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Changes in Shared Spaces for Social Interaction: A Socio-Temporal Evaluation of Real Estate Apartments in Dhanmondi R/A, Dhaka

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Abstract: This paper evaluates the role of shared spaces within contemporary real estate apartments in Dhanmondi Residential Area in Dhaka-based on users' adaptation for social interaction by comparing two assessments separated by seven years. While these apartments provide regular and designed shared spaces for generating social interactions, besides dwelling units, do people change themselves for making changes in their setting—social space—for social interaction? This paper probes this question when affluent communities living in apartments, belonging to a wide-ranging socio-economic background, face a higher degree of hesitation for social interaction than those living in traditional arrangements and resulting to a socially unfit group. The issue of social interaction within apartment community, this paper argues, becomes equally important with other issues of apartment planning and design. The shared spaces of six apartments of Dhanmondi R/A were evaluated through ethnographic study and post-occupancy evaluation (POE) method based on observations made in 2008 and 2015. A socio-temporal evaluation gives evidence to the 'then-now' condition of the apartments and the social and spatial changes taking place in regular and designed shared spaces of the same apartments. The findings from a 'then-now' comparison assert apartments' growing and transforming with the change of its inhabitants and their needs, and are evident in its regular and designed shared spaces for social interaction. In conclusion, the findings support the rationale of evaluating the built environment performance to provide design feedback as it ruminates social and behavioural issues considering the users' standpoint.

Keywords: Social Interaction, Shared Spaces, Real Estate Apartments, Post Occupancy Evaluation

INTRODUCTION

Dhaka, the capital of Bangladesh holds the ninth position in urban agglomerations in the world. The density of urban population of Dhaka has rapidly increased from 4457 per sq-km to 7444 per sq-km (BBS, 2011), and has created a huge demand for housing and physical infrastructure. Furthermore, the shortage of developed urban land and urge for possessing a property in the capital has made Real Estate Apartment (REA) living a popular choice among the affluent urban population. These internally varied modern communities face a higher degree of social disorientation and hesitation to social interaction than the traditional ones, often leading to various social problems and socially unfit groups in the apartments. Henceforth, the issue of social interaction within this apartment housing community along with the spaces for interaction is equally important with other issues of apartment planning (Islam, 2012). Earlier observations suggested that inadequacy or non-existence of community space in these apartment buildings is one of the main reasons for the needs and demands for social interaction of the residents not being fulfilled (ibid). The REAs, besides merely dwelling units, provide two types of shared spaces within the building that are common among the owners: First, the regular shared spaces i.e. lift lobby, staircase, roof, meeting rooms, parking etc. Second, designed shared spaces for social interactions when designers being aware of the problem of lack of social spaces come up with different design solutions in the form of courtyards, swimming pools, multipurpose halls and so on. Social space here refers to the spaces regularly visited, spaces where users spent time on the holidays and spaces that they choose to go out for recreation and eating.

Most of these shared spaces, however, have remained unevaluated in terms of users' adaptation for social interaction in time. Observations of the same shared spaces for social interaction in 2008 and 2015 lead to explore the present condition of the apartments and the social and spatial changes taking place in shared spaces of the same apartments. The shared spaces of six apartments of Dhanmondi Residential Area (R/A) were evaluated through a POE method based on observations made in 2008 (Islam, 2012). The users of these apartments later have had gone through socio-demographic changes: the tenants shifted, children grew up, some service holders retired, and some young adult got married. As shared spaces of the apartments have gone through changes in time, an earlier evaluation of the previously evaluated shared spaces carried out in 2015 searched for tracing changes in the spatial setting with the following objectives: First, searching for the socio-demographic change in a user group in these apartments. Second, searching for the extent of spatial and physical changes taking place between the two survey periods. Third, assessing the nature and extent of changes of shared spaces for social interaction by comparing through a “then-now” evaluation to explain how these changes are affecting dwellers' use of spaces. After setting the objectives in the Introduction, this paper outlines methodology followed by a description of the contextual and theoretical backgrounds. Then it presents the finding coming out of the changing user profile and settings for social interactions between 2008 and 2015. In Conclusion, the findings support the rationale of evaluating the built environment performance to provide design feedback as it ruminates social and behavioural issues considering the users' standpoint.

