

*Chapter 1*

**MORPHOLOGY OF TRADITIONAL  
TOWNS AND THE ORGANIZATION OF  
NEIGHBORHOOD PUBLIC SPACES IN  
THE KATHMANDU VALLEY**

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**ABSTRACT**

Traditional towns of the Kathmandu Valley boast a fine provision of public space and offer a unique setting for urban life. This chapter presents a comprehensive review of the morphology of these towns and the organization of public spaces within in the residential neighborhoods, with an aim to identify the key attributes of such spaces and the factors that are responsible for their formation and utilization. The chapter highlights that the physical form of the traditional towns exhibits a

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compact and dense character in the arrangement of buildings and urban spaces. A distinct pattern of settlement design is also evident in the organization of neighborhoods, where the town has been divided into several residential quarters to house communities based on caste and social status of the inhabitants. Most notably, public spaces have been developed as an essential feature of every traditional neighborhood, with a set of urban squares distributed over the entire town and arranged in an innovative and interesting way. The provision of public space, consisting of many elements of urban interest, has contributed to the development of an urban environment that is conducive to both daily social activities and occasional feasts and festivals.

**Keywords:** traditional towns, morphology, urban squares, neighborhood public space, Kathmandu Valley

## INTRODUCTION

Cities around the world have undergone a significant level of morphological shift, with the Kathmandu Valley towns as no exceptions. Observation reveals that the rapid and haphazard growth of the new urban areas of the valley, including its residential neighborhoods, no longer exhibit urban design qualities of the traditional towns. In the changing context, the provision of neighborhood public space in the new growth areas is inevitably changing with consequences on the use of urban space and the sense of community (Chitrakar, 2016). Scholars argue that there is a need to address the issues of urban transformation in the growing cities. But this may not be possible without a good understanding of the past practices of urban development approaches in terms of the formation and utilization of urban public spaces. This chapter is presented as a starting point in the study of urban neighborhoods and their public spaces in the traditional towns of the Kathmandu Valley.

Traditional towns of the Kathmandu Valley boast a fine provision of public space and offer a unique setting for urban life. They comprise marvellous urban spaces that are distributed over the entire town and

organized in a unique and innovative way (Tiwari, 1989). This chapter presents a comprehensive overview of the public spaces in the valley's traditional urban neighborhoods, with an aim to identify the key attributes of these public spaces and the factors responsible for their development.

This chapter is built primarily on secondary sources of information that include both texts and images. It begins with a brief account of historical development of the traditional towns, followed by a discussion on their morphology. Next, urban neighborhoods in these towns are reviewed, and their physical and socio-cultural attributes are reviewed. Public spaces in the traditional neighborhoods are then discussed, covering the features such as typology and organization, provision of physical features and activities occurring in them.

## **HISTORICAL DEVELOPMENT OF TRADITIONAL TOWNS IN THE KATHMANDU VALLEY**

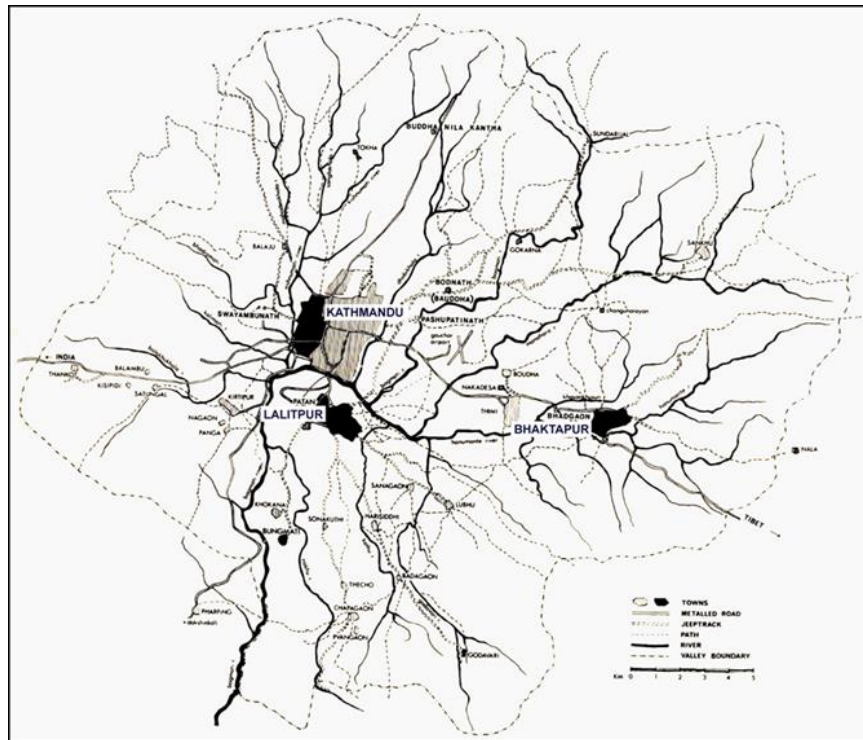
The development of human settlements in the Kathmandu Valley dates back to the Lichchhavi<sup>1</sup> period. Scholars suggest that the early settlements evolved during this period in the areas of current habitation in Kathmandu and Patan (Lalitpur) (Shrestha et al., 1986; Slusser, 1982; Tiwari, 1989). Slusser (1982, p. 84) notes that the “settlements were numerous and widespread in the Lichchhavi period. Lichchhavi remains – chiefly inscriptions, stone sculptures, and architectural fragments – attest to a total occupancy of the Kathmandu Valley.” Tiwari (1989) suggests that a number of sizable settlements must have existed, which had moved to the ridges and other higher lands during the later period - a trend that was followed during the Malla period as well. Though the remains of Lichchhavi townships have not yet been discovered (Hutt, 1994; Tiwari,

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<sup>1</sup> The Lichchhavis kings ruled from the 2nd to 9th century, with the establishment of a strong valley-based centralised state.

