

# Changing Dimensions of Public Space in Traditional Neighborhood of Mahaboudha

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## Abstract

Urban public spaces are where people discover the value and benefit of public life. These are places for social activities and maturing of culture itself. However in the recent times, the evolution electronic means of communication and modern transportation needs have transformed the physical, social and psychological dimensions of public space. Traditional city core of Kathmandu mostly retained its medieval characters until pre-modern period but has gone through massive transformations since 1950s. The transformation has led to loss of spatial relation, linkages and accessibility that used to exist between the built environment and public spaces. This research aims to examine how the physical, social and psychological dimensions of public spaces are changing in the traditional neighborhood and how one dimension influences the other. Mahaboudha is chosen as a study area, which is one of the most commercialized areas within the traditional town boundary and has gone through significant physical transformations. Both qualitative and quantitative methods are used in the research within the post positivist paradigm. Perception survey was carried out at site for the quantitative method whereas for the qualitative method literature, historical photographs and maps were studied to understand the change over time. Direct observation of the site for the usage of public spaces along with the factors that cause the misuse of the spaces were also done. Findings from the research showed that change in physical environment and incompatible uses have degraded the public spaces. The research also revealed that perception and use of public space is different for local residents and renters. The research concludes that the changes in immediate built environment have huge impact on the usage and perception of public spaces while the perception and usage of public spaces also varies for locals and renters. Controlling mechanisms for the physical transformation and restriction on inappropriate uses is very essential and due consideration of all its users along with their perception should be taken into account for the traditional public spaces to retain its functional quality and inherited spirit.

## Keywords

Public space, Street, Courtyard, Local, Renter, Built environment

## 1. Introduction

Urban public spaces are where people discover the value and benefits of public life. These authenticate the city's image and identity. These are places for social activities and maturing of culture itself. Public spaces are common ground where people carry out the functional and ritual activities that bind a community, whether in the normal routines or in periodic festivals[1]. Public space is basically a physical environment for a variety of social activities taking place within a community and which is accessible to all people[2]. However the evolution of physical and electronic means of communication

between locations, and modern transportation needs has transformed the physical characters, uses and perception of traditional public spaces[3]. Traditional public spaces have been contemporized coercively, because the acceleration in the functional and technological variables are flowing more rapidly than the adaptability and acceptance of traditional space. Although the controlled mechanisms can result in positive transformations, uncontrolled transformations have damaged and deteriorated the inherit values and also made it difficult to achieve good performance of contemporary requirements.

Traditional city core of Kathmandu retained its medieval characters until pre-modern period but since

1950s, various factors such as development of physical infrastructure, migration and population growth and social change and modernization has led to its transformation. The transformation has led to the loss of spatial relation, linkages and accessibility that used to exist between buildings, monuments and spaces[4]. The original diversity of urban fabric and activities is gradually disappearing. Traditional urban spaces are degrading rapidly, undermining the urban morphological character. Traditional urban spaces have mostly lost its characters and their basic components that maintained the cohesion and harmony. Their legacy of sustained urban life and environment with unique socio cultural, ecological and communal characters has gradually faded from people's mind. Now, many people regard traditional space and values as hindrance to their modern life.

## 2. Literature study

### 2.1 Planning of traditional towns of Kathmandu valley

Planning of traditional towns in Kathmandu valley Much of the traditional urban form in the Kathmandu valley developed during the Malla era along with the development of socio-cultural institutions for urban management. Two characteristic features of Malla towns are its pedestrian scale of design and public spaces distributed all around the town. Traditional towns were developed for people, in their natural mode of movement, that of walking so exhibited human scale in its design and were pedestrian friendly. There were three different types of public spaces namely nodal spaces, streets and open courtyards[5]. Traditional streets developed during Malla Period were not only 'paths' for movement of pedestrians but also were shared community spaces for performing multiple social and religious activities. Developed before the advent of automobile, they were sort of irregular shaped and equipped with community amenities such as temples and shrines, public taps and rest places[6]. Uniformity in building height and texture adjacent to the street gave a sense of enclosure while the narrowing and widening of the streets broke the monotony and brought personality into space[5]. Courtyards are one of the most prominent public space in traditional towns, courtyards of different sizes and hierarchy are distributed all around the town. Baha is the most dominant type of Buddhist courtyard found in the traditional Newar towns. It is a distinctive

