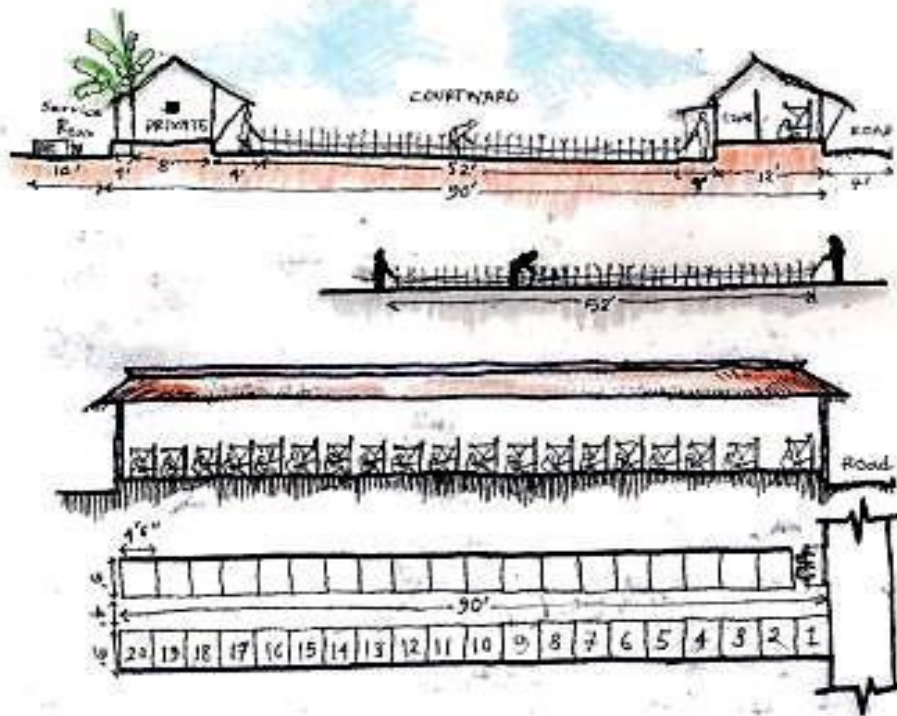
Most secular collective events?



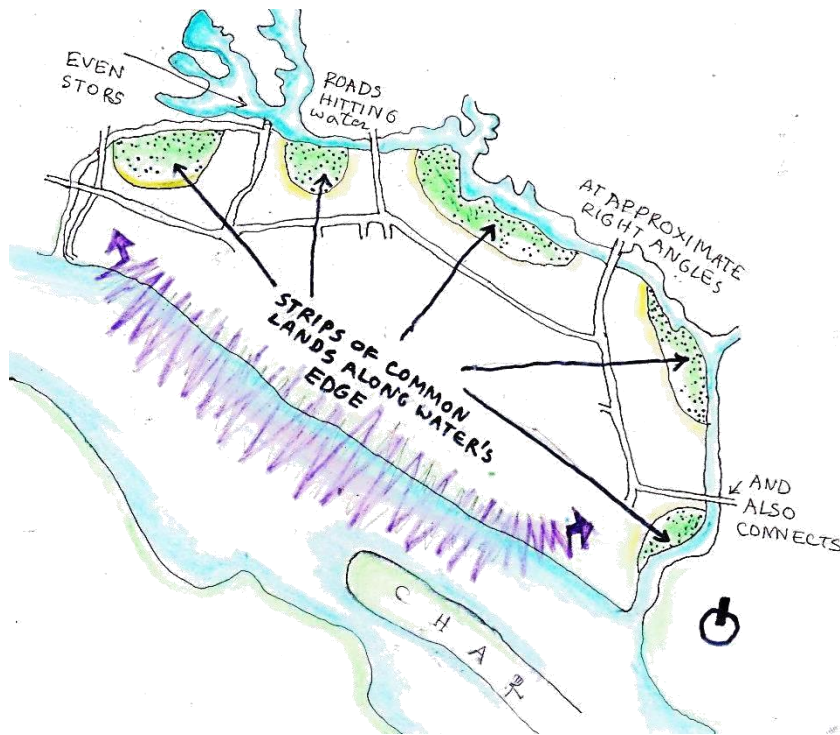
35% consider Poilaboishakh as secular event



Drawing 6: Green belt and core shifting let craftsmen to continue trade, redrawn from map of 1924, source : Mamun (1993)