1989), the Lichchhavi rulers are attributed to have laid the foundation of settlements in the Kathmandu Valley.

The fall of the Lichchhavi rule in the 10<sup>th</sup> century was followed by a dark period for quite a few centuries until the rise of Malla dynasty in the 13<sup>th</sup> century. The Malla rule had been firmly established in the Kathmandu Valley by 1200 AD and “for the next 560 years, [the Mallas] consolidated the cultural grains of the Lichchhavis and greatly developed urban centres” (Tiwari, 1989, p. 81). With no doubt, it was a period of major contribution to the development of the traditional towns.



Source: Hosken, 1974.

Figure 1. Map of the Kathmandu Valley showing the three principal Malla towns.

Referring to the chronicles, Toffin (1990) reports that the city of Bhaktapur had 12,000 houses when it was founded (or reconstructed) by King Ananda Malla in the late 13<sup>th</sup> century. Patan had 24,000 houses in 1655 AD (Tiwari, 1989). Several factors have played a role in the outstanding development of the Malla towns. On the one hand, it was a combination of the patronage of Malla rulers and the artistic genius of local artisans, which helped to advance all forms of art, including architecture and town planning (Chitrakar, 2006). On the other hand, the political division of the valley into three independent and rival kingdoms of Kathmandu, Patan and Bhaktapur (see Figure 1) by King Yaksha Malla in the late 15<sup>th</sup> century proved to be productive (Shrestha et al., 1986; Toffin, 1990). The subdivision encouraged the arts to flourish through a keen competition with each other as reflected in the organization of urban space (Toffin, 1990), and the development of royal palaces, major shrines and temples and public squares (Pruscha, 1975; Shrestha et al., 1986).

The Kathmandu Valley is strategically located as a trade centre between India and Tibet (Hosken, 1974; Shrestha et al., 1986). There is a well-balanced climatic condition and the topography is good enough with highly fertile flat land surrounded by the high hills (Korn, 1977). Scholars believe that these factors have led to the development of early settlements in the valley. While it took several hundred years to develop a meaningful urban form of the Kathmandu Valley towns, Tiwari (1989, p. 76) explains that it is not “a result of an isolated planned effort in a particular period of history ... but rather a product of gradual accretion over these political/cultural periods.”

## **MORPHOLOGY OF TRADITIONAL TOWNS**

The urban form of the Malla towns can be considered a wise assemblage of beautifully carved streets and squares. This exhibits a fine-grained network of urban blocks interspersed with a series of

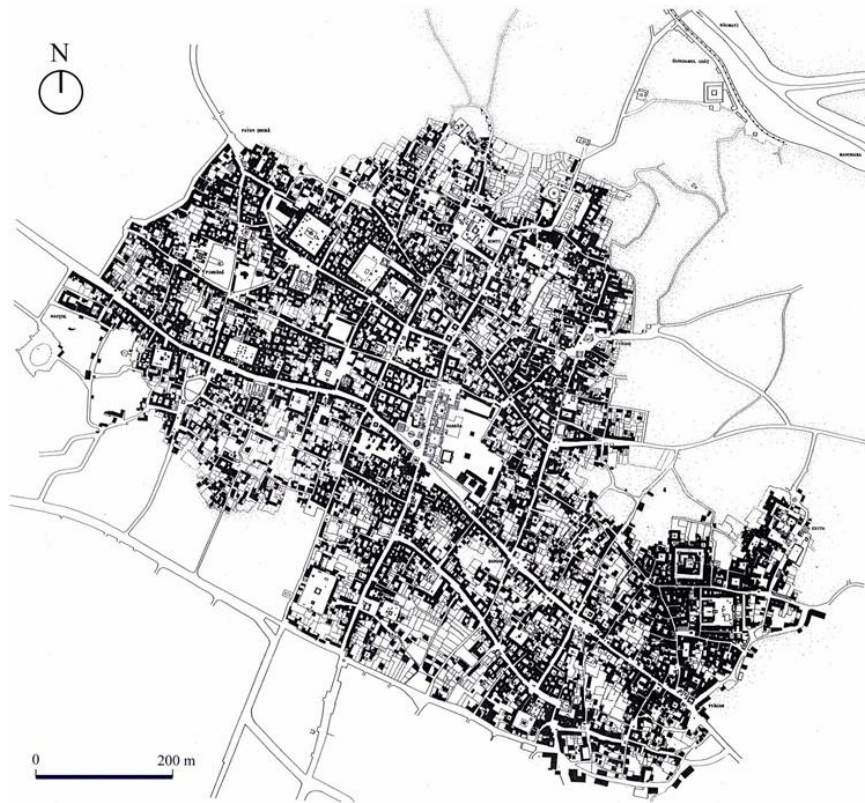
interconnected squares or courtyards (see the city plan of Patan in Figure 2). Hosken (1974) writes:

The urban design of the towns ... [of the Kathmandu Valley], the relationship between the narrow streets and open spaces, the placement of houses and monuments tell of a remarkable understanding of visual and functional principles, related to social needs. The Newars<sup>2</sup> were master builders, and their handling of space and scale and of the arrangement of buildings within a square for greatest visual effect is extraordinarily skilful and sophisticated. (p. 156)

The traditional towns are compact and dense settlements with a definitive urban character (Chitrakar, 2006; Shrestha et al., 1986). These towns were laid out on the highlands, preserving the fertile agricultural low lands. Many towns were fortified for protection against attacks (Hosken, 1974), and had a definite boundary pierced by numerous entry gates at various locations (Slusser, 1982).

