

Identifying spatio-cultural settings in a self-organized living environment of slum in Bangladesh

(バングラデシュのスラムにおける自己組織化した生活環境での空間文化的セッティングの識別)

アワル ナンディニ

Housing, the basic human need for civilized living has become a complex problem for slum dwellers, who are closely intertwined with the developing countries' formal economy. Many internationally driven slum reform projects simply concentrated on engineering and construction solutions failed as they were inappropriate with the life-style of slum dwellers; their affordability; spatial and cultural settings of living environment and other needs. This research aims to concentrate on these aspects towards giving an affordable housing solution. The study area is selected at Karail slum, Bhashantek slum, Bhashantek Rehabilitation Project (BRP) in Dhaka city, Bangladesh. Based on field survey and oral history, it is found that, slum is not a living area full of negative things only. Slum dwellers play a key role in the improvement of their own living environment. The way slum dwellers live and use space and earn their livelihood have strong cultural, environmental, behavioral, spatial and economic influences (such as multi-purpose of open-air court; working area in an accessible distance; typical style of storing household materials considering the shortage of spaces and so on). The way slum area has been developed has some sequences (zoning of spaces) and patterns which are potentially applicable for giving affordable and sustainable housing solution. This study also shows the way our cities are building and the way urban poor trying to live there. At the final stage, suggestion and ideas are given according to the practical findings.

1. INTRODUCTION

Global population growth and its concentration in cities around the world is truly crucial. Today the systems of cities have become the world's social, economic, cultural and political matrix. As a result, mega-cities are created with high population density aimed poverty and limited resources makes a special environment, which is called slum.¹ Slum is a low-income settlement and most visible concentration of poor people.² The majority of them live in developing countries. Bangladesh is also a developing country, growing rapidly with its population. Especially in the capital city, Dhaka (Dhaka is going to be the fourth largest mega city by 2015)³, the growing rate is much higher than expected. The number of migrated people coming from countryside for the hope of better job and life, are huge. Since the independence (1971) of the country, these people have been living under same poor condition without significant achievements. Some NGOs are providing important infrastructure, education and health facilities, and the government of Bangladesh recently initiated some housing projects. Although it sounds good, but, the poorest and most vulnerable groups are unable to afford these market based solution. And most of the cases, the solution does not match with the living style of these people. The original residents tend to sell or rent their flats to speculators or to the middle and upper income groups. Grounded on this context, this research is exclusive to analyze and identify important spatial and cultural factors of life-style and living environment of slum dwellers to give them an affordable and equitable housing solution.

2. BACKGROUND OF THE RESEARCH:

- Slum dwellers play a key role in the formal economy

of Bangladesh. But, general public know very little about them.

- Most of us consider slum life as a world of darkness where people can't live. But, the fact is, slum dwellers work hard to improve their socio-economic condition by themselves. They also have a 'design of living (findings from researcher's previous research).
- Researcher believes that slum is an integral, creative and productive part of a city. But, research regarding slum and slum dwellers are very small in number and professionals find their job quite risky being a specialist in this field.

3. RESEARCH AIM AND OBJECTIVES:

Aim: The aim of the research is to stand the idea that, slum is not a living area full of negative things only. There are some strong and meaningful elements available which are appropriate for better living environment; some small changes are required only. Another aim is to establish the truth that, only multi storied building with lots of structural, infrastructural facilities cannot be the main condition for better living environment for the slum dwellers. These people need that type of environment which responds functionally, culturally and economically.

Objectives: The central objective of the whole thesis is mainly two-fold. One is to identify the important spatial and cultural settings from the existing slum area. Other one is to encourage and maintain those essential elements and contribute them to the improvement of affordable housing solution with an integrated approach. Apart from these:

- Develop a theoretical understanding of slum dwellers

and their housing situation in the whole world especially in Asia

- Learn about the slum dwellers, their future plan about their life and housing environment
- Experience personally (detail observation) the available situation

4. SIGNIFICANCE OF THE RESEARCH AS AN ACADEMIC PAPER:

- In the growing awareness of the progress of global urban situation, this research (although relatively little) may enhance the understanding the slum dwellers' situation especially in developing country like Bangladesh. This research may promote a better understanding of low cost housing situation (of slum dwellers) monitoring through several kinds of survey and analysis in the field level with the collection of data at city and country level to understand the local as well as the national situation properly.
- Based on the findings of the study, this research will suggest more detail analysis focusing some special settings and try to find out affordable solutions based on an integrated approach. Thus researcher's gained knowledge and observation may promote other researchers doing research in the same field.

