

THE RURAL BANGLADESHI COURTYARD

K. Iftekhar Ahmed

*Department of Architecture, BUET, Dhaka 1000, Bangladesh
and*

*Postgraduate Programs in Disaster Management, BRAC University, 66 Mohakhali C/A,
Dhaka 1212, Bangladesh*

ABSTRACT

In rural settlements of the predominant floodplains of Bangladeshi, an intrinsic component is the extended family homestead. The layout of the homestead is defined by the courtyard, formed by the arrangement of dwelling units and ancillary building around an open space. Specific building typologies prevail, in terms of design, construction and building materials. Some typical types of courtyard can be observed, but there are also variations to these types. The courtyard has important physical and functional characteristics derived from the climatic requirements and living patterns. Nonetheless, particularly in this predominantly Muslim society, the cultural aspect of respecting women's privacy is an important factor behind the development of this archetype. However, other communities living in the floodplains also have courtyards, suggesting that it is also a regional archetype. The archetypal courtyard is subject to transformation or elimination due to social, economic and environmental changes. If this trend becomes widespread, it would signal the loss of an important and long-lasting regional expression that has resulted from blending of culture, climate and nature.

Key words: Homestead, courtyard typologies, climatic aspects, cultural aspects, changing patterns.

I. RURAL SETTLEMENT

In predominantly rural (nearly 76%) Bangladesh, low-lying alluvial floodplains comprise the major part of the land, which is a large river basin or delta with annual flooding of the numerous rivers and water bodies that define the landscape. There are two main types of rural settlement: elongated-linear and amorphous (Sultana, 1993), both patterns of establishing settlement on raised or high land above the annual flood level. The elongated linear type is built on high land along natural levees of rivers or water channels. The amorphous type, consisting of clustered or scattered settlements built on raised land, is often dispersed throughout the terrain. In the plains land entire towns and villages have grown over time in the amorphous pattern by raising land and such settlements are still being built. Settlements are elevated to adapt to the annual flooding, but during extreme floods even raised settlements may become flooded.

Where high land is not available, earth obtained from excavating ponds or channels is raised into a mound about 2 to 3 meters high depending on the

surrounding water level, on which a homestead or *bari* is established. A *bari* often begins with an individual household and incrementally develops into a settlement of several *ghors* (dwelling units and ancillary structures) of inter-generational households belonging to an extended family. Over time more earth is added to extend the mound as the settlement gradually expands in an amorphous pattern. In many places settlements thus established on raised mounds are scattered throughout the low-lying terrain and in the rainy season virtually become islands.

II. HOMESTEAD AND COURTYARD

A typical morphological feature of the rural homestead or *bari* is the arrangement of a number of closely spaced single-storied (or occasionally double-storied) one to two roomed rectangular buildings (*ghors*) around a square or rectangular open courtyard (*uthan*). There is usually a single row of buildings around a courtyard. In the homesteading process, a pond is excavated to obtain soil for raising the land; a backyard pond with bathing steps (*pukur ghat*) can be found in

many large homesteads. The pond provides for rearing ducks and fish, and for bathing - a frequent purification ritual in this tropical land.

After raising land, each homestead begins on the mound with a main dwelling unit (*bosoth ghor*) and ancillary structures such as kitchens (*ranna ghor*), granaries (*gola ghor*) and cowsheds (*goyal ghor*) laid out around a central open space or courtyard. The word *ghor* literally means 'room', indicating that the individual units are perceived actually as rooms with specific functions and not really as buildings; the *bari* comprised of several *ghors* around a courtyard is considered the unit of home. The main *ghor* is usually the well-built structure on the homestead and the ancillary structures tend to be semi-permanent and built of perishable materials. As the family grows, these are moved to peripheral locations and more dwelling units are added around the courtyard. The courtyard serves as the main circulation space between the buildings arranged around it.