METHODOLOGY

This paper employs both the ethnographic study for gathering user profile and a POE for evaluating shared spaces for social interactions. The three objectives and their respective data collection methods are outlined below in Figure 01. This paper is a result of two observations obtained from two POE performed in the selected apartments. A similar method that was followed in 2008 was also followed during the POE in 2015, and the key steps involved in the comparison between the two are summed up below in Figure 02.

Review of relevant theories and research on social interaction in apartment buildings in the general field of POE helped to determine the key concepts and develop an understanding of theoretical framework to carry out the field survey and analyze the data. Before going into the detailed survey, a reconnaissance survey was carried out to find out the typologies of apartments present in the area. Six apartments were selected, equally

Objectives	Methods for data collection
To search for the socio-demographic change in a user group in these apartments in relation to the use of spaces.	Case study and Ethnographic study of Selected Families
To search for the extent of spatial and physical changes taking place in the initial survey and	Post Occupancy Evaluation based on selected criteria and indicators.
To assess the shared space through a comparison between the “then-now” evaluations	Comparative analysis between two POEs

Figure 01: Relationship between objectives and method

Figure 02: Steps of the study

located at larger and smaller plots from the survey based on the presence and absence of designed spaces (Islam, 2012). A questionnaire survey was then done to find out the socio-economic data of the residents of these apartments. Based on the questionnaire survey and general discussion and interview, families from these apartments were chosen for in-depth interview for ethnographic study. Families varying in a number of members, age, gender and different profession were chosen so that the variable use of spaces within the building can be traced. In-depth qualitative interviewing means repeated face-to-face encounters between the researcher and informants directed towards understanding informants' perspectives on their lives, experiences or situations as expressed in their own words (Taylor et al, 1984). Life history was taken, where the salient experiences in a person's life and that person's definitions of those experiences were captured. The focus was to identify the social spaces of the residents focusing on the role and use of these spaces in social interaction. The relation of the residents and their neighbourhood is important to understand the situations of the buildings as well as the occupant's sense of spaces for socialization in a bigger scale. Presenting the rich qualitative data is beyond the scope of this paper.

For POE, the regularly shared spaces and designed shared spaces having potential to generate social interactions were identified as shown in Figure 4. Then three evaluation criteria and indicators for each criterion based on which evaluation of each element was done were determined (Islam, 2012). So, every element of the apartment is analyzed in terms of these three criteria based on certain indicators. For every indicator, space is evaluated on a scale of being satisfactory, moderately satisfactory and unsatisfactory. The findings from the three criteria were then summed up to get a compiled result that represents the result for each apartment. For this paper, each element is critically analyzed, but not summed up as a whole (Figure 03).

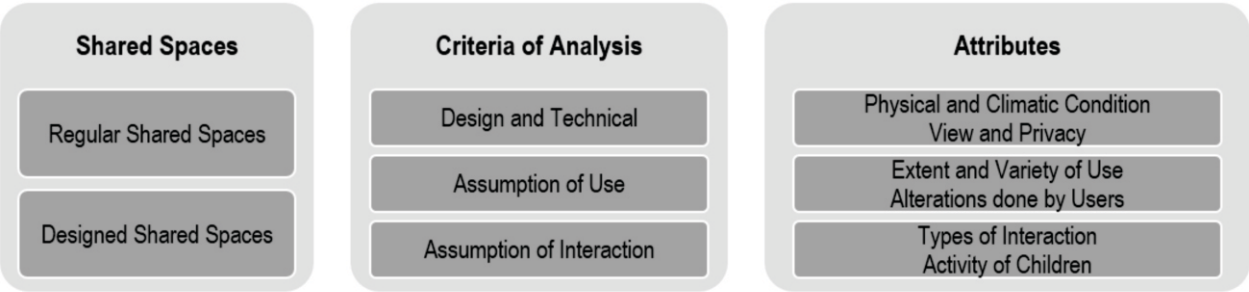

Figure 03: Evaluation Framework: Shared Spaces, Evaluation Criteria and Attributes (Islam, 2012)

CONTEXTUAL AND THEORETICAL BACKGROUND

This section explains the context for considering the role of shared spaces for social interaction by explaining the contextual and theoretical backgrounds for studying the concept of Social Interaction and its significance.