5. FRAMEWORK OF THE THESIS:

Chapters	Contents
Chapter one	Introduction
Chapter two	Literature review
Chapter three	Methodology and research sample
Chapter four	Presentation of data & data analysis
Chapter five	Discussion, conclusion & implications

6. RESEARCH METHOD:

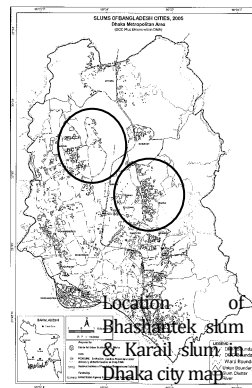
No technical or scientific analytical method has been used here. The main methodology is 'field research'. Field investigation has been carried out by taking interviews, writing documents, taking photographs and drawing sketches. The selection of each case study is made by a several number of site surveys and the notification of different household category. The issue that makes up the questionnaire is to ask the house users answer some important points regarding their household environment, use of functional space and culture of living. The target was to gather different type of sample as much as possible to have a wide variety of information. Another purpose was to find out dwellers' own ideas regarding spatial arrangement inside and outside the dwelling unit.

7. REASON BEHIND THE SELECTED SURVEY AREA:

- Dhaka (the capital of Bangladesh), the center of economy and other important facilities is known as one of the fastest growing cities of the world. This city can attract the migrants the most compared to other cities of the country is one of the most dominant factor of population growth here; although natural increase is also very high all over the country. Most of the largest low cost housing

area or slums are located in this city. The population growth rate of Dhaka city is the highest than any other major cities of the world. Researcher believes that a survey area located in Dhaka city can give more information than any other cities.

- Bhashantek slum and Karail slum: These two slums have been chosen as the central survey area in Dhaka city. After the independence of Bangladesh, Bhashantek slum was developed by its dwellers around 1973. Slum dwellers in Karail slum have been residing over last three decades on about 90 acres of land with a population of 80,000, most victims of river erosion and poverty. These two slums have been located in different geographical locations consisting different characteristics.
- Bhashantek rehabilitation project (BRP): The first rehabilitation housing project for slum dwellers in Dhaka, Bangladesh.



Karail slum	Bhashantek slum
no of household 4188	no of household 1885
Population 16227 (male:8505 female:7722)	Population 7248 (male:3344 female:3612)

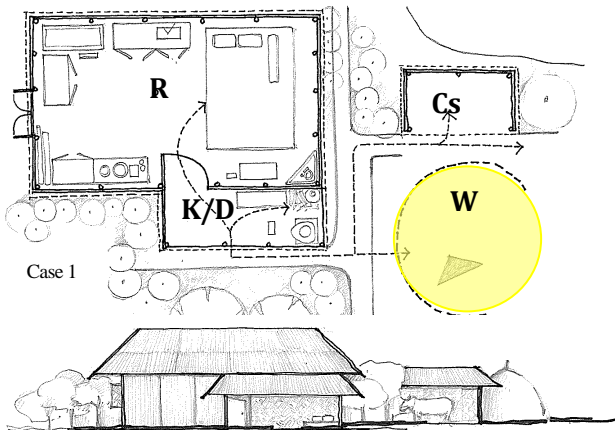
Source: Census of Slum Areas and Floating Population 1997, volume 1



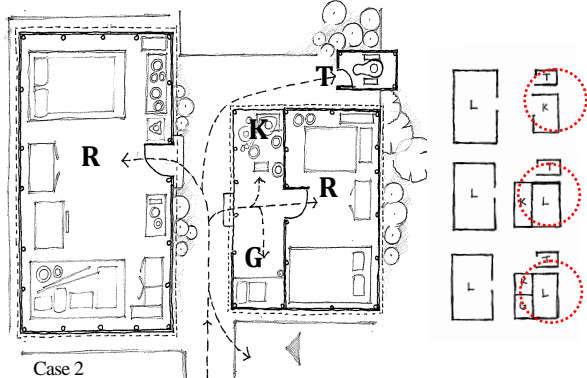
Fig: location of Karail; Bhashantek slum and BRP

8. ANALYSIS & FINDINGS:

8.1 Case study analysis: (spatial relationship)

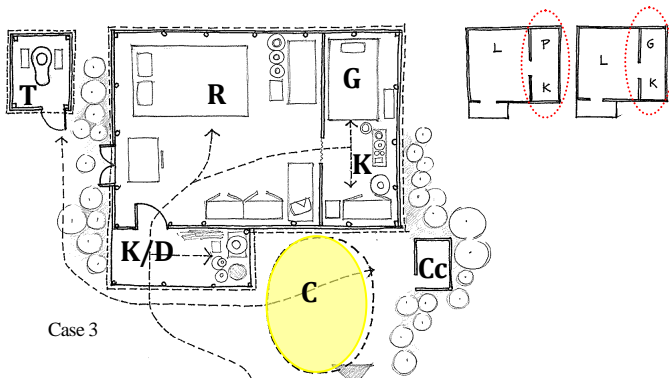


In most of the cases, slum dwellers live in one room house. They spend most of the day time outside their room for different household function and socialization. Dwellers in case 1 use outdoor spaces to get water from a common water-tap and one cattle shed for keeping cattle.