Dwelling units flanking the courtyard often have shaded open verandahs, which provide cool outdoor spaces. In some cases verandahs are partially or fully enclosed by screen-type walls for shade and privacy. The verandah is a semi-private space and serves as a transition zone from the semi-public courtyard to the private house interior. Generally, the buildings comprising the homestead range in size from 2 meters by 3.5 meters to 4 meters by 7 meters, and face all sides of the courtyard and they can be entered only through the courtyard. The buildings have one to two rooms and are usually single-storied, although in some well-to-do homesteads some two-storied buildings can also be found. Buildings are usually constructed on a raised plinth of compacted earth and the floor is left bare. This additional flood-proofing technique is ubiquitous throughout Bangladesh and is a characteristic feature of rural housing. The plinth varies from a height of about 15 centimeters in higher areas to 120 centimeters in low-lying areas. Walls are commonly porous screens made of organic materials such as bamboo, reeds or grasses; in drier and hilly regions the walls are also made of earth. Pitched roofs are typical, thatched with different types of grasses or straw according to local availability, but corrugated iron (CI) sheet has now become widely popular and common in rural areas, both for roofs and walls. These features of rural settlement and housing have

been described in more detail elsewhere by the author (Ahmed, 1994; Ahmed 1997).



]Figure 1: A typical courtyard in a Bangladeshi rural homestead (photo: D.M. Hasan)

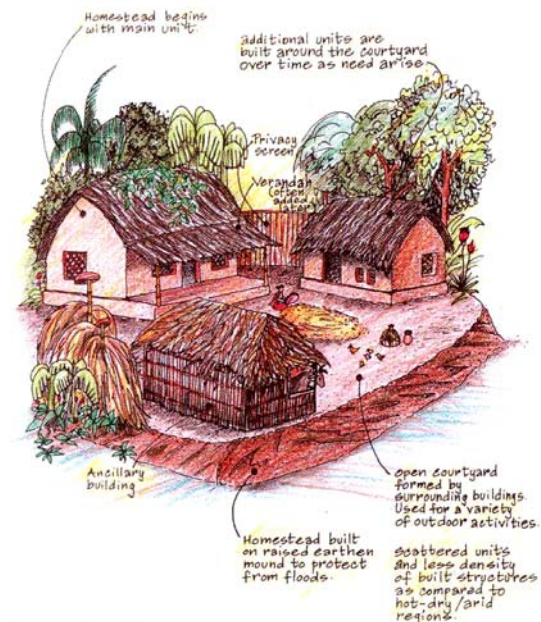


Figure 2: Salient features of a courtyard in a Bangladeshi rural homestead

III. TYPES OF COURTYARD

Four main types of courtyard arrangement have been documented (Hasan, 1987; Islam *et al*, 1981). At the early stage of establishing a homestead, a single dwelling unit, usually with an outdoor kitchen, is built facing a front yard. This, however, does not really represent a courtyard typology *per se*, rather it is the initial stage of homestead formation, which incrementally develops into more elaborate arrangements as in the other courtyard

types documented by the above authors. Thus the second type consists of several buildings, usually belonging to a single household, around an 'independent' courtyard, comprised of a main dwelling unit with ancillary structures and subsidiary dwelling units for children, often an incremental development of the first type. The third type results from further development as new households are formed gradually, an outcome of family growth. More houses are built along the courtyard, resulting in a 'common' courtyard, often requiring extension of the courtyard and relocation of ancillary structures. The most elaborate arrangement, the fourth type, is that of 'interlocking' courtyards with open passageways linking different households. This represents a further horizontal extension of the family over space: as the family grows, the homestead is extended into adjacent land and new courtyards with buildings around them are built. The gaps between buildings serve to define passageways 'interlocking' the courtyards. The latter two arrangements arise from expansion of the homestead and the extended family; kin usually relates most households with shared or linked courtyards.

In Hindu communities, where seclusion of women is less prevalent, a more open arrangement of interlocking courtyards can sometimes be found (Hasan, 1987). In some cases here, instead of passageways linking the courtyards, the corners of the courtyards merge with each other forming almost a large contiguous multi-sided courtyard. Chowdhury (1992) has documented some other types of courtyards including adjacent, walled and multiple courtyards. The adjacent courtyard is similar to the common courtyard described above, but different because here two or more sets of unrelated extended families build houses along the periphery of adjoining courtyards. Walled and multiple courtyards belong to large and relatively wealthy families and are not very widely prevalent.