architecture typology seems to have been handed down from the earliest days of Buddhism. They are fairly larger sized enclosed spaces and physically separated from the major streets. They are surrounded by buildings and has at least one centrally placed chaitya. Each Baha also has its main deity known as Kwapa dya, which is usually housed in a building opposite the entrance known as Dyo chen[7]. Bahas are private domains, which serve the various domestic purposes and social activities precedence over economic activities. In addition to these daily activities, Bahas also has special functions during periodic festivals and Jattras[5]. The arrangement of buildings, streets and public open spaces of this glorious era can still be traced in the traditional city core of the Kathmandu valley.

### 2.2 Dimensions of public space

Public space is a multidisciplinary domain of research focus because it involves not only the physical dimensions but also the non physical dimensions with considerable overlap between them. This paper focuses on physical, social and psychological dimensions of a public space. The physical dimension refers to the physical environment of public space that provide a basis for social interaction, while the social dimension refers to the use or activities that occur in the space. The psychological dimension concerns with the perception of public space, which may be expressed in terms of how people perceive the space and give meaning to it, and how such meaning helps develop a sense of community or place[3].

Studies have shown that there exists a strong relationship between the physical qualities of public space and its use[8]. Most sociable spaces are the ones which are easily accessible to the users, both physically and visually, with plenty of amenities to support various activities occurring in them[9]. Studies also show a strong association between quality of public space and sense of community in urban neighborhoods.

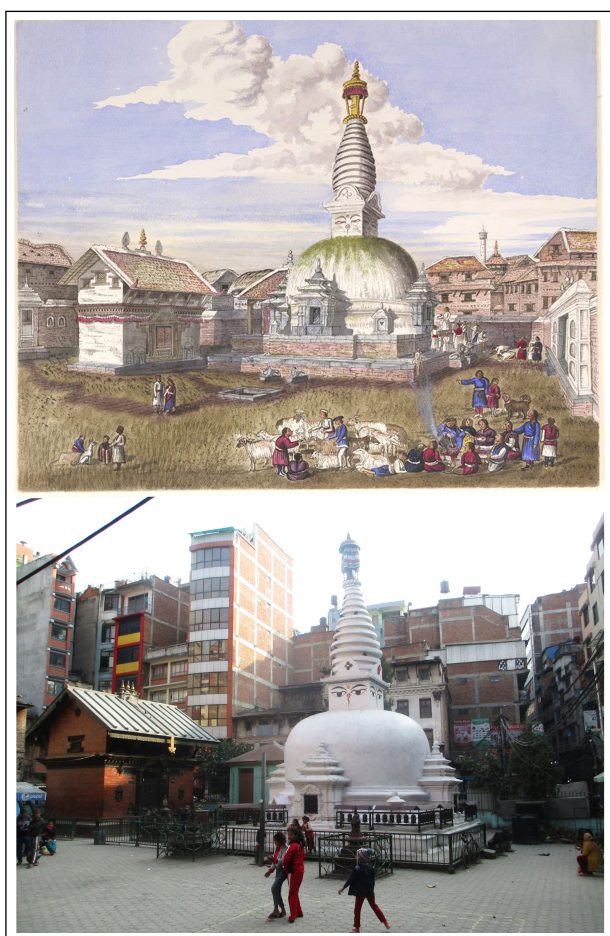
## 3. Methodology

The research was carried out using both quantitative and qualitative methodology within the post positivist paradigm. Perception survey was carried out at site for quantitative method. For the qualitative method, historical photographs and maps were studied and compared with existing situation to understand the

change over time. Literature of the place were also studied to understand the socio-cultural aspects of a place. Direct observation of the site for the usage of public spaces along with the factors that cause misuse and disuse of the spaces were also done.