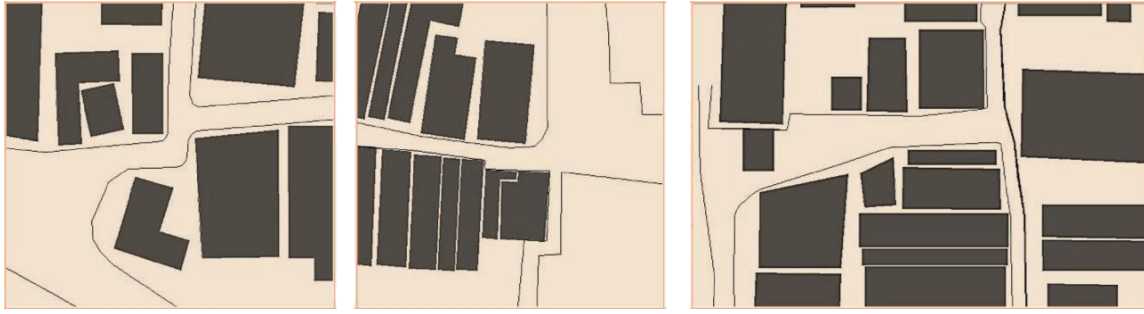
Drawing 7: Coarse grain gained from the vernacular architecture at Tatibazar, from today's context



Drawing 8: Patrick Geddes's stage 3 of city formation, „backflow“ and noise shield



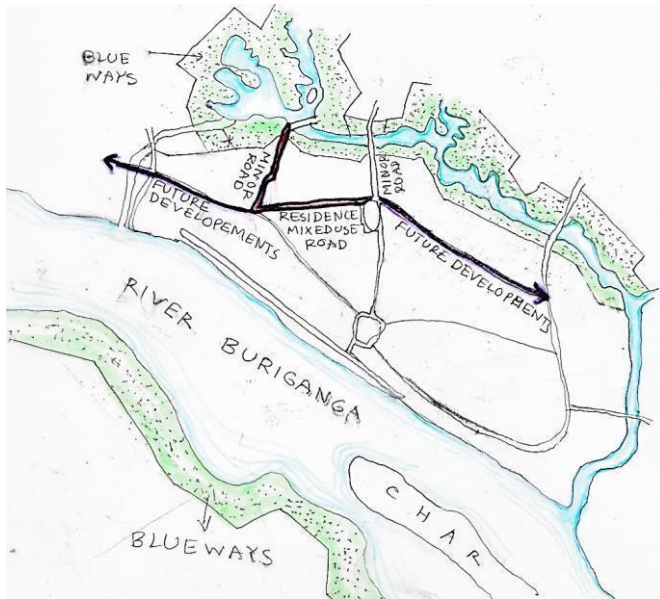
Figure 18: „Space syntax“ used for urban morphology shows Shakharibazar as busiest road in global integration since 1764 to 1916, and surprisingly it is still second most integrated global line in today's context. While Tantibazar was quiet before 400 years. Source: Nilufar, Khan (1999)



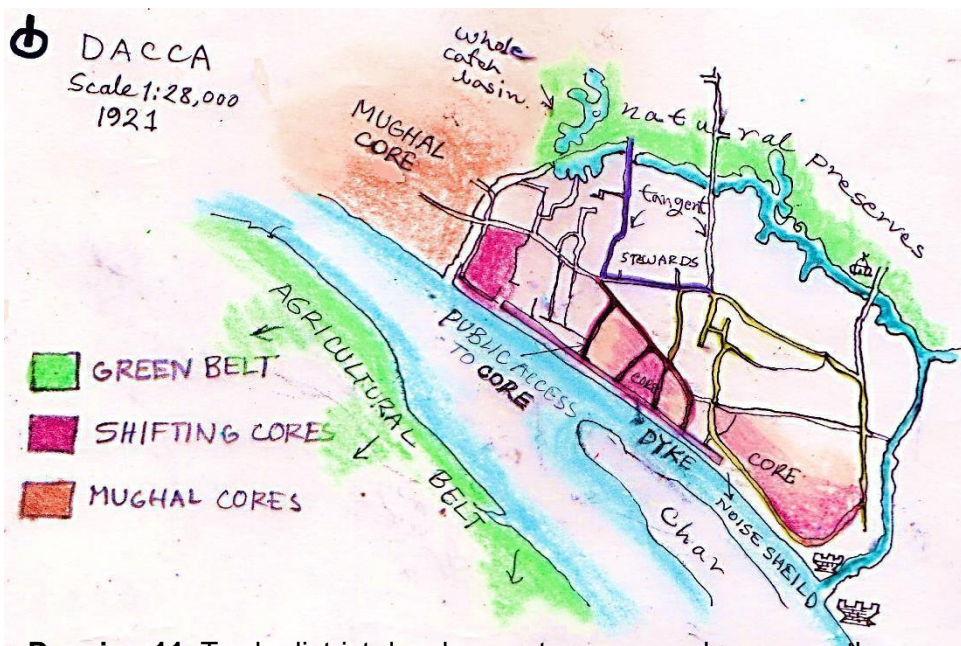
Drawing 9a: Carpenters join at Islampur Shakhari bazar