The megacity Dhaka has gone through a rapid growth in the recent decades. The population of Dhaka has grown from 2, 06 million in 1974 to 9,91 million in 2001(BBS, 2001), and is estimated to be 156.69 million in 2015 (Demographia, 2015). Restraint in physical expansion due to city's location within an encircling river system, and lack of urban infrastructure development has restricted its horizontal growth. The phenomenal growth of the city population is dominantly contributing to the dynamic changes in residential areas. The only way to accommodate the rising population appears growing vertically. Thus apartment living in both low-rise walk-ups and high-rises have become a popular choice for the high income and higher middle-income groups of the city dwellers. The formal private developers had introduced the multistory and multi-family apartment building types in the early1980s. Dhaka experienced a boom in apartment development in almost all the planned and unplanned formal residential areas since the late 90s. Although formally the early 1960

developments were not much different from the government quarters and multi-storied single ownership walk-ups, the new idea of multi-ownership and shared facilities like parking area, lobby spaces, lifts, stairs, services etc. with individual unit rights was accepted since the 1980s. The only significant change that has taken place was freeing the ground floor from the unit and providing parking and other services. Though high-rise apartments in Dhaka have a minimum 10 percent of the total floor area dedicated as community spaces as per provision by the 1996 Building Construction Rule, a large number of apartments are exempted from this rule. These are the six story apartments with a smaller number of population living in. These apartments have better options for initiating social interaction among the residents, especially children, elderly people and women, who stays in these building for a longer span of time (Islam 2012). Amidst paucity of local literature, earlier local studies (Ghafur (2005; Ghafur and Siddika, 2014) on the low-income dwellers' social and spatial adaption in multi-story public housing suggest a propensity for social interactions' taking place in shared space. These REA built apartments, therefore, become appropriate cases for studying the shared spaces that generate social interaction

Social interaction is a dynamic, changing sequence of social actions between individuals, modifying their actions and reactions according to the actions by their interaction partner; it occurs in a particular place and duration of time (Giddens, 2006). Social interaction becomes a fundamental concept of society formation (Ian, 1980) as people in a society share a common way of living by interacting on a regular basis as they have acquired a behavioural pattern agreed generally by all. Changes in urban and house forms due to culture, technology, and power initiate changes in social interaction forms- [King, 1980]. Moreover, population size, density, and social heterogeneity of a housing area influence social interactions at the community level (Abu-Ghazzeh and Tawfiq, 1999). Social interaction is enhanced by the presence of three variables: the opportunity for contact; proximity to others; and lastly, appropriate space to interact (Fischer, 1977). This active presence in a given context suggests that the design of a neighbourhood provide both opportunities for and constraints on whom and where the individuals interact. Physical design affects social relations principally through its control over proximity (Festinger et al, 1950). The less the physical distance of the assigned activity and the greater the number of paths leading to it, the more passive contact, the higher the probability of social interaction (Ghazzeh and Tawfiq, 1999). Functional distance affects the space of interaction, proximity to others, the opportunity for contact, and social interaction patterns (Abu-Ghazzeh and Tawfiq, 1999).

The chance of interaction is more in the apartments as they have a smaller number of users and the chance for intimate interaction is high in them. Four forms of social interaction (Figure 04) are distinguished in terms of their relative chances of occurrence (Heatherton and Walcott, 1990). All the above four forms of interaction are expected to be seen in the shared spaces of an apartment; however, no attempt is seen to evaluate regarding social interaction in the local context.