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<sup>2</sup> The Newars are considered the aboriginal inhabitants of the Kathmandu Valley towns who emerged as a predominant social group by the early Malla period.



Source: Kathmandu Valley Preservation Trust.

Figure 2. City plan of Patan in the Malla period.

According to Pant and Funo (2007), some scholars doubt the “planned” formation of the Malla towns and suggest the possibility of an organic growth. Among others, Slusser (1982) holds a view that these towns were not planned but instead evolved as an accretion of diverse settlements over many centuries. A closer examination of the plan form, however, suggests that these were planned settlements and exhibit regular geometric lines and shapes in their urban pattern (Pant & Funo, 2007). The grid networks are apparent, although in most cases, these are highly deformed and with a loose geometry. In turn, the settlement blocks are

irregular in size and the street networks are rather complex. Although the streets and the lanes are non-axial, no line is curvilinear (Tiwari, 1989).

In deriving the physical form for a town, the Newar planners might have considered some ordering principles. Tiwari (1989) believes that some type of plan must have been required for a layout of larger towns of the Malla period and suggests that the concept was derived from a Vastupurusha Mandala. The Vastupurusha Mandala is a symbolic diagram used in Vastushastra (Venugopal, 2012) that suggests the rules that allow the translation of theological concepts into architectural and urban forms (Nathan, 2002). Tiwari (1989) argues that the “canonisation of forms has always been uppermost in a Hindu mind and whether the priest-architect was designing a temple or a settlement, it would have been sacrilegious to tamper with basic cosmic form” (p. 85). He adds:

The metaphysical Vastupurusha Mandala assumes cosmic attributes as it is physically translated into a pattern on ground, which is by nature subject to cardinality and cosmic laws. All these aspects must be equally met by all elements of a town, be it a temple, a square or even a residence. (p. 86)

Gutschow (1993), in a study of Bhaktapur city, suggests that the town has been laid in the form of a Mandala, reflecting the cosmic order transformed into the reality of an urban space. An important element of Bhaktapur’s Mandala is the group of the Astamatrika, the eight mother goddesses that have been placed at the peripheral locations (Gutschow, 1993). The apparent position of certain temples does confirm this and suggests that the religious Mandala might have been used in another city plans as well (Tiwari, 1989). In the case of Patan, Pant and Funo (2007) suggest that it was planned with four stupas placed in cardinal directions and a palace at a central position. Gutschow (1997), on the sacred urban space of Patan, explains that these four stupas<sup>3</sup> orient the human settlement

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<sup>3</sup> Stupa is a mound like structure with a semi-hemispherical form believed to be containing Buddhist relics.



towards the cardinal direction of the cosmos. Kathmandu is also said to be planned in the shape of a sword<sup>4</sup> (Regmi, 1966 in Shrestha et al., 1986; Tiwari, 1989). However, Tiwari (1989, p. 85) suggests that “the towns of [the] Kathmandu Valley have been in habitation for such a long period that strict Mandala patterns [or other forms] are no longer apparent.”

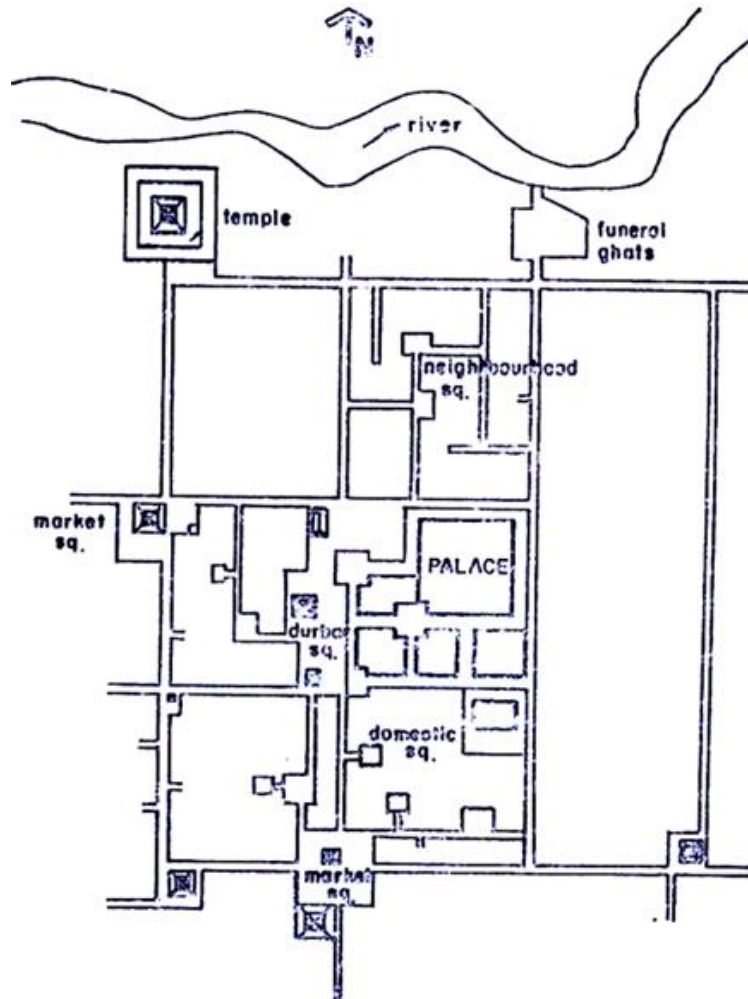
## **T TYPOLOGY, DISTRIBUTION AND HIERARCHY OF PUBLIC SPACES IN A TOWN**

Urban spaces of the Malla towns have been organized in a unique and innovative way. Tiwari (1989, p. 95) suggests that these towns exhibit “a distinct set of [urban] squares with a clear hierarchy of social [and] cultural activity.” These are: a) the Durbar (palace) square; b) the market square; c) the residential neighborhood square; and d) the private residential square (see Figures 3 and 4).