From field survey it has been found that, extension (horizontally or vertically) and transformation (with temporal partition inside the room) of spaces is another common/typical feature in slum dwelling. To adjust with the increasing number of family member or new member (guest) or for giving rent (income source) dwellers used to do this.

In case 2, the south part is an extension of this dwelling where one extra room is provided for new member; kitchen and one guest space (semi-open space right the opposite side of the kitchen) are arranged. In front of that.



As mentioned that, extension (horizontally or vertically) and transformation (with temporal partition inside the room) of spaces is another common/typical feature in slum; is also located in case 3. To adjust with the increasing number of family member or new member (guest), the prayer space at the opposite side of the kitchen (inside the house) is transformed into a guest space (one small bed is added there). The comparison between case 2 and 3 are:

- There is no extra spaces for providing an additional room in case of 3
- Female guest can't stay at semi-open outdoor space (in case 3)

R=room; K=kitchen; T=toilet; C=court; W=tube-well; S=shop; St=store; P=prayer room; Pt=path; D=doorstep; Cs=cattle shed; G=guest space; V= veranda -----=activity flow of different household space =Community gathering space/ court

8.2 Questionnaire analysis:

Questionnaire analysis regarding number of family members:

Data		Analysis																																																																																																							
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Secondary data:																																																																																																									
Source: CUS		<table border="1"> <thead> <tr> <th>Person Per Room</th> <th>Dhaka</th> <th>Chittagong</th> <th>Khulna</th> <th>Rajshahi</th> <th>Sylhet</th> <th>Barisal</th> <th>All Cities</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td>0.0</td> </tr> <tr> <td>2</td> <td>0.0</td> <td>0.1</td> <td>0.0</td> <td>0.5</td> <td>0.0</td> <td>4.0</td> <td>0.2</td> </tr> <tr> <td>3</td> <td>1.5</td> <td>13.5</td> <td>4.0</td> <td>18.9</td> <td>0.8</td> <td>47.0</td> <td>7.0</td> </tr> <tr> <td>4</td> <td>31.8</td> <td>25.4</td> <td>49.8</td> <td>42.8</td> <td>6.9</td> <td>25.4</td> <td>30.0</td> </tr> <tr> <td>5</td> <td>55.2</td> <td>44.6</td> <td>41.9</td> <td>30.3</td> <td>78.2</td> <td>12.5</td> <td>50.8</td> </tr> <tr> <td>6</td> <td>7.4</td> <td>11.4</td> <td>3.7</td> <td>3.9</td> <td>8.1</td> <td>7.7</td> <td>7.8</td> </tr> <tr> <td>7</td> <td>0.3</td> <td>0.8</td> <td>0.0</td> <td>0.3</td> <td>1.6</td> <td>2.0</td> <td>0.6</td> </tr> <tr> <td>Above 7</td> <td>0.5</td> <td>0.7</td> <td>0.0</td> <td>0.5</td> <td>1.2</td> <td>0.3</td> <td>0.6</td> </tr> <tr> <td>Don't Know</td> <td>3.2</td> <td>3.6</td> <td>0.6</td> <td>3.0</td> <td>3.3</td> <td>1.1</td> <td>3.0</td> </tr> <tr> <td>Total %</td> <td>100</td> <td>100</td> <td>100</td> <td>100</td> <td>100</td> <td>100</td> <td>100</td> </tr> <tr> <td>N</td> <td>4,966</td> <td>1,814</td> <td>520</td> <td>641</td> <td>756</td> <td>351</td> <td>9,048</td> </tr> </tbody> </table>								Person Per Room	Dhaka	Chittagong	Khulna	Rajshahi	Sylhet	Barisal	All Cities	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2	0.0	0.1	0.0	0.5	0.0	4.0	0.2	3	1.5	13.5	4.0	18.9	0.8	47.0	7.0	4	31.8	25.4	49.8	42.8	6.9	25.4	30.0	5	55.2	44.6	41.9	30.3	78.2	12.5	50.8	6	7.4	11.4	3.7	3.9	8.1	7.7	7.8	7	0.3	0.8	0.0	0.3	1.6	2.0	0.6	Above 7	0.5	0.7	0.0	0.5	1.2	0.3	0.6	Don't Know	3.2	3.6	0.6	3.0	3.3	1.1	3.0	Total %	100	100	100	100	100	100	100	N	4,966	1,814	520	641	756	351	9,048
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Questionnaire analysis regarding merit and demerit :