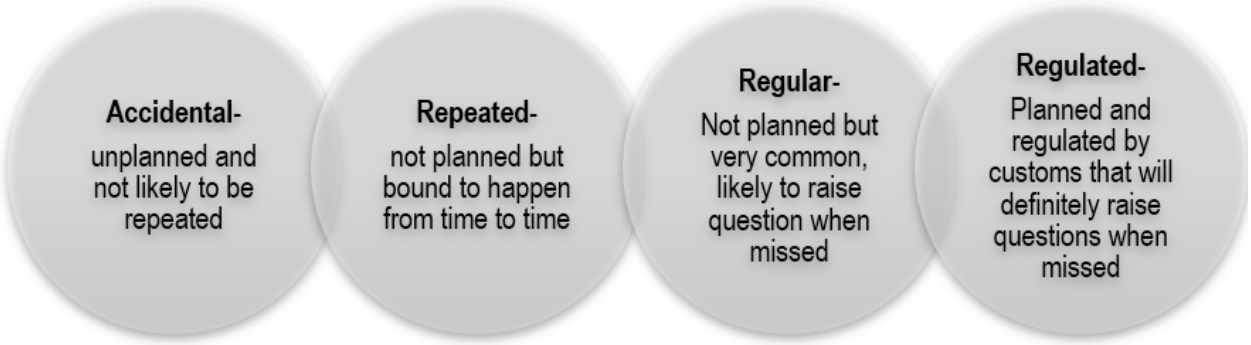

Figure 04: Form of Social Interaction (Heatherton et al, 1990)

The key purpose of residential buildings is to provide their occupants a safe, comfortable, healthy, and secured indoor environment that carries out different activities ranging from family life, leisure to social interactions. Buildings are thus designed based on established standards and specifications by governments, professionals, and experts who have adequate knowledge of users' needs and expectations (Eziyietal, 2013). Studies show that these standards and specifications do not often conform to the changing needs of users leaving them unsatisfied (Kaitilla, 1993; Ukoha and Beamish, 1997; Zeiler and Boxem, 2008; Meir et al, 2009). As Meir et al (2009) rightly observed, whereas designers in other fields expend considerable resources in examining the functioning and user satisfaction with services and products and refining their design accordingly, professionals in building industry appear not to have done well in this area (Eziyietal, 2013). Kim et al. (2005) and Fatoye and Odusami (2009) suggested that one of the ways to improve the performance of buildings is to understand users' needs, expectations, and aspirations through regular performance evaluation. The expectations of building users and the community are diverse and vary among individuals and groups, thus Building Performance Evaluation (BPE) is used to constantly examine the extent to which buildings are effective and efficient in meeting the users' needs and expectations (Liu, 1999; van der Voordt and Maarleveld, 2006; Nawaz and Khalil, 2008). The main categories of approaches to BPE, include: (i) functional suitability of buildings; (ii) quality assessment of buildings; (iii) service ability; (iv) environmental performance; (v) energy consumption and indoor air quality; (vi) user satisfaction; (vii) post-occupancy evaluation (POE) of technical, functional and behavioural aspect of buildings (Khairetal, 2012).

Post-occupancy evaluations (POE), in architecture, are concerned with social and behavioural issues as opposed to aesthetic issues (Wener, 1989). POE focuses on building occupants and their needs and compares actual building performance with human performance needs (Preiser et al, 1988). Main goals of POE are to provide actions to improve life quality of users and to produce a database and generate systematic knowledge on built environment and relations between environment and behaviour (Preiser et al, 1988). The 21st century has seen a new paradigm replacing the hierarchical, command and control, top-down approach, one that is autonomous, self-organizing, ecological, to sustain adaptation and continuous improvement (Preiser, 2007). Issues pertaining to the building delivery cycle and life-cycle – a Meta level approach to building evaluation, were investigated jointly, and an integrative framework for building performance evaluation was developed. In this framework, POE represents only one of six internal review loops, and the framework focuses on the entire life of a building (Figure 05).