In every principal Malla town, there is only one Durbar square while other square types are numerous and widespread and can be considered as neighborhood public spaces. While the private residential square is a courtyard house built for communal life of an extended family and exists largely independent of street space, “the rest of the three squares are dependent on the street for their visual and spatial appeal” (Tiwari, 1989, p. 95). The residential neighborhood square can either take the form of a large enclosed courtyard or is often laid off the streets and enclosed partially. It houses a number of extended families often belonging to the same clan group and consists of some public amenities such as a temple or a stupa or a dhara (Tiwari, 1989). The market square is also a community square but laid at street intersections and considered a significant nodal point of the town. It exhibits a “heightened urban space sense and has many elements of urban interest” (Tiwari, 1989, p. 96).

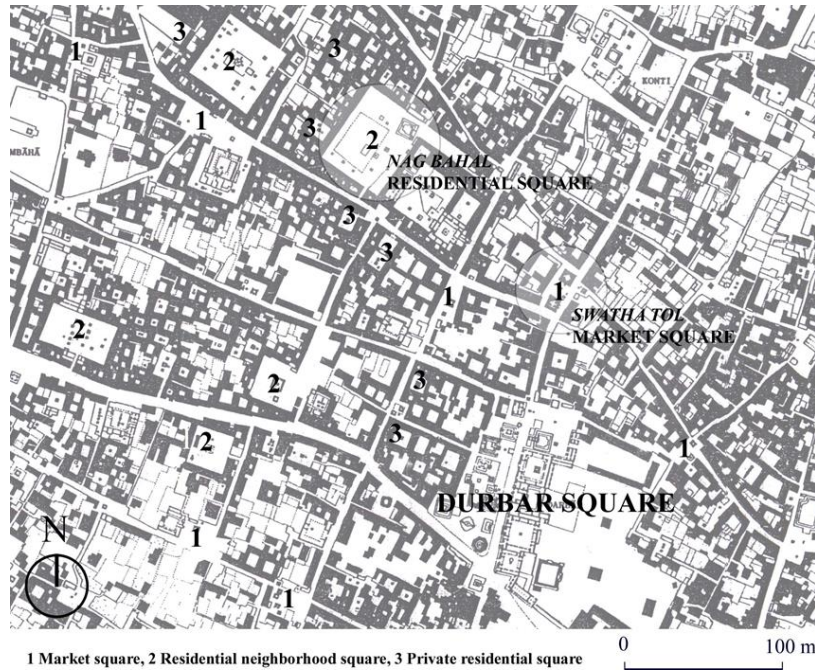
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<sup>4</sup> This theory, however, lacks evidence.



Source: Tiwari, 1989.

Figure 3. A diagrammatic layout of a typical Malla town showing a hierarchy of urban spaces.



Source: Modified from Kathmandu Valley Preservation Trust.

Figure 4. An urban pattern of Patan city showing the hierarchy and distribution of urban squares.

Although this classification reflects a hierarchy based on social attributes, there is an underlying implication on the physical aspects of public space. With each typology, the physical features such as location and accessibility, shape and size, degree of enclosure and the presence of urban elements greatly vary (Chitrakar, 2006; Chitrakar, 2011).

The Newar principle of organization of open space is guided by a distribution of urban squares throughout the entire town (Chitrakar, 2006). These squares have been embedded in the city's fabric in such a way that they are present in each neighborhood in one or the other form. Furthermore, the idea of conception of squares in relation to the streets makes them more accessible with the spatial linkages made fluent and convenient (Chitrakar, 2011). The squares are, thus, well linked with other

squares of the town through either main streets or the secondary streets and lanes (Tiwari, 1989). In most cases, the linkages have also been provided through the narrow passages underneath the buildings (Chitrakar, 2006).

## **URBAN NEIGHBORHOODS AND COMMUNITY SPACES**

The traditional towns of the Kathmandu Valley are divided into several residential neighborhoods or *tole* (*tole* in Nepal Bhasa<sup>5</sup>). The *toles* are both spatial and social units (Pant & Funo, 2007), and have community squares as a main element (Chitrakar, 2006; Gutschow, 1993; Pant & Funo, 2007; Shokoohy, 1994). The purpose of demarcating the neighborhood units is to divide the whole town into different sectors according to the social groups. However, the physical separation of neighborhood is not significant in doing so and has never been attempted.