Drawing 9b: Carpenters join at Nawabpur Shakhari bazar

Drawing 9c: Carpenters join at Kotwali node, Shakhari bazar



Drawing 10: The „Blueways” and future development, redrawn from map 3. Source: Dani (1962)



Drawing 11: Trade district development, source: redrawn over the map 3, Dani (1962)



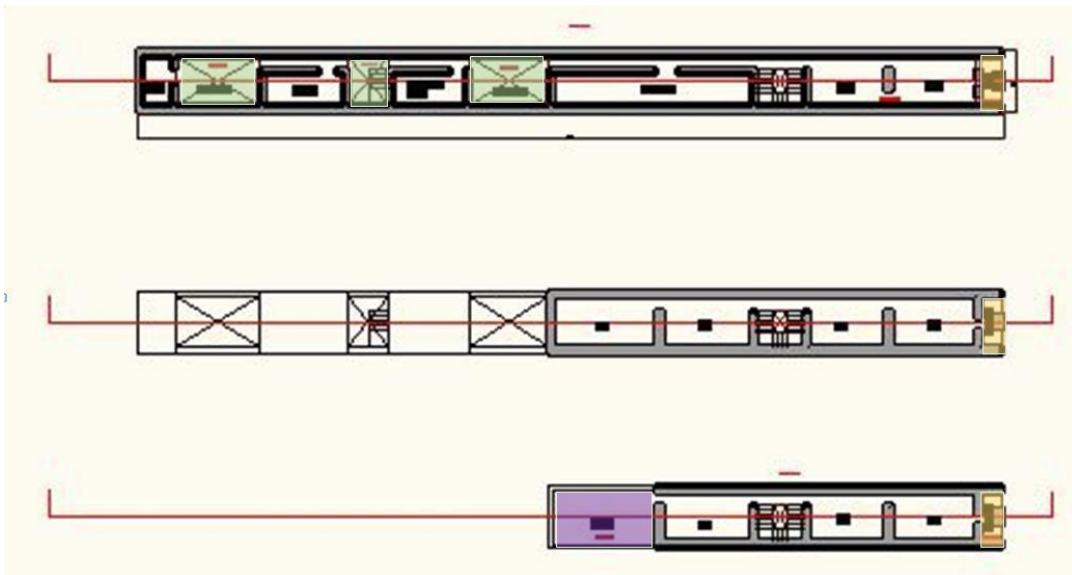
Figure 19: Identified landmark, yet blended landmark