Data		Analysis																																																																	
Primary data:		<ul style="list-style-type: none"> • Working scope is better here (good thing) • Limited space according to members, Lack of ventilation (no window), Common toilet, Not well constructed (toilet and bath), Common bath, Common kitchen space, water logging, eviction (problems) 																																																																	
Secondary data:																																																																			
Graph showing the situation of eviction in slum by six cities in Bangladesh		<table border="1"> <thead> <tr> <th>Eviction Incidence</th> <th>Dhaka</th> <th>Chittagong</th> <th>Khulna</th> <th>Rajshahi</th> <th>Sylhet</th> <th>Barisal</th> <th>total</th> </tr> </thead> <tbody> <tr> <td>None</td> <td>95.5</td> <td>89.6</td> <td>82.5</td> <td>91.1</td> <td>98.9</td> <td>94.9</td> <td>93.5</td> </tr> <tr> <td>Once</td> <td>1.4</td> <td>2.8</td> <td>5.0</td> <td>—</td> <td>0.5</td> <td>1.7</td> <td>1.7</td> </tr> <tr> <td>Twice/More</td> <td>1.9</td> <td>1.9</td> <td>6.0</td> <td>6.9</td> <td>0.1</td> <td>3.1</td> <td>2.4</td> </tr> <tr> <td>Currently Under Eviction Threat</td> <td>1.2</td> <td>5.7</td> <td>6.5</td> <td>2.0</td> <td>0.4</td> <td>0.3</td> <td>2.4</td> </tr> <tr> <td>Don't Know</td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td>0.3</td> <td>0.0</td> </tr> <tr> <td>Total %</td> <td>100</td> <td>100</td> <td>100</td> <td>100</td> <td>100</td> <td>100</td> <td>100</td> </tr> <tr> <td>N</td> <td>4,966</td> <td>1,814</td> <td>520</td> <td>641</td> <td>756</td> <td>351</td> <td>9,048</td> </tr> </tbody> </table>		Eviction Incidence	Dhaka	Chittagong	Khulna	Rajshahi	Sylhet	Barisal	total	None	95.5	89.6	82.5	91.1	98.9	94.9	93.5	Once	1.4	2.8	5.0	—	0.5	1.7	1.7	Twice/More	1.9	1.9	6.0	6.9	0.1	3.1	2.4	Currently Under Eviction Threat	1.2	5.7	6.5	2.0	0.4	0.3	2.4	Don't Know	0.0	0.0	0.0	0.0	0.0	0.3	0.0	Total %	100	100	100	100	100	100	100	N	4,966	1,814	520	641	756	351	9,048
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Source: CUS		<p>People are found to do different kind of job in the near-by bazaar which is a positive findings regarding affordability issue (income generation)</p>																																																																	
Concluding remark:																																																																			

Questionnaire analysis regarding function and the usefulness of an open air court :

Data		Analysis															
Primary data:		<p>Very important part of a house (for different function) Function: Preparation for cooking, Cooking, Gossiping, Drying cloths, Sitting, Preparation for other things.</p>															
Secondary data:																	
Graph showing the percentage analysis regarding different functions of an open air court		<table border="1"> <thead> <tr> <th>Function</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>preparation for cooking</td> <td>6%</td> </tr> <tr> <td>gossiping</td> <td>8%</td> </tr> <tr> <td>cooking</td> <td>11%</td> </tr> <tr> <td>drying cloths</td> <td>25%</td> </tr> <tr> <td>sitting</td> <td>14%</td> </tr> <tr> <td>preparation for different things</td> <td>22%</td> </tr> </tbody> </table>		Function	Percentage	preparation for cooking	6%	gossiping	8%	cooking	11%	drying cloths	25%	sitting	14%	preparation for different things	22%
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Concluding remark: Open air court is found as one of the strong functional space in slum area