### **Boundary, Physical Form and Elements**

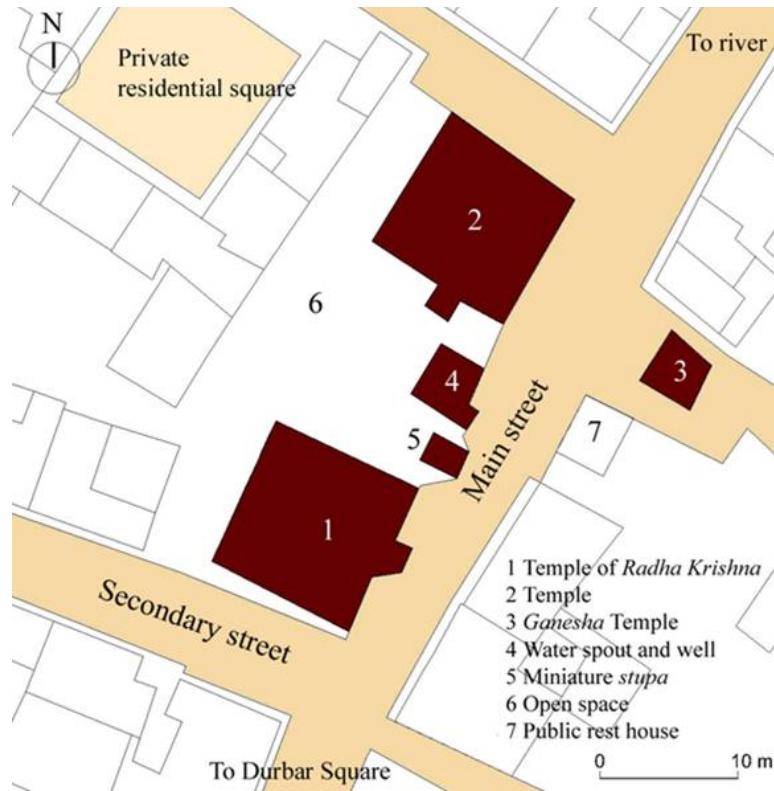
Due to the compact urban form, urban neighborhoods in the valley's traditional towns do not exhibit a boundary as one neighborhood is physically never detached from the other. Instead, they are embedded and overlapped with each other within an urban fabric. However socially, they function as independent, complete and often separate entities (Chitrakar, 2006; Chitrakar, 2011). Each *tole* is centred around a spacious square (Gutschow & Kolver, 1975) and has its own public amenities. Most neighborhoods comprise a homogenous population, often belonging to the same clan group or occupational caste. The predominance of one caste, thus, lends uniform socio-economic characteristics to a neighborhood (Shrestha, 1981). In each neighborhood, a number of shrines or public facilities such as a *pati* (public rest house), wells, fountains and community

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<sup>5</sup> Nepal Bhasa is a language spoken by the Newars.

houses are present (see Figure 5 for a range of urban elements present in a tole in Patan). Toffin (1990, p. 110) explains that the tole can be defined by some common elements: a) a central open space; b) a temple to Lord Ganesh; c) a temple of Nasa dya, the local god of music; d) places of discharge (Chhwasa), connected with the rituals of exorcism and curing; and e) itineraries of specific funeral processions that lead to the places of cremation outside the limits of settlement. According to Pant and Funo (2007), Ganesh is regarded as a tole devata – the deity of the neighborhood. They elaborate:

The building of a shrine to Ganesh or pati and wells in a square are indicative of a civic-minded community. Such actions could have been a requirement for a locality to exist as an independent tole (p. 46).



Source: Modified from PAHAR Nepal.

Figure 5. Urban square as a centre of a neighborhood at Swatha Tole in Patan showing various elements of urban interest.

Each tole bears a name and “people identify themselves with their own neighborhood rather than with the town as a whole” (Pant & Funo, 2007; Shokoohy, 1994, p. 46). The tole, thus, has become the important loci of identification (Levy & Rajopadhyaya, 1990). This has been reinforced, to a large extent, by the social organization of people in the neighborhood according to their caste (Shokoohy, 1994).

Traditional neighborhoods are relatively smaller in size compared to the new neighborhoods. In their physical structure, the toles might take varying form and size depending on the way the houses are clustered around courtyards or along streets. This also depends on the number of

families and the pattern of their distribution in a neighborhood as well as on the proximity of households to the public facilities. Moreover, the formation of Buddhist monasteries has also been pivotal in the organization of settlement clusters around a courtyard, particularly in Patan and Kathmandu, where their concentration is comparatively high (Pant & Funo, 2007). In such cases, the *tole* often bears a name from the name of a monastery<sup>6</sup>.

With houses clustered around a central open space of residential neighborhoods, the Newars of the Kathmandu Valley show a gregarious living pattern (Pant & Funo, 2007). Levy and Rojopadhyaya (1990, p. 185) describe the traditional neighborhoods as “the face-to-face communities beyond the extended family where people know each other personally and where mutual observation and gossip are important sanctions.” In his study of urban form of Patan, Shankar (2009) argues that these neighborhoods, with their organization of dwellings around interconnected open courtyards, exhibit the most important and unique innovation of the organization of space. As Pant and Funo (2007) observe, the organization of neighborhoods and urban squares in the Kathmandu Valley towns has created a distinct pattern of settlement that is unique even in South Asia. Indeed, the development of *tole* has been instrumental in defining both the physical and social patterns of these towns.

### **Organization of Communities and Social Networks**

The traditional towns of the Kathmandu Valley can be described as the settlements of communities where a community dwells in a particular sector (Pant & Funo, 2007). This distribution of communities in neighborhoods is an important social feature that has also played a key role in the organization and use of urban spaces. Shokoohy (1994, p. 36) observes that “the distribution of urban spaces [in neighborhoods] was determined by rigid caste structures, with the quarters of the towns divided

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<sup>6</sup> Tebahal in Kathmandu and Gabahal in Patan are two examples, among others.

traditionally according to caste hierarchies.” Traditionally, the Newars lived in an extended family, and demonstrated considerable ease among neighbours and a communal life philosophy (Tiwari, 1989). This extended family also “played a singular role in the development of characteristic urban spaces such as private family squares or courts and the neighborhood of the public square” (Tiwari, 1989, p. 76). This highlights the fact that the clan relationship in the communities has an important bearing on the social and spatial organization of the traditional towns and their neighborhoods (Pant & Funo, 2007). The spatial distribution of communities has employed a concentric pattern of organizations in which the higher caste communities are located at the centre, near the royal palace, while the lower ones are located away from the centre at the fringes. The social stratification is, thus, evident in the spatial structure of the towns (Shrestha, 1981). Tiwari (n.d.) refers to this as zoning by jaat<sup>7</sup> that helped to survive the traditional occupation and developed localized homogenous communities.