IV. PHYSICAL AND FUNCTIONAL ASPECTS OF THE COURTYARD

Except for small additions, extension of a homestead is not accomplished by extending the dwelling units; rather, new structures are built around the courtyard as need arises. Thus, a rural homestead usually consists of several one to two roomed buildings constructed incrementally. The homestead represents the habitat of the extended

family and each separate dwelling unit within it represents the habitat of individual households or family members. Historical accounts of housing in this region indicate the continuity of this pattern from earlier times (King, 1984), but reasons for it are not mentioned. Possibly, and primarily, the humid climate necessitates separate buildings to maximize cross-ventilation, more difficult to achieve in larger buildings with many rooms. Although the buildings are unattached, they are placed close enough with small gaps between them ranging generally from 70 centimeters to 1.25 meters and their long sides flank the courtyard so that the courtyard as a rectangular introverted space becomes obvious and defined. In this way a set of buildings laid out separately around a courtyard behaves as a unit. Even though separate, they work as a group because of the inter-relationships of their functions and the inherent concept that these separate buildings are actually rooms comprising a larger unit of the home; the word '*bari*' literally means 'home'. The courtyard layout derives primarily from the need for privacy, and together with the need to have separate buildings for climatic comfort has resulted in this particular type of courtyard housing in rural Bangladesh. The courtyard principally contributes to an introverted layout of the homestead; the built units are accessible only from the courtyard and face away from the outside world. This introverted layout is further accentuated by planting trees extensively on the periphery of the homestead along the outer walls of the buildings.

A north-south orientation of the main dwelling unit is preferred, with its long side along the courtyard facing south to benefit from the coolness of the prevailing southern breeze. Dwelling units built subsequently have to compromise their orientation in order to face the central rectangular courtyard, thus ostensibly also compromising their climatic performance. However, several studies suggest that extensive protective cover by vegetation and the use of a courtyard reduces overall heat gain considerably (Hasan, 1985; Olgay, 1963). The courtyard draws in air and ventilates the buildings facing it, once again an example of how the homestead here functions as a unit. The climatic performances of individual buildings are relegated to serve the overall collective performance of the homestead. Trees planted along the homestead boundary and in the gaps between buildings together with the built structures form almost a continuous edge for the courtyard, thus defining its

singularity and allowing its function of drawing in air. Other than a small altar-planter for the holy *tulsi* tree in Hindu homesteads, the courtyard is mostly kept unfettered of vegetation and structures. The surface is regularly plastered with mud slurry for smoothness and most courtyard activities are carried out upon the leveled mud-paved ground without need for built structures; squatting or sitting on low seats (*pidi, mora*) or mats allows working on the ground comfortably. The courtyard functions as a bounded open-to-sky built indoor space.

In this warm climate, the courtyard is virtually an extension of indoor living and serves a variety of activities: processing agricultural produce, making household artifacts, drying clothes and food items, cooking, gossiping, etc. Social events such as weddings are also held in the courtyard, especially in the larger ones. Even the gaps between the buildings are utilized for outdoor activities because they tend to be shaded. However, it is uncommon to sleep in the courtyard despite the hot-humid climate for fear of evil spirits or assault, because although visually private, the courtyard has a sense of openness and is easily accessible from the outside. During the day, the courtyard becomes the territory of women because most of the men are away working in the fields or outside the homestead. In addition to various household activities, women also visit neighbors and spend time in their courtyards, unhampered by the presence of men during daytime. Adult male family members of the homestead mostly tend to spend the time during meals and sleeping and sometimes during the evening within the precinct of the homestead. For younger men especially, the major part of the day is spent away from the homestead; in the evening even if only to gather outside the homestead to meet friends.