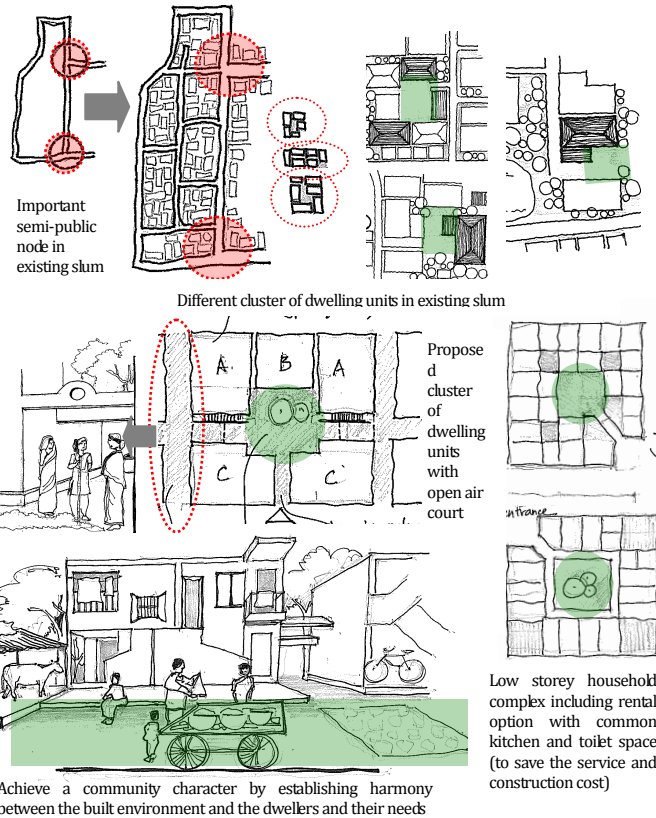
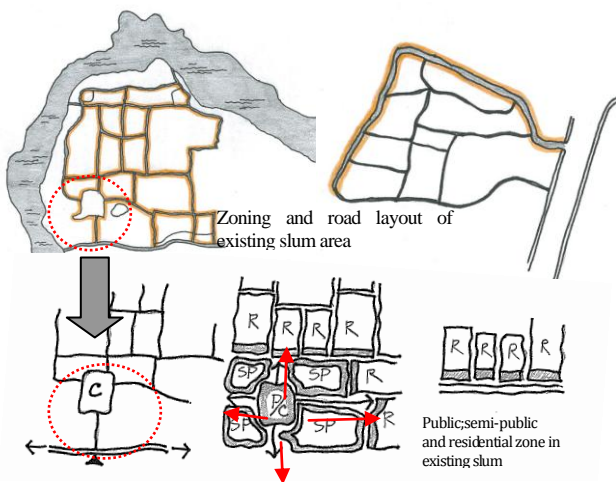
8.3 Hidden identity and valuable expression of slum and slum dwellers:

Culture	Space
Used to living with nature	Interesting storage space
Used to living with others	Growable space
Utilization of natural resources	Zoning of space
Job opportunity in an accessible distance	Privacy maintained with the location of entrance
Climate consideration	Bazaar near housing area

9. SUGESIONS FROM PRACTICAL FINDINGS:

For proper functioning, combination of various necessary elements is needed. That is why, an integrated or holistic approach is proposed here for achieving the goal of affordable housing for slum dwellers. This approach can contains some characteristics which are:

- Designation of socio-culturally accepted and economically sustainable settlement.
- Adaptation of the low cost energy efficient housing technology for making the housing affordable to entire people.
- Active participation of all beneficiaries in decision making, construction, implementation and maintenance of the program.
- Construction, implementation and operation of the settlement with the partnership of 3ps (people, public organization and private organization).
- Provision of the soft loan to the house consumers through the facilities of the public organizations.
- Development of incremental type and skeleton type of houses.
- Incorporation of land for agriculture in the proposed land use plan.



10. CONCLUSION:

Today the cities and countries are admitted at what the problems of slums are and about how to solve them and they have generally found that the problems can be solved through the efforts of everyone especially the poor who play a key role in the improvement of their own living conditions. Our climate and culture has an incredible resource. The usability of open spaces is considerable, since so many daily activities carry out there. We think of housing only as built-up structures, as the boxes – and not of the open spaces which are so crucial to their proper functioning. This is why so many attempts at low cost housing perceived as a simplistic question of trying to pile up as many boxes as possible on a given site, without any concern for other spaces.⁴ So if we consider the environment, culture and climate, housing can be built in a more affordable way with the participation of intended people and thus, slum could be an integral, creative and productive part of a city.

11. References:

- ① The Challenge of Slums. Global report on human settlements 2003. Earth scan Publications Ltd, London and Sterling, VA.
- ② ibid
- ③ Slums of the World: The face of urban poverty in the new millennium. UN-HBITAT publication.2003.
- ④ Chares Correa. Housing and Urbanization: Building Solutions for People and Cities. Thames & Hudson May 2000.