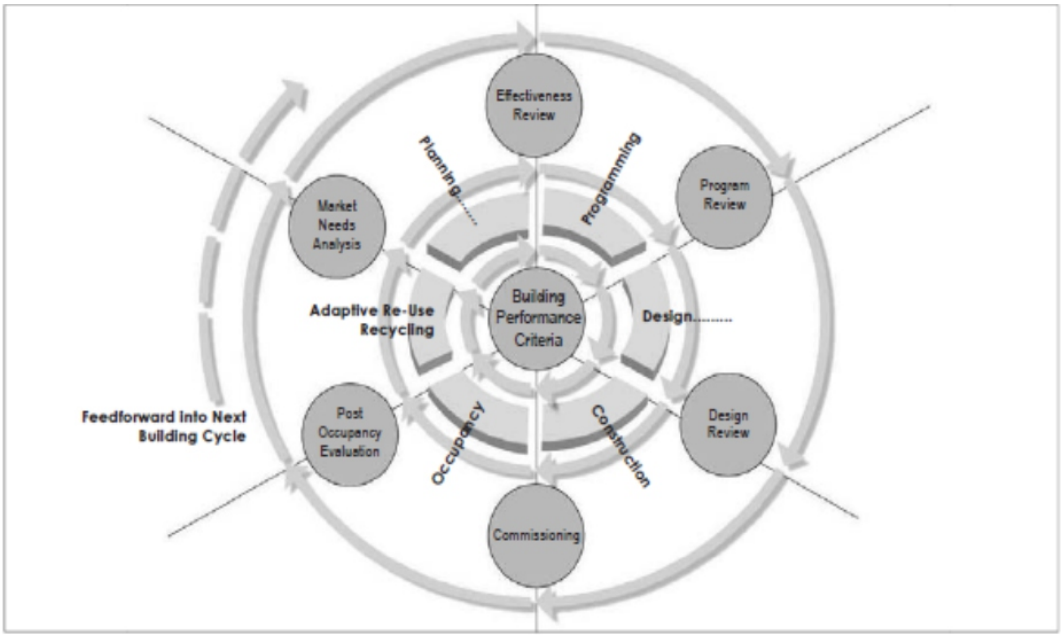

Figure 05: Building Performance Evaluation Process Model (Source: Eziyietal, 2013)

THE CHANGING USER PROFILE AND SETTINGS FOR SOCIAL INTERACTION

As a background to further analysis, this section outlines the profile of the users living in the REAs, of Dhanmondi R/A along with the changes taking place. The socio-economic condition of the users, their social spaces, and type of interaction taking place and their relation with their neighbours and their neighbourhood are discussed next.

Socio-Economic state of the users

The time span of stay in Dhaka of the residents of these apartments varies from twenty years to two generations. The older section of the population though familiarized with the urban life, still struggles to adapt to the busy and self-centered life of the metropolis, whereas, the younger generation are quite habituated with the scenario. Well-established businesspersons or professionals including doctors, engineers, teachers, architects etc. head most of the single families of three to four members. Only 25% of the children being under thirteen years, most of the children are college or university students. Most of these occupants belong to the upper- and upper-middle class strata with about forty percent families where the head is the only earning member and sixty percent families where more than one person is contributing to the household expenses.

The Role of social space in social interaction

The relation of the residents with their neighbourhood is important, as it reflects both the social condition of the buildings and the occupant's sense of spaces for socialization in a bigger scale. The type, occurrence, and extent of the daily activity vary with age group, occupation, distance one travels, and above all individual characteristics. Both the working male and female members spend a large time at the office and after office hours with families. The homemakers, on the other hand, spend most of the time taking care of home. The children under thirteen and teenagers follow the same routine of school, coaching, and games after lunch and homework. The holiday routines vary from family to family reflecting one's family type and the nature of leisure one indulges in. The holiday's routines have extreme opposite examples with cases of spending the whole day at home to members gathering for breakfast beside the lake followed by lunch at one of the member's houses of their morning walk group.

The social network that established by the households over generations, has taken a different form in the apartment context. The apartment dwellers have wider social network mostly with relatives, friends, and fellow dwellers depending on the duration of living, which results in many cluster and fellow groups within the apartment based on age, education, occupation, origin (home district), political identity, religious practices, like-minded etc. Moreover, employment and ownership status play important roles for social networks (Hussain, 2010). The daily household needs of the residents are met from the nearest departmental stores, kitchen markets, and vans. The colourful and well-publicized restaurants are trendy and are hard to find free places on the weekends. Virtual parks are popular among the children. Lack of open spaces for leisure time; force the people to spend most of the time at home.

Changes observed in the user group

Though not a very diverse one, few changes have taken place in the user groups in these apartments. The foremost change that is seen is the children growing up. The buildings, full of chatter, are now quite as most of the children have grownup into teenagers or adults. Many of the professionals have retired, and spend more time in the building premises. This reflects in their attempts in gardening in the roof or common corridors. Many of the tenants have shifted and new tenants have walked in. The variety of the user groups still prevails, and though the previous groups have changed, newer members have taken up the places keeping the overall character homogeneous and identical as before.

SOCIO-TEMPORAL PROFILES OF SHARED SPACES FOR SOCIAL INTERACTION

This section discusses the present condition as observed in 2015, along with a comparison of the previous 2008 findings of the shared spaces and evaluates its role in generating social interaction among the inhabitants. For conducting POE, the shared spaces, both regular and designed, which are thought to be potential in generating social interactions, were identified. Each of the shared spaces was evaluated with the set evaluation criteria along with definite indicators. The obtained findings show the result of each element being satisfactory, moderately satisfactory or unsatisfactory and from this compiled together, the result of each apartment is obtained. The whole process is shown below (Figure 06).