The individual families of these communities, whether higher or lower caste, were linked in a social network through the establishment of a number of traditional institutions. Such community-based institutions are known as the Guthi, which are founded based on territorial propinquity, clan relationships, or membership in religious organizations (Pant & Funo, 2007). Through social networks, a considerable ease among the neighbours could be developed, resulting in a better social interaction. Traditionally, the Guthis have proved to be an important tool for social connection and solidarity and have expedited the communal functions of the neighborhoods (Shrestha et al., 1986).

## **Neighborhood Public Spaces**

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<sup>7</sup> Jaat is a local term used to denote a caste.



As previously mentioned, the Kathmandu Valley towns consist of four different types of urban squares (Tiwari, 1989). This discussion of neighborhood public space does not, however, include the Durbar square, but focuses on the remaining three i.e., the market square, the residential neighborhood square and the private residential square. These squares have been an essential feature of urban neighborhoods, with a key role to play in their formation and physical layout. On the other hand, they have also served as a communal platform for social interaction where the daily life of the community unfolds. During feasts and festivals, the squares of higher order (the market and residential neighborhood squares) acquire a new ambience with intense use and activity. Many elements of urban interest are present in these public squares to support human activities, and also for the visual roles they play. The following sections discuss the typology and configuration of these neighborhood public spaces, focusing on their provision and use.

#### *Typology and Organization of Neighborhood Public Spaces*

Whereas Tiwari (1989) identifies three types of neighborhood urban squares, observations show that these squares follow two basic approaches of spatial configuration: a) space formed at street intersections – the street squares; and b) the enclosed space of a courtyard. Table 1 summarizes the features of spatial configuration for the urban square types identified by Tiwari (1989).

It is interesting to note that each traditional neighborhood consists of at least two types of public squares (except Durbar Square) as identified in the table below, which are arranged in a hierarchal order. For example, Pant and Funo's (2007) study of Dupat Tole in Patan city discusses the organization of Lachhi and Nani<sup>8</sup> clusters in a Jyapu<sup>9</sup> community (see Figure 6 for the organization of neighborhood spaces in this tole). They identify that Dupat Tole has been configured around a centrally located

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<sup>8</sup> Lachhi is a Newari term used mostly by Jyapu community to denote a Market or Community square while Nani refers to a Residential Neighbourhood square.

<sup>9</sup> Jyapu is one of the dominant communal groups of Newar society.

community square called Dupa-lacchi together with ten numbers of Nani distributed within a neighborhood.



Source: Pant & Funo, 2007.

Figure 6. Organization of neighborhood public spaces in Dupat Tole in Patan.

**Table 1. Urban square typology and the features of spatial configuration in traditional towns**

Square type	Neighborhood	Spatial	Enclosure	Symmetry
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	public space	configuration		
Durbar square	No	Street intersection	Semi-enclosed	No
Market (or community) square	Yes	Street intersection	Semi-enclosed	No
Residential neighborhood square	Yes	Courtyard	Enclosed with a few exceptions	Yes/No
Private residential square	Yes	Courtyard	Enclosed	Yes

Usually, the Nani has its own name derived either from location and topographical features, or from the identity of clan inhabiting them (Pant & Funo, 2007). Other residential neighborhoods of Patan centred around the Buddhist monasteries also exhibit the similar feature of spatial organization in which the central open space of Baha<sup>10</sup> and residential courtyards are hierarchically organized in a neighborhood (Pant & Funo, 2007).

### Urban Space Formed at Street Intersections – The Street Squares

With several streets culminating in it, the market square represents a neighborhood public space formed at the street intersections (see Figure 7 for an example from Bhaktapur town). As already mentioned, this street square reflects a nodal point of a town (Chitrakar, 2006; Tiwari, 1989) in which no symmetry is found in the physical layout. This type of physical layout leads to highly informal urban space settings.

Arguably, the focus on loose geometry appears to be a deliberate attempt of Newar urban designers. On the formation of these squares, Korn (1977) writes:

Paved roads generally pass through fields to the settlements, via formerly narrow gates into a network of winding oblique-angled streets and alleys, which then broaden out into squares ... these brick paved squares ... are the network around which ... houses and temples ... are built (p. 2).

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<sup>10</sup> Baha is a type of Buddhist monastery dedicated to Bajrayana Buddhism.



Source: GTZ & UDLE, 1995.

Figure 7. An aerial view of Dattatraya square in Bhaktapur – an urban square formed at street intersection.

The shape and size of the street squares greatly vary. Each space exhibits a unique design in terms of spatial configuration and enclosure, and the use and placement of elements of urban interest. Some of them are even smaller than the residential neighborhood squares yet “they play a great role in socio-cultural scene of the town” (Tiwari, 1989, p. 96).

### **The Enclosed Space of a Courtyard**

The residential neighborhood and private residential squares form a neighborhood public space organised around a courtyard. By their very nature, these are mostly enclosed spaces with a few exceptions, and exhibit a tight geometry of either a square or a rectangle in the plan form. A combination of these squares often forms a series of interconnected courtyards embedded within an urban block. Figure 8 shows a large courtyard space in Itumbahal Tole of Kathmandu. Pant and Funo (2007) write:

When entering a lane from a street, visitors may find a gate to a quarter with an open courtyard large enough to accommodate more than 100 houses around it or only small enough for a few dwellings. Large or small, there are shrines at the centre of the courtyard. In not a few cases, the courtyard has a Buddhist monastery with residential dwellings and their courtyards clustered around it (pp. 3-4).