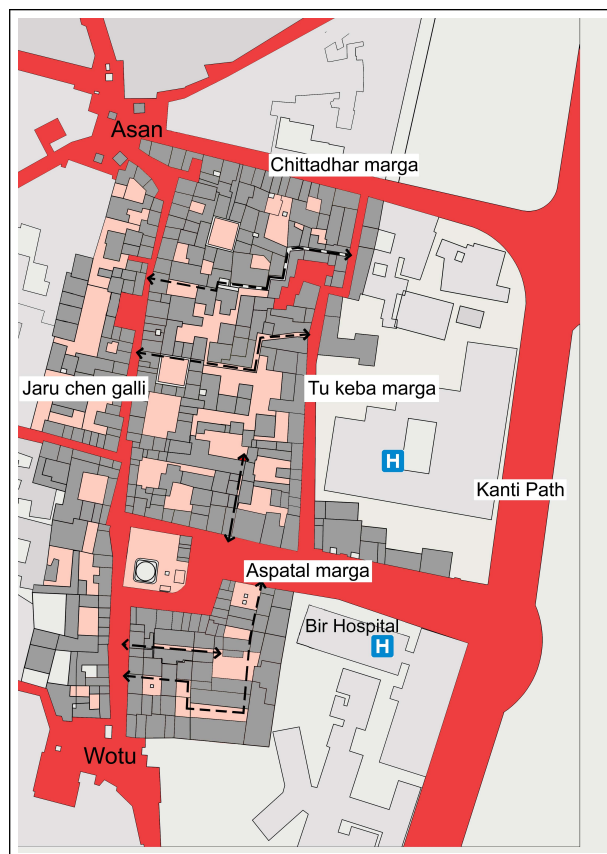
## 4. Site and data

The study area of Mahaboudha is located in the north-eastern edge of the traditional town of Kathmandu and in the current administrative framework it lies in the ward no 27 of Kathmandu municipality.



**Figure 1:** Mahaboudha in Oldfield's painting of 1860s and at present

The area has numerous Bahas dotted with Licchavi and Malla era chaityas along with many other artefacts suggesting that the place was an ancient Buddhist site. Various factors such as shift in economic base from agriculture to service and information, commercialization, rapid population growth, diverse lifestyle, increase in number of vehicles, availability of modern construction materials and technology have drastically transformed the form



**Figure 2:** Streets and courtyards in Mahaboudha

and function of this place. Moreover, as the place is located between the bustling business centers of Ason and New Road with principle north south road of Kathmandu in its near proximity has developed into a major commercial hub of the city in the recent times.

Fifty-seven respondents were surveyed through during the research.

**Table 1:** Sample distribution for perception survey

Locals		Renters		Male		Female	
No	%	No.	%	No.	%	No.	%
31	54	26	46	32	56	25	44

### 4.1 Street

There are three major streets in the study area Aspatal Marga, Jaruchen Galli and Tu keba Marga. Aspatal marga is the widest road in the area that links Mahaboudha with the principal north-south road of Kathmandu. This road is very critical for the commercial development of the place as all the goods

for the various shops are brought thought this road. Even though the road is wide, more than half of it is occupied by parking while portion of the road is



also used as taxi stand and loading and unloading of goods with makes it congested. As access for four wheelers is limited to this road they have to make a U turn to go back which adds up to congestion. The other prominent street in the area is Jaruchen Galli, which is a narrow street which links the area of Mahaboudha with the historic market square of Asan. The historical significance of this road is also greater compared to other streets in the area, as it is the main festive route and most of the Bahas in the area is accessed from this street. However in the present context the historic essence of the street is eradicated by the haphazard building construction. Tall buildings with projected floors have reduced the light and ventilation in the street. The artificial light form the shops are the only source of light in the street and when the shops are closed the street is dark even during the day time. This street is also highly commercial with shops of kitchen utensils and electronics aligned throughout the street. Most of these shops have high plinth with metal stair to access it and they also occupy street in front of their shop to display goods making this narrow street very congested. Another street in the area Tu keba Marga which connects Mahaboudha area with Bhotahiti is also narrow and faces similar issues to this street while the street around Mahabu Baha is occupied by parking, vendors and shop owners and is equally congested.