V. CULTURAL ASPECTS OF THE COURTYARD

In this predominantly Islamic country, in traditional Muslim homesteads, the courtyard is the private inner domain of women; hence various measures are followed to maintain their *pardah* (seclusion for modesty). For example, as evident in the various types of entry documented by Chowdhury (1992), the entry into the courtyard is always indirect or arranged in such a way that view into the courtyard from the outside is obstructed. An indirect entry is less intrusive, assists in

maintaining privacy and allows preparation or warning before entry. Vegetation and screens are used additionally to ensure privacy and also to provide shade, adding to the private ambience. The layout of the homestead with the long sides of the buildings flanking the courtyard creates small gaps or passages between the buildings linking the courtyard to the outside. Some of these passages are used as entries into the homestead and act as a filtering mechanism to allow entry of only familiar or approved men; gaps not used for circulation are veiled off with vegetation and screens to block outside view.

There is a gendered division and use of space in rural homesteads according to Islamic ideals of *pardah*. The outer area near the main entry of the homestead compound belongs to the men and often a structure for male gatherings (*baithak ghor*) is built there. In some places as documented by Hasan (1987), an outer court used mainly by men is built in the case of large homesteads. It is uncommon for unrelated men to enter a courtyard directly; they are usually received in the front area of the homestead. If there is at all need for them to enter the homestead, they are invited inside to sit in the courtyard or a verandah where the older men or relevant household heads give them company, while the women tend to retreat into the dwellings or kitchens.

In addition to the physical separation of male and female domains, the privacy of women is further achieved through behavioral adjustments. For example, when male members of not very close kin are sometimes admitted into the courtyard, it is preceded by warnings such as clearing the throat, singing, calling, etc to alert the women within the homestead to adjust behavior and adopt modesty, such as covering the head and withdrawing inside the buildings. It is necessary to first enter the courtyard in order to enter the individual dwellings. In addition to security, for household male members this sequential entry into the homestead allows preparation for adjusting to a private and domestic domain. Even in the case of male family members residing within the homestead, there are specific codes of behavior relating to the concept of female modesty. For instance, men generally do not enter the kitchen, at least not without warning. Or there are specific allocated periods for female toilet use, usually when it is dark at dawn or evening, so men avoid these timings. The time-specific use of space according to the period of the

day, or time zoning, that is separate use of the same space within the homestead by men and women during different times of the day, is a common strategy of gender-based willful avoidance. One main basis of time zoning is the local lifestyle where men tend to spend most of the day away from the homestead. Women spend more time within the homestead and the bounded courtyard provides them a private sanctum during daytime.

In Hindu and tribal communities gender-specific use of space is less rigorous, although Hasan (1985) has noted that with some small differences the courtyard pattern is widely followed in Hindu communities and not entirely dissimilar to that of the Muslims. The prevalence of the courtyard even in many of these communities can be attributed to its being a regional typology and multipurpose space relating well to local patterns of outdoor activity. In Hindu homesteads, symbols of religious ritual, such as the holy *tulsi* tree in a planter or an altar with ceremonial statues of deities, are placed in the courtyard. Here the courtyard is maintained well by daily sweeping, usually in the morning, and plastered frequently every few days with a mixture of mud and cow dung. This Hindu traditional practice of courtyard maintenance is believed to bestow well-being on the family, failing which may bring bad fortune. A similar practice is followed also in Muslim communities, but without the conscious spiritual connotation. Because of this perhaps, as many local observers comment, courtyards in Muslim homesteads do not appear maintained as well as in Hindu homesteads. It should be noted however that the courtyard typology is prevalent largely in the rural plains of Bangladesh, usually irrespective of cultural background, but in the few hilly areas with tribal population, such as the Chittagong Hill Tracts, the courtyard is largely absent. Here settlement patterns are usually linear, with roads or walkways defining circulation and community space (Ahmed and Kabir, 2005). Seclusion or modesty of women is of lesser concern here compared to the predominantly Muslim society of the plains. This alternative typology is possibly a result of the hilly topography and the cultures of the people inhabiting these areas, which are very different from the terrain and people of the plains.