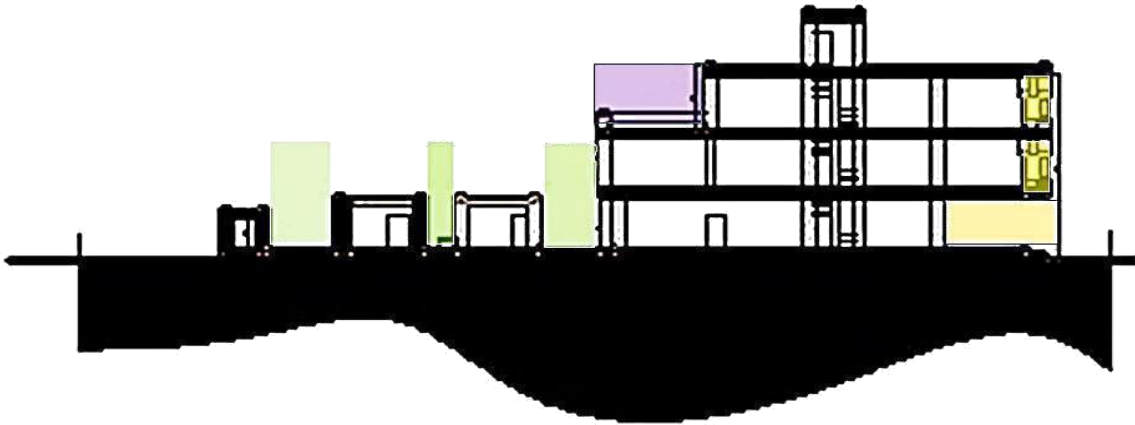
Figure 20: Preparation of Festival



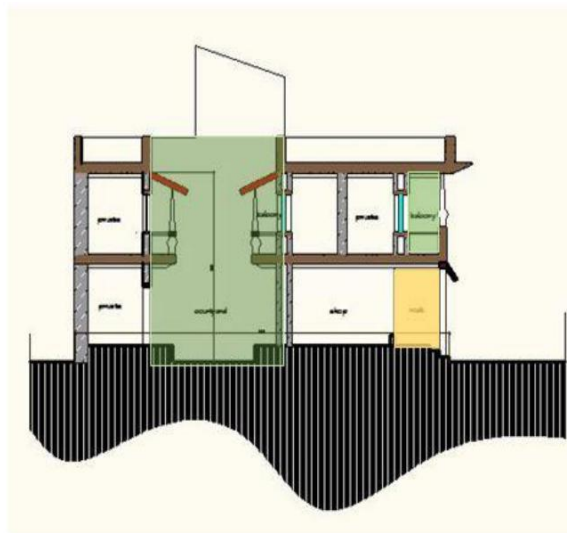
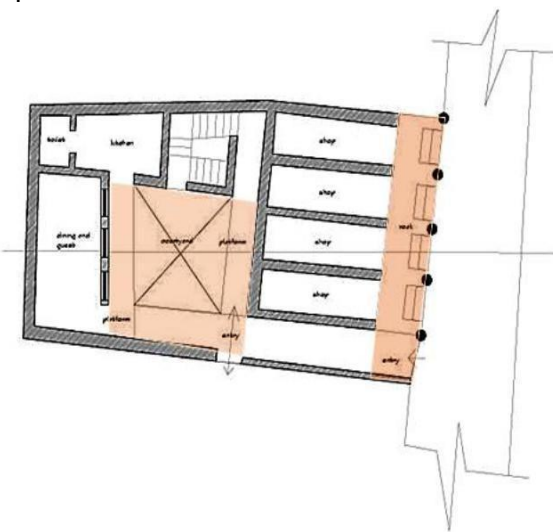
Figure 21: Holi Festival, source: Aryndam (photographer)



Drawing 12: All Plans for 89 no. Shakhribazar, Provat Kumar Sur's residence



Drawing 13: Section of 89 no. Shakhribazar, Provat Kumar Sur's residence, pace of interaction



Drawing 14 : Ground floor plan of 27 no. Tantibazar, Md. Abdul Salam Talukdar's residence. Public interaction in front and courtyard for private communication. Source: Fatema (2013)

Drawing 15: Section of 27 Kotwali Road, source Fatema (2013)