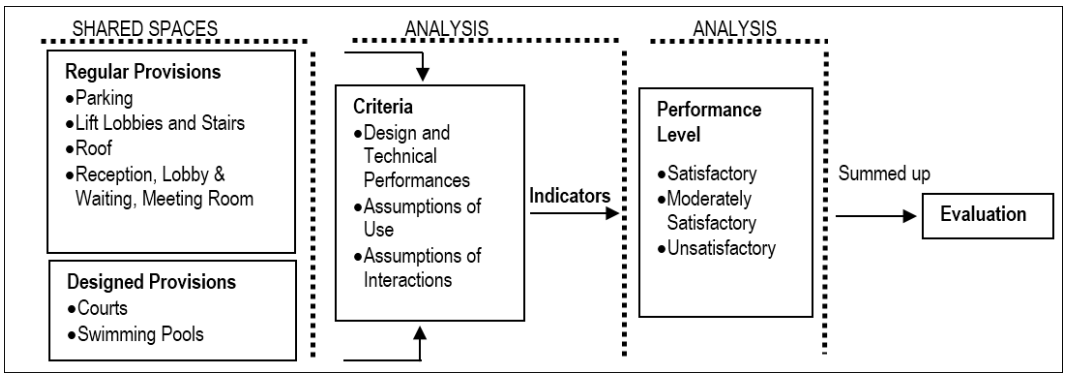

Figure 06: Evaluation Process (Islam, 2012)

Regular Shared Spaces of the buildings

The regularly shared spaces are those, which are present in all the apartments and are thought to be generating social interaction among its users. Parking, lift lobby, stairs, roof, meeting rooms are identified as regularly shared spaces. The evaluation of the spaces will be described along with the changes observed during a recent survey.

Parking

The Parking spaces in these apartment buildings are proved to be satisfactory in terms of design with being well lit and ventilated. Besides car parks, these spaces are facilitated with lift lobby, reception and other utilities in both small and large plots. Parking spaces in the previous survey were sometimes seen to be used for holding programmes like milad or annual get together of residents. In the recent survey, some small changes that are observed are that an attempt of beautifying the spaces by painting the walls or cladding tiles is seen. Erecting a small room to support the drivers is also seen in one of the buildings. Nevertheless, the parking spaces are unsatisfactory when it comes to being generating social interaction, as except for some annual large gathering, residents seldom stop here for any interaction. Only children are sometimes seen playing.

Lift Lobby and Stairs

The lift lobbies of these apartments give a diverse image. Almost all the lobbies of the smaller plots are unsatisfactory in terms of all the criteria as they are tightly designed and serve only as a transaction point from lift to the unit. These lobbies are hardly ever used and only hi-hello or small chitchats takes place while somebody enters or leaves the unit. Personalization through interior design intervention or arranging some plants or potteries is seen in these lobbies. The larger plots, where open space is kept; the lobbies are used for sitting and plantation. The interaction among the residents is more in the lobbies than those that have smaller space. The stairs, which are open, and faces the open spaces are more used than those of the one designed in a tight and closed space.

2008		2015
		
The parking of the larger plots		Tile cladding is being done
		
Parking place on a regular day		Room erected in the corner
		
The parking on a regular day and on a *milad*		Columns painted

Figure 07: Parking Space of the apartments

2008	2015
	
Stairs are rarely used, other than for service	Pots are seen kept for decoration
	
Small lobbies are usually used for circulation	Personalizing the lobby

2008	2015
	
Lobby before interior intervention	Lobby after interior intervention
 	
Plantation is seen in the larger lobbies	Plantations are replaced with services

Figure 08: Lobby of the apartments

Roof

Roof being the only open space, is a possible option to generate gathering all kinds of users, and this reflects in the attempts taken to be seen in both the small and large plots to generate social gathering. Even provision of small meeting rooms and pantry is seen. The roofs are used for the daily activities like drying clothes or foods. Varied use like walking, gardening and gossiping in small scale is seen but not a larger scale. Often the lack of coordination between the residents and building committee results in conflict and the use of roof space is hampered. Only in few apartments, the roof is used for gathering.