The significance of the courtyard as a regional typology, suggesting it to be a cultural archetype, is evident even in modern urban houses and apartments, where it is manifested in a consolidated

form (Rahman, 1996). Urban houses are essentially a transformation of the rural homestead pattern, consolidated to account for the higher cost and demand of urban land. Here rooms are grouped around a central dining/family space, similar to the rural courtyard, but in a compact fashion. Although unlike the rural extended family homestead, urban apartments are built typically for nuclear families, many aspects of behavior relating to privacy described above are nonetheless followed: receiving guests at the front, indirect entry into the house, gender-based time-zoning, etc. Having rapid but only recent urbanization, Bangladesh still remains largely rural. Most people in cities have rural roots and there is thus continuity of many rural behavioral and cultural patterns in the urban context; the similarity in layout and use of space between the rural homestead and urban apartments is an example of that.

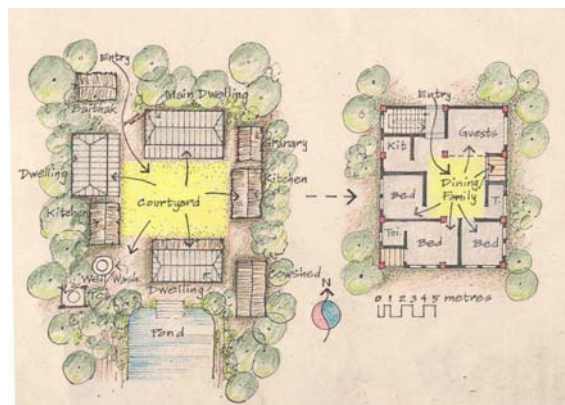


Figure 3: The rural courtyard-based housing pattern consolidated into an urban apartment

VI. CHANGING PATTERNS

In some rural settlements, the archetypal courtyard is now built smaller or even excluded because of increasing population density and the need of land for construction of more settlements. This is also due to the reduced need of the courtyard for post-harvest activities such as threshing rice and drying grain; there is an increasing tendency to carry out these activities in mills or in roadside commercial operations. Some authors suggest that this phenomenon of the diminishing courtyard may also be linked to the modernization process leading to reduced seclusion of women and gradual transformation of the extended family into nuclear family units (Adnan, 1996; Muktedir and Hasan, 1985). But then, this process is potentially directed

towards altering the wider rural landscape, and the vanishing courtyard is simply part of this larger process of change. However, whether such a deeply rooted, widely prevalent and popular entity as the courtyard will disappear so easily or if it will persist in a different form in the future remains to be seen.

It has been suggested that the elimination of courtyards may result in linear settlements, which could then facilitate the extension of infrastructural services (Muktadir and Hasan, 1985). However, although this appears to offer some advantages of physical planning, the elimination of the courtyard would also mean the loss of an intrinsic aspect of architecture of this region. The courtyard in the rural Bangladeshi context is not only a working space. It has special meaning for households and communities in terms of its symbolic value as an introverted, private and intimate open space at the scale of the family. It provides a sense of security particularly to women and children where they can carry out activities freely and safely within this bounded space. The climatic quality of the courtyard in terms of drawing in breeze and cooling the buildings around it is also important in this hot-humid region. It allows separating household functions such as dwelling, cooking and toilet, which if designed otherwise might not work well in the existing rural context; it represents a time-tested indigenous site layout that has developed according to contextual requirements. For example, in planned rural settlements built by a local community development organization, a linear grid instead of a courtyard arrangement was followed. Toilets were designed adjacent to houses and kitchens were incorporated into the dwelling units as part of a design concept for a more spatially efficient house. This was found completely unsuccessful. The toilets became an irritant with bad odor wafting into the houses. The kitchens were converted into living spaces and new kitchens were later built separately away from the houses as done traditionally (Ara and Kabir, 2000).