Figure 22: Monipuri foods



Figure 23: Bakorkhani



Figure 24: Khasta-ruti

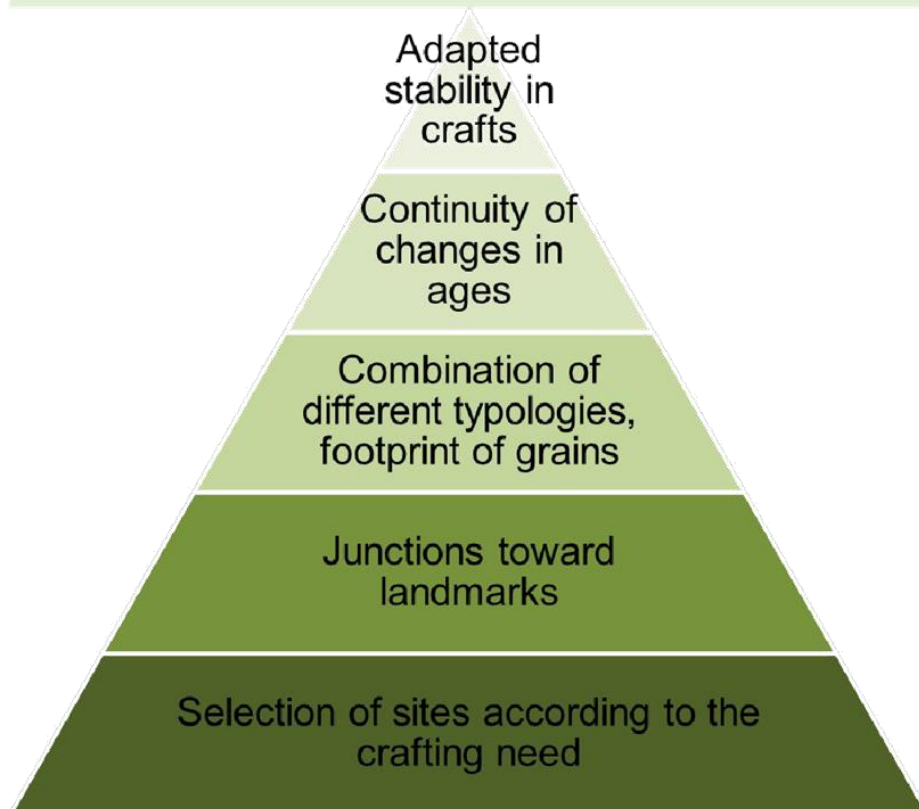


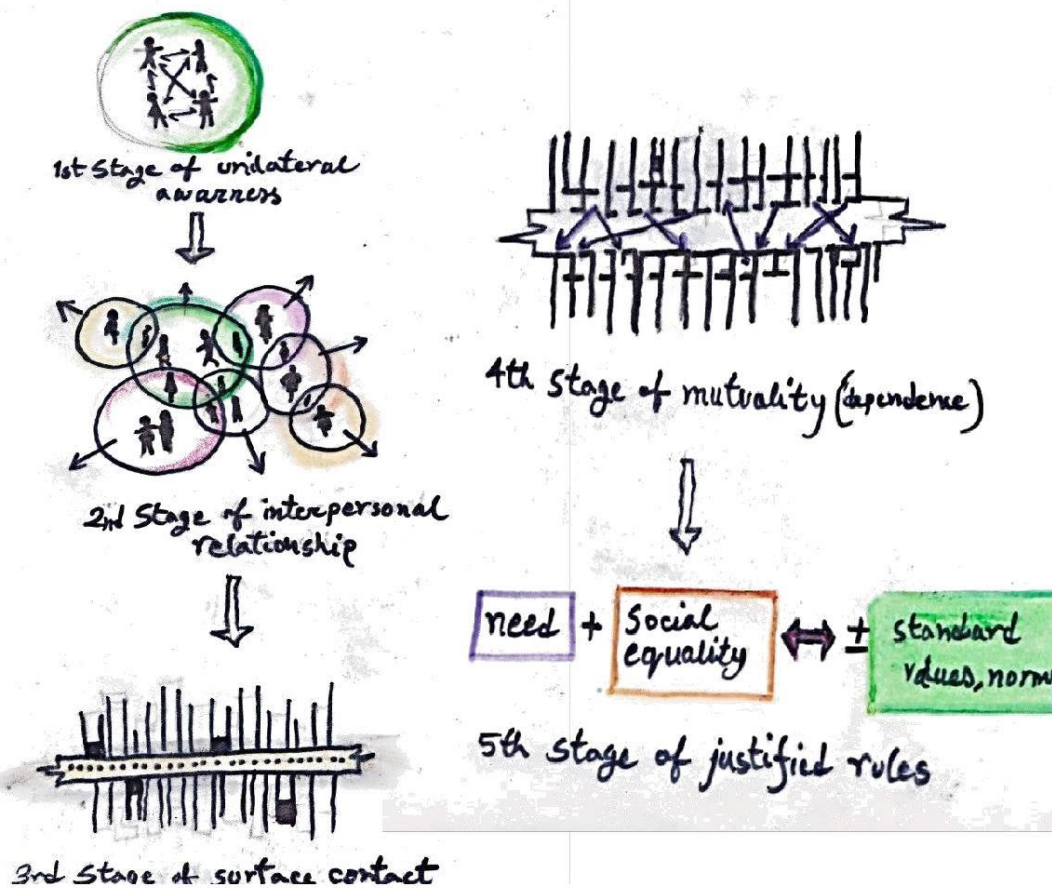
Diagram 2: How two city districts were evolved from and end at craft



Drawing 16: The densest capital city of the world: UN Habitat. Two sites in solid void relationship, degree of grain.