The roof is one of the spaces, where major changes are observed. Some roofs are seen unchanged other than a different colour is painted or some plantation is done. The children are seen drawing a badminton court on the roof for playing. On the other hand, some roofs have faced drastic changes. One of the roofs which were barren is now green with a huge number of plants and a swing is seen kept on the roof for the inhabitants to use. Use of floor paving is also seen in one of the roofs. There are even roofs which have lost its liveliness. The roofs are mostly kept closed due to security and restricting unattended teen-agers' use.

Then	Now
  	  
Some roofs that didn't have many changes other than paint, green or drawing a badminton court	

Then	Now
 	 
Major transformation is seen in form of plantation and tile cladding	
 	 
Roofs those were lively earlier are now rather is barren and kept locked	

Figure 09: Roof of the apartments

Meeting Rooms

Almost all the apartments provide a meeting room for the inhabitants, to use for monthly or annual meetings. Some of these are just rooms with small openings and some are designed with open spaces and large openings that connect the space with the outside. These meeting rooms are often converted into other functions like prayer space, office, game room etc. Even if not converted the rooms are kept locked and sometimes used by the security guards. Seldom are these rooms used for any social purpose. The uses of these meeting rooms are almost similar in the second evaluation as well.

2008	2015
  	   
Large meeting rooms used by security guards and converted to prayer room	The same use is observed, as addition to a table tennis table was seen in one of the apartments

2008	2015
	
Meeting rooms in smaller plots are mostly unchanged	

Figure 10: Meeting Rooms of the apartments

Designed Shared Spaces of the Building

Designed spaces are unique in character, and are an additional effort by the architects to make the living space better. In the apartments, these features are seen in form of open court like spaces, swimming pools etc. There is varying use seen of these spaces, depending upon the mentality i.e. differing priorities of the inhabitants of the buildings and the coordination between the building committee. Among the three, in two of the apartments, the central court is extensively used for children playing, evening walk, gathering etc.; whereas, in the other, space acts just like an airshaft devoid of social interactions.

Courts

Central courts are seen in three of the surveyed buildings. In two of them, the courts are placed in the centre and in the other; it is placed in the corner. Two of the courts are green and other has a combination of paving and green. The courts, which are open towards the end, and have an open view seem to be working more than that of the one, which is covered from all the sides. The courts open on one side are used for playing, gathering, even keeping cattle during the eid-ul-azha. Even the lobbies and windows facing these open courts are also used more than that of those, which have no open space. The paved court is used for multipurpose uses starting from children playing, gathering to evening walk of women. Though the courts of all the buildings are satisfactory in the designed criteria they vary in the satisfaction level. Besides the design aspects, the mentality of the users and the coordination between the building community effects in the use of the spaces.

Even during the second survey, the courts are seen to be used as it was seen in the earlier one. The surrounding contexts of two buildings have not changed and thus the courts of those two buildings face internal changes only. The children have grown up and the courts are now mostly used for evening walks. And the building which had the court placed in the corner now has a fifteen storied building as a neighbour and that has affected the scale of the court and the court being shaded does not grow grass anymore. The windows and the lobby places are not used as much it was used earlier because of the privacy reasons.

2008	2015
	
Court used for various purposes	Court losing it's scale and green
	
Multiple uses of the court	

Figure 11: Courts of the apartments

Swimming pool

Swimming Pool is seen in one of the cases in the surveyed buildings. The attempt to provide a pool was very good as it was thought to be generating a gathering and sharing of the users with a common interest. Nevertheless, the pool of the apartment was never even filled with water. Lack of coordination between the users and the conflicts between the inhabitants kept this unused.

The preceding discussions outline the changes observed in the evaluations of the regular and designed shared spaces of the surveyed buildings that have (not) taken place between 2008 and 2015. These observations are summarized below in Figure 13.