Source: [www.panoramio.com](http://www.panoramio.com) (accessed on February 07, 2015).

Figure 8. The courtyard of Itumbahal in Kathmandu.

*Provision of Neighborhood Public Spaces and Their Physical Features*

Adhikari (1998) explains that the amount of neighborhood public open spaces in traditional towns of the Kathmandu Valley averages about 12% of the total housing area. As already explained, they appear in several forms throughout the town, and also consist of many elements of urban interest (see Figure 9). Most traditional open spaces are hard landscaped areas with stone or brick paving. Some neighborhood spaces also consist of small or large water bodies. The use of urban elements in them serves both functional and visual purposes (Chitrakar, 2006). They are not only used widely by the residents but also work as space defining elements with a direct influence on the design and use of the space. On the other hand, the use of these elements has also led to the creation of a picturesque urban setting with a potential to enrich the space and thus, lends a high degree of legibility and “imageability” (Bentley, McGlynn, Smith, Alcock, & Murrain, 2013; Chitrakar, 2006; Lynch, 1960). Moreover, these elements have often been treated as the elements of surprise (Tiwari, 1989). In Table 5.2, Chitrakar (2006), based on his observation, identifies a number of elements of urban interest located in the neighborhood public spaces of the traditional towns, and also gives a brief description for each of them.



Source: Author.

Figure 9. Elements of urban interest in Nagbahal residential square in Patan - a stone waterspout (left) and a Buddhist Chaitya.

**Table 2. Elements of public interest in urban neighborhoods, their purpose and description**

Element type	Purpose and description
Temple	A temple is the most important and essential element of a neighborhood public space. The temples are either square or rectangular (often octagonal) in shape with symmetrical plan and elevation. A neighborhood square may have more temples, in addition to the one housing the deity of Ganesh.
Pati – a public rest house	A pati or public rest house serves as a place for respite and a place for travellers to stay overnight. These also serve as a place for leisure to spend daily life, a place for exchanging goods and a place for playing traditional music. In most cases, these do not appear in isolation but are always physically embedded within the built mass.
Well	Wells are extensively present as a source of water for the residents and define a public domain in space.
Hiti (Stone waterspout)	These are sunken platforms with stone spouts discharging the water. These elements create space within themselves with the confining walls and are usually accompanied by the public rest houses.
Stupa and Chaitya <sup>11</sup>	These are important Buddhist shrines and may work as space radiating volumes. The chaityas are usually moderate in size while the stupas are larger volumes.
Dabali <sup>12</sup> – an open elevated platform	A Dabali is simply an elevated platform built for a simple reason of gaining height. They serve as a stage for performance and for display of gods. The dabalis regulate the horizontal flow of space and guide a movement of the users.
Chariot	These are temporary elements but make equal contribution to spatial enrichment whenever present. Most of these chariots are miniatures of temple form while some are tall and tower-like structures <sup>13</sup> . These movable elements show their presence in urban space for varying durations during major festivals.

### *Communal Life and the Use of Neighborhood Public Spaces*

The Newar society is pervasively communal in nature, which is evident in their preference for compact urban settlements (Hosken, 1974). The Newars are gregarious people with their deep-rooted beliefs in social

<sup>11</sup> A Chaitya is a replica and miniature of a larger stupa with a hemisphere placed on a cubical base and topped by a pointed pyramidal roof.

<sup>12</sup> Dabali is a Nepali terminology used to denote an elevated platform or an open-air stage.

<sup>13</sup> An example of a tall structure is the chariot of Rato Machhendranath in Patan (see Figure 5.10).

values and norms. Traditionally, they lived in an extended family and demonstrated considerable ease among the neighbours, adopting a communal life philosophy (Tiwari, 1989). Social networking and exchange have always been significant parts of their life, leading to the extensive use of public spaces in a town. With communities organized around a neighborhood and its public spaces, an active participation in a public realm by the Newars can be observed both in everyday life as well as during festivals and religious occasions.

Every day public life in a traditional neighborhood appears ordinary. In neighborhood squares, children play and grow up together; women wash their utensils and laundry nearby a source of water (Shokoohy, 1994). Likewise, adults or elderly people are found having a chat with their fellow neighbors, sitting on a plinth of a nearby pati (see Figure 10 for an example from Kirtipur town in Kathmandu). Every bit of a space is well used throughout the span of a day, as people widely use outdoor spaces of a neighborhood. Shokoohy (1994) observes:

All activities connected with the public life of a neighborhood take place in the tole. In the traditional life of a Newar community, the line between private and public life is not sharply drawn, and the tole should be regarded as an extension of the houses, where the families share their public interests – and activities – with the neighbors” (p. 45).

In traditional neighborhoods, streets and other public facilities are also the venue of everyday life (Hosken, 1974). Sekler (1979, p. 103) observes that “many social activities also have their locale in the streets and particularly in the adjoining open public shelters, the patis; here games and music are played, gossip is exchanged, instruction provided and business conducted; here mendicants and travelling religious men may rest and sleep.” While people are busy performing different sorts of everyday chores, “the nature of life in the tole not only varies with the time of a day, but changes with the seasons of the year” (Shokoohy, 1994, p. 45).