**Figure 3:** Maha bu Baha and surroundings in Oldfield's painting of 1860s and at present

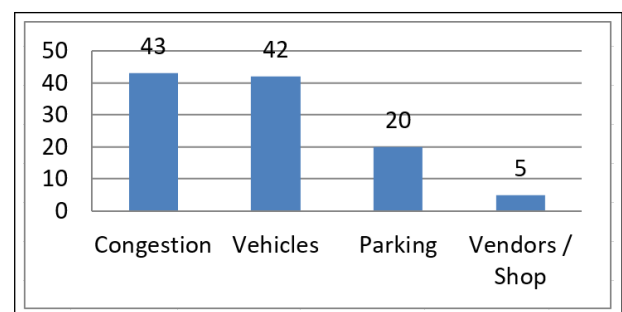


**Figure 4:** First image - Street around Maha bu Baha, Second image - Jaruchen Galli towards wotu

More than two third of the sample population felt it was not at all comfortable walking in the streets of the neighborhood while only 3 percent respondents felt it was completely comfortable and 30 percent felt it was moderately comfortable. Discomfort while walking in the streets were felt more by the female respondents.

**Table 2:** Comfort level walking in the streets

Description	Total respondents		Male		Female	
	No.	%	No.	%	No.	%
Completely	2	3.5	2	6	0	0
Moderately	17	29.8	11	34	6	24
Not at all	38	66.7	19	59	19	76
<b>Total</b>	<b>57</b>	<b>100</b>	<b>32</b>	<b>100</b>	<b>25</b>	<b>100</b>



**Figure 5:** Bar chart showing reasons for discomfort in streets: Total responses 110

According to the respondents, over congestion and haphazard parking was the main reason for causing discomfort in the streets. Other factors such as loading and unloading on any part of the streets at any time, frequent diggings of streets for public utility installations, encroachments of streets by vendors/shop owners have also contributed in reducing utility of the streets. Many respondents mentioned that streets are almost impossible to walk during the festive season due to congestion. It is even more difficult for many labors working in the area, as they would be stuck in the road with a heavy load in their back.

### 4.2 Courtyards

Courtyards are one of the characteristic features of traditional towns of Kathmandu and Mahaboudha also has many courtyards most of which are Bahas. Maha bu baha is the largest and most prominent Baha in the area, other Bahas in the area are Maha bu kacha baha, Okha baha, Mahadev chowk, Asan baha, and Dagubaha.

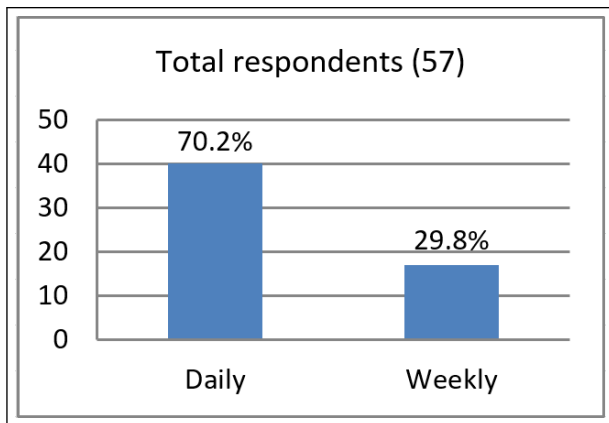


**Figure 6:** First image - Bikes parked at Asan Baha, Second image - People sun basking and socializing at Maha bu Baha

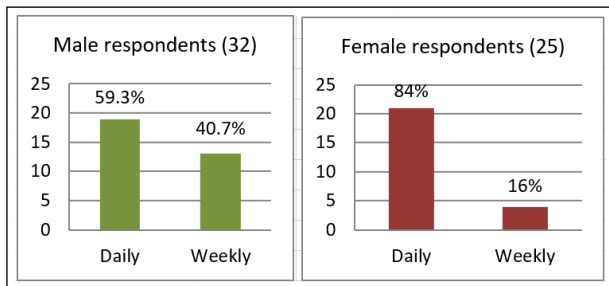
commercialization and modern transportation needs, affects most of the courtyards in the area. Increased height of the building has significantly reduced light and air circulation in the courtyards. Business activities have also been extended in the inner courtyards, and they have also been invaded for incompatible activities such as providing seating for cafe or tea shop, displaying commercial items and parking. Religious activities associated with the Baha shrines have also reduced in these Bahas, with only few annual festivals taking place while the Nitya puja (daily ritual) have been discontinued for many years.