Figure 25: The collapse, Bangladesh Observer, 10 June 2004, cited at Iftekhar Ahmed, BRAC university journal, 2007



Drawing 17: How community evolves and participation to decide a standard for need, Source: Sketch by Author



Figure 26: 27 Kotwali node



Figure 29: 17, Tantibazar



Figure 27: B.K. Das Lane



Figure 30: English road



Figure 28: Tantibazar north lane



Figure 31: Islampur node



Figure 32: Kotwali node

Annex D: List of tables

Chapter 1

Table 1: List of craft based districts of old Dhaka. Source: Mamun, (1993)

City districts	Community /Craft activities
Amligola	Craft of button and comb made from Buffalo horn, documented from year 1765
Bangshal	The kernel of river trade, started unknown date
Bashpotti	Bamboo craft, documentation found in British period
Chamartuli	Leather center, dating from unknown time
Goalnagar	Dairy center, dated before year 1600.
Jogi nagar	Muslim weavers, documented 13410 weavers in 1600
Kolutola	Traditional oil production, Ghani, started from unknown era
Kumartuli	Earthen pot and idol of Hindu deities, there were 14835 potters in year 1600.
Potuatuli	Earthen pottery painting, from year 1600
Shakharibazar	Conch shell bangle, had presence from Sena dynasty during 11 th century. There were 11,453 craftsmen in year 1776.
Sonartuli	Craft Centre of gold and silver jewelry, from 1600 and shifted to Tantibazar after 1947
Sutrapur	Wood carpenters, ship dockyard, still unknown but traces of roman period trade.
Suritola	brewery center, after British period
Tantibazar	Hindu weavers, documentation dates from year 1600.
Thataribazar	Craft for cart wheel, started around 1600
Tikatuli	Hukkah, traditional smoking craft, documented before year 1600.

Chapter 5

Table 2: List of semiotics from the concept of Pierson's Taxonomy

Symbol	Index	Icons	Techniques For representing collective memory	Different layers of signs (Categorized in different senses)
Symbolic & memorial statue or painting conceptual arts in Shakhribazar and Tantibazaar	Using indexes (tools used in Shakhribazar and Tantibazar, desk of mohazons as a sign of century old tradition)	Performing realistic memorable stories, mythology, worships and puja.	Visual arts (sculpturing & painting in the shops dramatic arts (street processions in Holi or Puja)	Sight
Playing drams in religious festivals/ many different symbolic sounds in old Dhaka's culture	Broadcasting explosion voices by audio devices (a sign for a defend in a war, heroes, martyrs) pictures of martyrs and freedom fighters list.	Playing a folk music/ singing in street theatre, picture of processions	Playing pieces of music/ singing/ using digital audio devices. Kirton, Milad	Hearing
Spreading the smell of flowers (a sign for religious believe dedicated to gods in shop)	Spreading the smell of smoke (a sign for burning, the Agarbatis , Dhup, Ator)	Spreading the smell of a special memorable event, Durgapuja. Also plants like Tulsi.	Flowering (gada) and planting (tulsi) Ashes (dhup)	Smell
Food as a symbol for happiness / Panta- Elish a symbol of Pohelaboishakh. Laddu in Durgapuja and Jilapi for sirni at mosques.	A sweet as a sign for sugar or milk production in a city.	Serving memorable foods in memorable places.	Spreading smells of foods, vogs of temples, sweets etc.	Taste

Writing symbolic words in religious scripts.	Using indexes in a text written in Halkhata,(accounting book) Ponjika, (calendar) Kusthi. (horoscope)	Writing memorable names in streets or statues in suitable places, in charts of shops. Graffittis, Floor fresco	Bangla hand writing, Sanskrit Lipi or poster writing system.	Touch

Table 3: Different experimentations of the possible social rehabilitation

Subjective	Objective	Intervention
Urban Morphology	To reach satisfactory qualitative levels concerning urban historic corridor	Retraining consolidated old districts and selected buildings for preservation and enhancement of craft based activities.
Tradition: Craft and Lifestyle	Retraining through interventions of ecology, quality control and hygienic urbanism.	Separate experiment over five categories: water supply, energy, acoustics, air pollution and waste management for containment of costs and attainment of elevated qualitative levels in today's context.
Replacement, preservation or conservation	To integrate the residential function with commercial and service activities according to today's demand	Demolition of some vulnerable and degraded edifices is advisable. But erecting new buildings according to traditional essence is mandatory.
Collective memory And Spaces	To promote socio-cultural activity through participation. A concept of „urban laboratories“ to improve the local craft practices.	Complexity of all kind of socio-cultural interventions that are facing generation gap in practice.