VII. CONCLUSION

The courtyard is a symbol of regional architectural identity in rural Bangladesh. Although it has characteristics similar to courtyard housing in other parts of the world, such as maintaining privacy within a traditional setting and as a climatic device, the Bangladeshi courtyard is unique because of the particular type of layout of individual buildings

around it which define its form. Unlike a typical courtyard house with built forms bounding the courtyard from all sides, the Bangladeshi rural homestead is composed of a number of closely spaced buildings around an open space, clearly defining a similar introverted courtyard layout. Because of its introverted nature, it serves the purpose of privacy similar to courtyard houses in other traditional Islamic societies; perhaps the form derives primarily from the requirements of *purdah*. On the other hand, the need for thermal comfort in this hot-humid climate is fulfilled by a somewhat scattered, open arrangement of buildings. In order to maintain privacy and yet achieve ventilation, the gaps between the buildings potentially allowing views into the courtyard are visually obscured by the row of trees and vegetation on the outer periphery of the homestead; bamboo or grass screens are used additionally. In this way, a bounded effect as in the typical courtyard house is achieved, using a combination of built forms and vegetation. The Bangladeshi rural courtyard is a distinctive example of function of space achieved by blending culture, climate and nature.

It can be argued that the courtyard form is principally a product of patriarchal norms and represents the submission of women. But the Bangladeshi courtyard layout extends beyond that because it arises from a specific context of social and environmental conditions and represents a unique regional typology. In addition to serving as a bounded space for women, the courtyard here provides a sense of belonging and weaves a collective bonding between the individual dwellings and thereby family members that comprise the homestead. The courtyard is what makes the rural homestead 'home'. Perhaps because of technological and social changes, the courtyard in its present form might become obsolete over time. But this loss would signal the forfeiture of a cultural expression that has existed for many generations.

REFERENCES

- ADNAN, Shapan (1996) "A harsh freedom: contradictory aspects of change in women's position in Bangladesh". Paper presented at the *South Asian Studies Programme*. Oxford, University of Oxford.
- AHMED, K. Iftekhar (1994) *Up to the waist in mud: earth-based architecture in rural Bangladesh*. Dhaka, University Press Ltd.

- AHMED, K. Iftekhar (1997) "Kitchen", "Bangladesh", "Bengalee" and "Namoshudra" in OLIVER, Paul (ed) *Encyclopedia of vernacular architecture of the world*. Cambridge, Cambridge University Press, pp. 441-442, 920-922, 924-925, 937-938.
- AHMED, K. Iftekhar and KABIR, Kh. Hasibul (2005) A study of traditional housing of the "Pahari" communities in the Chittagong Hill Tracts. Research report. Dhaka, BUET.
- ARA, Yasmin and KABIR, Rumana (2000) "Rural housing initiative by development agencies in Bangladesh: miles to go" in Hodgson, Robert *et al* (eds) *Village infrastructure to cope with the environment*. Dhaka, BUET and Exeter, UK, University of Exeter.
- CHOWDHURY, Tasneem A. (1992) *Segregation of women in Islamic societies of South Asia and its reflection in rural housing - case study in Bangladesh*. MArch thesis, Montreal, McGill University.
- HASAN, Dewan Mahbub (1987) *A study of building process of houses in rural Bangladesh: the case of floodplain region*. Master of Engineering in Architecture thesis, Leuven, Katholieke University Leuven.
- HASAN, Dewan Mahbub. (1985) *A study of traditional house forms in rural Bangladesh*. MArch thesis. Dhaka, Bangladesh University of Engineering and Technology (BUET).
- ISLAM, Nazrul *et al* (1981) "A survey of housing in a Bangladesh village". Paper presented at the *Regional Workshop on Transfer of Rural Housing Technology*. Dhaka, Center for Urban Studies.
- KING, Anthony Douglas (1984) *The bungalow: the production of a global culture*. Boston, Routledge and Kegan Paul.
- MUKTADIR, Mohammed A. and HASAN, Dewan Mahbub. (1985) "Traditional house form in rural Bangladesh" in POWELL, Robert and KHAN, Iftekhar Mazhar (eds) (1985) *Regionalism in Architecture*. Singapore, Concept Media/ Aga Khan Award for Architecture, pp. 81-86.
- OLGAY, Victor (1963) *Design with climate*. New Jersey, Princeton University Press.
- RAHMAN, Mahbubur (1996) "Evolving environmental ideals of old Dhaka: a study into tenement houses". Paper presented at the *14th conference of the International Association of People-Environment Studies (IAPS)*. Stockholm.
- SULTANA, Sabiha (1993) *Rural settlements in Bangladesh: spatial pattern and development*. Dhaka, Graphosman.