Maha bu baha is the largest Baha in the area and unlike other courtyards is not immediately enclosed by buildings. It is surrounded by streets from all sides before the layer of buildings, so even though the surrounding buildings are tall it does not block the light and air circulation. It is enclosed by walls, is easily visible, and can be accessed from three sides. Parking is only allowed for residents of four houses within the Baha and shops are also restricted which made it spacious for other social activities. This is the liveliest and vibrant Baha in the area filled with people from different walks of life. While daily activities like gathering and sun basking is very common in this Baha, it is also extensively used for various social and religious events. As most of the other courtyards in the area is occupied with parking, this is also the only place where children could play freely. Children from all around the neighborhood gather during the evenings and weekends to play at Maha bu Baha. Most of the children also said it is their favorite place in the neighborhood.

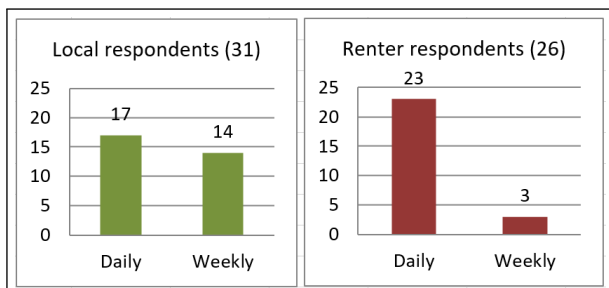
During the survey more than two third (70 percent) of the interviewees responded that they have been using the courtyard daily while only 30 percent responded that they were using it weekly. This shows that courtyards are still an integral part of life for people in the area. It was also found that renter respondents were using courtyards more frequently than the local respondents. These is because the people on rent mostly live in lower floors of a building and are physically close therefore are more connected to the courtyard while the locals mostly live in upper floors and are gradually losing their connection with the courtyards. In addition, since courtyards were also used for daily chores, female respondents were using in more frequently than their male counterparts.



**Figure 7:** Bar chart showing frequency of courtyard use for total respondents



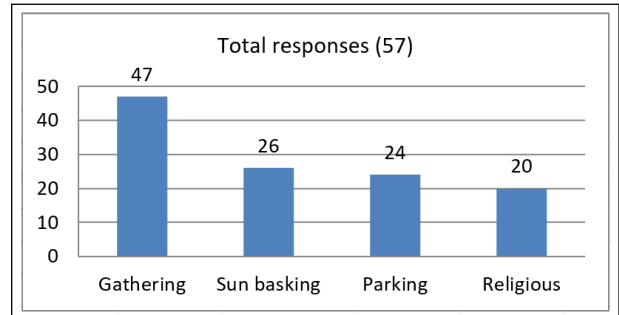
**Figure 8:** Bar chart showing frequency of courtyard use for male and female respondents



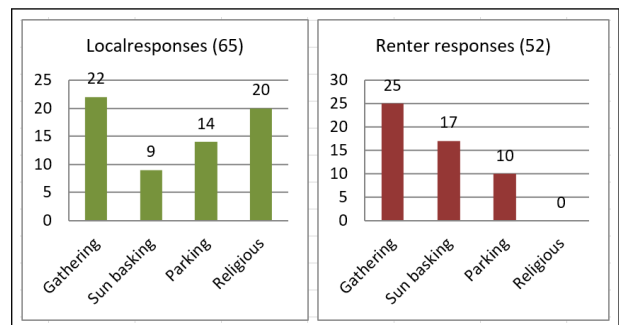
**Figure 9:** Bar chart showing frequency of courtyard use for local and renter respondents

Through the questionnaire survey it was also found that social gathering was the most common activity in the courtyards while they were also used for sun basking, parking and religious activities. Children in the area play different games and sports in the courtyards during evenings and weekends. While social gathering was a common activity for both locals as well as renter respondents, renter respondents were using it more for sun basking and only locals used it for religious purpose. Renters mostly lived in the lower floors of a building, which rarely receives sunlight so they had to come out to the courtyard for

sunlight during winters. Only locals seem to have a cultural and religious connection with the courtyards and were using them for religious purpose while the rented respondents were largely unaware of the religious significance of the courtyards.