Annex E:

Specialists' point of view

1. Ar. Sazzadur Rashid

Chairman, Associate professor

Department of Architecture

State University of Bangladesh, Dhaka

(Interviews taken on 10/04/2017, at 10:30 pm and on 15/05/2017, at 12.30 pm)

First Interview: *“To conserve both tangible and intangible heritages of Puran (old) Dhaka, we need to develop the public awareness first. Then make our government convinced to protect the heritages. First, area value of historic landmarks should be identified. Conservation specialist’s careers is rare in Bangladesh and in some cases are absent in our country. Improper initiatives had destroyed lot of relics and excavations doomed, even deteriorated some archaeological sites. For old Dhaka’s context, legal problem with multiple ownerships, even in some cases hereditary is not established and slow progression of government’s acquisition to obey the rule of high court, and lot of complexities arises after every political change after any election, all are involved here. So for today’s reality, the inhabitants neither can be shifted nor can be allowed to erect new extensions, we might better follow a „mid-strategy“ to sustain in the future.”*

Second Interview: *“One important thing is, there is still some hope left. These two sites itself got a lively management for living, the local stewardship in a mixed culture had been proved successful for Tantibazar and same thing acted like a unifying „glue“ for Shakharibazar. Also young generation is getting the education to conserve those and protest against any demolition of old structure. Social media like Facebook page „Save the heritages“ took lead and organizing tours around the different corners of the country. Media sometimes playing a vital role by making historical documentations and commercial movies, also news are recurrently published in press. Photographic exhibition and video documentation are also added, all are optimistic approaches and changes around hopeless reality.”*

2. Khandaker Ansar Hossain

Urban and regional planner

Bangladesh institute of planners (BIP)

(Interview taken on 11.04.2017, at 9pm)

“Dhaka was such sort of city which was not aloof from its surrounding market places in sense. Its morphology is directly related to its water way connection and its organic order is unique while transformations of built forms are responsible to create such urban fabric.”

Here society was manifested according to ethnic groups along with their traditional occupation practice. DAP and DSP have identified Shakaribazar and Tantibazar as heritage area and should be protected accordingly.”

3. Md. Faruk Ahamad Mullah

Chairman, Associate professor

Department of craft

Faculty of fine arts

University of Dhaka

(Interview taken on 21/05/2017, at 1:30 pm)

“If you go for a basic idea of craft, I will not agree about anything which art got some use and has mass production. Again, despite mass productivity, we can still acknowledge them as craft based art, where Dhaka as a city got its identity. It’s a civic art, cannot be separated from its environment, a living art workshop. Who are the users and who made this bunch of workshops to continue? To evaluate Shakra as a daily necessity art, we can say, human first dress them and use ornament eventually resulting in fashion. Religion implies justification as a force. Extinct muslin is cousin of today’s Jamdani. But art, that what we do; is reflection of lifestyle and some places are associated with the practice.”

4. Dr. A.K.M. Shahnawaz

Professor

Dept. of Archaeology

Jahangirnagar University

Savar, Dhaka-1342

(Interview taken on 16/05/2017, at 10:15 pm)

“There are also some Tantibazar, Shakharibazar still in the ancient land of Bikrampur with the same purpose. So, it is evident that Dhaka as a village came civic society where craft practice was main reasons to start any settlement and both professionals like weavers and shakharis” were brought from Bikrampur. That practice was existed from Sen Dynasty, until around 1260, while Muslims invaded north and west Bengal already. The geo morphology suggests that Mughal settled here only to counterpart the rebellious capital Sonargoan and they encroached until Gajipur to establish an „own” capital over red soiled highland. They wanted to control Dholai canal (in fact river) for raw materials to supply and feed troops and utilized existing afghan forts.

At the parallel to these waterways, they built three stepped fortification over river Shitwalakshya, a „battle field (or waterbody)“ which shows Mughal strategy to keep their living supply undisturbed even during the war, the Dholai River. They employed Paiks (local hindu stick warriors) near to their settlements, today the name still bears this legacy, so it is clear that defencive importance of riverfront, lead all this craftsmen to the backward areas like Shakharibazar and Tantibazar.”