2008	2015
	
No change is seen in the condition of the pool	

Figure 12: Swimming Pool

Shared Spaces	Spaces	Observations in 2008	Observations in 2015
Regular Provisions	Parking	1. Satisfactory in design. 2. Used for holding programmes and different works. 3. Only children playing.	1. Beautifying the parking level with tiles cladding. 2. Rooms erected for extension and fewer programmes held. 3. Children are not seen playing.
	Lift Lobbies	1. Tightly design in the small plots. Open spaces in the larger plots. 2. Serves only as transaction points in the small plots. Lobbies are used for plantations and sittings are kept. 3. Smaller plots do not have many options for any interaction. Interaction amongst the inhabitants is observed in the lobbies of larger plots.	1. Beautifying the parking level with tiles cladding. 2. Rooms erected for extension and fewer programmes held. 3. Children are not seen playing.
	Stairs	1. Stairs in all the buildings are seen to be designed with light and ventilation. 2. Stairs in the larger plots placed in the open spaces are seen to be used more. 3. No interaction is observed.	1. Beautifying the parking level with tiles cladding. 2. Rooms erected for extension and fewer programmes held. 3. Children are not seen playing.
	Roofs	1. Roofs of smaller plots are less likely to have many options to design. Meeting rooms, gathering places, pantry, toilets, seating places are seen in the larger plots. 2. Daily activities like drying clothes or foods are seen. 3. Morning or evening walk gardening, gossiping, the gathering is seen.	1. Painting the roof and decorating with various measures are observed. 2. Use remains as before other than for one or two buildings where the roofs are kept closed. Plantation, Evening walk in some roofs have increased even more than before in many roofs.
	Reception, Lobby, Meeting Room	1. Designed mostly with regular features. 2. Used for meetings and by the guards. 3. Sometimes indoor games are played by the children	No changes are observed in the second survey
Designed Provisions	Courts	1. Designed well. 2.Used for multipurpose reasons throughout the day. 3. Children playing, morning and evening walk, small gatherings are seen.	1. The court of one of the buildings, face major change due to a building erected in the next plot has changed the open character. 2. Use have seen decreasing. The degree of interaction was seen to be less than the previous survey .
	Swimming Pools	1. Well-designed pool 2. Never used as a pool 3. Children played in the pool	No changes are observed in the second survey

Figure 13: Findings on the Regular and Designed Shared Spaces

People require a certain amount of social interaction to maintain their social and psychological wellbeing and for that contacts with others are required which requires an optimal level of environmental stimulation. While too much stimulation is potentially stressful, so is too little; a delicate balance is therefore required. Frequent face-to-face contacts make neighbors significant sources of everyday assistance regardless of the weakness or strength of their bonds. The 'then-now' comparison of the regular and designed shared spaces for social interaction observed in 2008 and 2015 confirms existing assertion: When residents have accessibility and good orientation, the setting encourages their meeting, greeting, and chatting (Unger & Wandersman, 1982; Wellman, 1979). In the apartment premises, the shared spaces are the ones that have an option of generating the face-to-face contacts and opportunities of social interaction. Though regulated social Interaction might

not take place in these premises, repeated and regular interactions are likely to take place. When people are in the presence of others, even if they do not directly talk to each other, they continuously communicate non-verbally through their postures and facial and physical gestures.

CONCLUSION

A comparison between the two observations, in 2008 and 2015, gives the picture of the changes taking place or not taking place in the apartment premises. As for the socio-demographic changes taking place, the user groups in many of the apartments have changed from children to young adults, young adults to office going professional, and professionals to retired elders. This result is dwindling activities like cycling, playing to increasing activities like gardening on the roof, or open corridors. However, physical changes are not very much observed other than erecting one or two rooms or buildings on the surrounding plots, that impacts on the spatial quality of the buildings. One major observation seen was the need for beautification in the shared spaces. Parking and the roofs are seen to be cladded with tiles, while the lobby spaces are decorated in many ways, from the small intervention of flowerpots to ceiling and wall claddings. Most of the meeting rooms are as before with mostly being used by the security guards. The 'then-now' observations confirm various socio-demographic and physical changes' influencing the character of the buildings in time. The building grows and transforms with the change of its inhabitants and their needs, and are evident in its regular and designed shared spaces for social interaction. The changing spatio-temporal dimensionality of user profiles, needs and shared spaces remain an unavoidable fact as much as a necessity for designing future socially responsive apartment buildings. Future researches, however, have to extend this paper's lack of explanation that the key social variables like age, gender, social background, profession—causes of change—play in shaping dwellers' mentality, conflicts, and negotiations in appropriating shared spaces for social interactions.

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