**Figure 10:** Bar chart showing purpose for courtyard use



**Figure 11:** Bar chart showing purpose for courtyard use for local and renter respondents

## 5. Findings and discussions

Increased commercial activities without considering the infrastructural capacity has attracted traffic in the already congested historic streets of the area. Commercial activities also created tremendous pressure in the area which resulted vertical expansion of buildings. Vertical expansion of buildings with its projected floors, including variations in plinth height, floor height, and architecture style have destroyed the volumetric definition and created a chaotic streetscape without any sense of place and identity. The social dynamics of the streets in the area have been completely eliminated as they have become too noisy and congested to be used for social interactions. Even the core functions of the streets of pedestrian movement have been challenged as it has become increasingly difficult and risky to walk in the streets especially for the elderly.

Increased height of the buildings also have a



significant impact on most of the courtyards in the area, as they have made them dark and damp by blocking the sunlight and air circulation. The sense of enclosure of the earlier times has been converted into sense of suffocation. Lack of light also has a psychological effect as people perceive it as unsafe and restrain themselves from using it. Invasion of courtyards by incompatible singular land use of parking has reduced its functionality for other daily activities while the business activities have reduced the level of privacy. All of these factors have made these courtyards undesirable for relaxation, socialization, communication and celebration of events, hampering the scope of bringing people from different walks of life together ultimately weakening the social ties and public life. Courtyards are mostly left isolated during the evenings after the shops are closed which have encouraged illegal activities like use of drugs among youngsters. Such illegal activities have also raised safety concerns for the people living in the area.

On the complete contrast to other Bahas in the area, Mahabu Baha was found to be very lively and vibrant filled with people of all ages including children. Unlike other Bahas in the area, this Baha doesn't have problem of light and air circulation. It is also located centrally surrounded by streets from all sides and could be accessed from three sides. Natural light and better visual and physical access have made this Baha more welcoming while the restrictions of parking and commercial activities have made it more spacious than other courtyards in the area. This Baha was also used extensively for various social activities like blood donations, health camps while religious and cultural activities were also more frequent. This Baha is a perfect example of how a well-maintained courtyard, free of incompatible uses can invite people and be used for multiple activities. This contrasting situation of courtyards in the same area shows that physical environment of the space has greatly influenced the perception and uses of the spaces.

It was also found that the purpose of courtyards use was not same for all people. The renter respondents, most of whom live in the lower floors of a building, are physically close and seems more connected to the courtyards hence using it more frequently. The locals although are not physically as close but have a cultural connection with the courtyards and were using them for religious activities. Most of the locals who no longer live in the

area come frequently to the courtyards for religious activities. However, gentrification is weakening the local's connection with their courtyards and the religious activities have also reduced significantly. The children in the area mostly used courtyards to play during the evenings and weekends. Most of the children also responded that courtyards are their favorite space within the study area. The perception of courtyards among the local and renter respondents was also found to be different, as renters only perceive it as a functional entity and locals perceive it as functional as well as cultural entity while the children perceive it as a playing space.

## 6. Conclusions

The research concludes that changes in the immediate built environment have huge impact on the usage and perception of public space in the study area. Haphazard building construction combined with over congestion and inappropriate uses are rapidly degrading the public spaces in the area. The research also revealed that the use and perception of public space is different among different people living in the same area. Public spaces are even more critical in the place like Mahaboudha where population density is high and many people are living in a cramped space with limited sunlight however deteriorating spatial quality and inappropriate uses are posing serious threats to public space. Controlling mechanisms for the physical transformation, restriction of incompatible uses and considerations of varied perceptions is very essential for traditional public space to retain its functional quality and inherit spirit.

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