5. Dr. Farida Nilufar

Professor

Department of Architecture

Bangladesh University of Engineering and Technology

(BUET) Dhaka-1000

(Interview taken on 18/ 05/2017, at 3:25 pm)

“The morphology of Dhaka’s these two areas are unique because of road front usage and Conzen’s idea reflected here as „trade oriented interface“. Such baggage plots actually formed tissue of early urbanization here from a mixed used perspective. I want to question about the viability of cultural corridor for a so called „third world“s economic and educational context. There are only 14 original buildings and some others have left a little originality, so is not it irrelevant to conserve and posing harassment for the inhabitants? The most burning questions are here, who will believe whom? If it is possible to manage world class tourism, then will you allow them to face danger while buildings are not safe yet? So, as an urban morphology specialist, if you ask my point of view, I think they all are self-sustaining and mocking façade decoration does not means a „great work“ of urban corridor conservation is done.”

5. Sania Sifat Miti

Assistant professor

Dept. of Urban and Regional planning

Jahangirnagar University, Savar, Dhaka

(Interview taken on 16/05/2017, at 10:15 pm)

“The initial road pattern of these two urban sites actually reflects the quest for straight grid over a vast vacant land before 400 years ago, as I can imagine. Such planning is possible when the planners want to feel the belongingness to its location. Now, for the confrontation associated with the challenges coming ahead; tools like rectification or restructuring, public awareness, and minimum allowance for future development or total rehabilitation should be applied. For that, we have to give priority to its inhabitants for compensation and consideration of land’s rational value although ownership is a great problem here. But burning question is how proposed Detailed Structural master plan will be implemented in harsh reality and stockholders; especially authority like

RAJUK should be brought under the same umbrella for the future generations who are going to face alarming tests in old Dhaka, in case of pollution, livability and natural calamities.”

Annex F: Special Terminology

Aurang (Bangla)	Retail cloth market
Bahadur Shah (Farsi)	Last Mughal emperor
Bikrampur (Bangla)	City of power, capital of ancient Bengal
Binot bibi (Bangla)	First mosque patronized by this woman
Brahmmaputra (Bangla)	Male River, son of Brahma
Buriganga (Bangla)	The old Ganges
Chandra (Sanskrit)	Hindu dynasty of Bengal
Chawk (Urdu)	Public city square
Dabekka (Bangla)	Ancient fort city
Desi (Bangla)	Local fiber of cotton
Devottor (Sanskrit)	Land bestowed to god
Dhakeswary (Sanskrit)	Goddess of Dhaka city
Eid-e-miladunnabi (Arabic)	Birthday of holy prophet Mohammad (PUH)
Farashganj (Bangla)	French market area
Gali (Bangla)	Alley
Ganesha (Sanskrit)	Elephant god of wisdom
Ganj (Bangla)	Market place beside river bank
Hat (Bangla)	Weekly market
Jamdani (Bangla/Farsi)	Decorated cloth piece
Kurta (Urdu)	Male dress
Limi-kaji (indo-Malay)	Bay window
Manipuri (Bangla)	Tribe from hill tracks
Moholla (Bangla)	Neighborhood
Morh (Bangla)	Node
Mughal (Bangla)	Most influential Muslim dynasty of India, Delhi
Muslin (Arabic)	Finest cloth of the world
Ogusta muni (Sanskrit)	Who killed demon with saw of shakharis
Osur (Sanskrit)	Evil
Panchayet (Farsi)	Stewardship
Para (Bangla)	Community area
Pathan (Urdu)	Afghans who speaks Pashtun language

Pohelaboishakh (Bangla)	1st day of Bengali calendar
Pudranagar (Sanskrit)	Ancient University City
Rakhain (Burmese)	Burmese tribe
Roak (Urdu)	Stepped veranda
Rupee (Hindi)	Indian currency
Sakraim (Bangla)	Festival of kites
Saree (Bangla)	Female dress
Sena (Bangla)	Hindu dynasty of Bengal
Shakhari (Bangla)	Who makes conch shell bangles
Sherwani (Urdu)	Male dress for marriage
Sonargoan (Bangla)	Golden village, medieval capital of Bengal
Suta bichani (Bangla)	Reed stage of losing yard
Tana hotam, (Bangla)	Wrapping process of ligatures in weaving
Tonga (Bangla)	Traditional horse driven cart
Uthan (Bangla)	Courtyard
Vihara (Pali)	Buddhist University