Apart from daily living, the social life of the Newar people is much influenced by festivals of one kind or other (Shrestha et al., 1986). Shrestha (1994, p. 30) explains that “the Newars observe more festivals than any other population group in Nepal, to the extent that it is said that there is hardly a day in the year which does not have a festival being celebrated somewhere in the valley.” Practically, all festivals have a religious purpose too (Hosken, 1974). During the early Malla period, great festivals of various gods and goddesses were either initiated or made more elaborate (Shrestha et al., 1986; Slusser, 1982; Tiwari, 1989) – many of them also taking the form of chariot festivals<sup>14</sup>. Tiwari adds:

Festivals with their chariots and their starting, finishing and stopping points enroute gave new social/cultural meaning to existing religious sites, squares and street. So many gods came out in chariots big or small that the streets often appeared as if they were designed to link two or more temples and were the passage for gods rather than for people and their everyday acts (p. 82).

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<sup>14</sup> It is interesting to observe that the major festivals celebrated in the traditional towns of the Kathmandu Valley are associated with chariots in one or the other way.



Source: Shokoohy, 1994.

Figure 10. Daily life in a neighborhood public space in Kirtipur town.

With a prolonged tradition, “the festivals remain forceful events even today” (Gutschow, 1993, p. 165), and are celebrated in many forms. Most of them are always centred around the important monuments in public realms. Some festivals require a large public space for the display and worship of an idol or god by the crowd, while others use the streets with gods moving in the chariots along the streets and squares of the neighborhoods (Chitrakar, 2006) (see Figure 11 for examples from Patan). As the streets and squares come alive with thousands of people pouring in, the festivals demonstrate a rich urban culture of the Newars of the Kathmandu Valley towns.



Source: Author.

Figure 11. Use of public space during festivals in Patan - women participating in a street festival (left) and the chariot festival of Rato Machhendranath.

## CONCLUSION

With a long history of development over different political periods, the traditional towns of the Kathmandu Valley attained a matured urban character during the Malla period. The Malla kings, during their reign of the valley for a period of less than 600 years, have made a significant contribution to the advancement of all forms of arts, including town planning and architecture. As apparent in their physical settings, the traditional towns demonstrate intriguing parallels to the medieval cities of Europe (Sekler, 1979 in Adhikari, 1998), with the skilful development of urban form and spaces. The morphology of these towns wisely responds to the need to have a network of open spaces, which is evident in the hierarchy and distribution of urban squares throughout the town.

Public space is an integral part of urban life and plays a significant role in providing a common ground for human contact and social interactions. Successful public spaces are designed and developed in such a way that they are accessible and can attract a range of activities. This review of

neighborhood public spaces of the Kathmandu Valley towns demonstrates that the Newar builders had an excellent understanding of such concepts of urban spatial design as reflected in their approaches to town planning. In turn, the urban spaces they have built reveal a constructive design inherent in their outstanding ability to support both daily life and public events during major festivals and social occasions.

## REFERENCES

- Adhikari, A. P. (1998). *Urban and Environmental Planning in Nepal - Analysis, Policies and Proposals*. Kathmandu: The World Conservation Union (IUCN).
- Bentley, I., McGlynn, S., Smith, G., Alcock, A., & Murrain, P. (2013). *Responsive Environments*. Hoboken: Routledge.
- Chitrakar, R. M. (2006). *A study of historic urban squares of Kathmandu Valley*. (MUD Dissertation), The University of Hong Kong, Hong Kong.
- Chitrakar, R. M. (2011). *Public Open Spaces in Kathmandu Valley: A Review of Contemporary Problems and Historic Precedents*. Saarbrücken, Germany: Lambert Academic Publishing.
- Chitrakar, R. M. (2016). Meaning of public space and sense of community: The case of new neighbourhoods in the Kathmandu Valley. *ArchNet – IJAR: International Journal of Architectural Research*, 10(1), 213-227.
- GTZ, & UDLE. (1995). *Images of a century: The changing townscapes of the Kathmandu Valley*. Kathmandu
- Gutschow, N. (1993). Bhaktapur: Sacred patterns of a living urban tradition. In H. Spodek & D. M. Srinivasan (Eds.), *Urban form and meaning in South Asia: The shaping of cities from prehistoric to precolonial times*. Washington: National Gallery of Art.
- Gutschow, N. (1997). *Sacred Urban Space Patan Museum Report*. Patan.

- Gutschow, N., & Kolver, B. (1975). *Ordered Space Concepts and Functions in a Town of Nepal: Bhaktapur*. Baden: Kommissions-Verlag Franz Steiner.
- Hosken, F. P. (1974). *The Kathmandu Valley Towns: A record of Life and Change in Nepal*. New York: Weatherhill.
- Hutt, M. (1994). *Nepal: A Guide to the Art and Architecture of the Kathmandu Valley*. Gartmore: Kiscadale Publications.
- Korn, W. (1977). *The Traditional Architecture of Kathmandu Valley*. Kathmandu: Ratna Pustak Bhandar.
- Levy, R. I., & Rajopadhyaya, K. R. (1990). *Mesocosm: Hinduism and the organization of a traditional Newar city in Nepal*. Berkeley: University of California Press.
- Lynch, K. (1960). *The Image of the City*. Cambridge, MA: MIT Press.
- Nathan, V. (2002). Vastu Purusha Mandala: Beyond building Codes. In K. Williams & J. F. Rodrigues (Eds.), *Nexus IV: Architecture and Mathematics*. Fucecchio: Kim Williams Books.
- Pant, M., & Funo, S. (2007). *Stupa and Swastika: Historical Urban Planning Principles in Nepal's Kathmandu Valley*. Kyoto; Singapore: Kyoto University Press in association with NUS Press.
- Pruscha, C. (Ed.). (1975). *Kathmandu Valley: The preservation of physical environment and cultural heritage, a protective inventory*. Vienna: Schroll.
- Sekler, E. F. (1979). Use of collective space in Patan and other historic towns of the Kathmandu Valley. *Monumentum*, 18-19, 97-107.
- Shankar, P. (2009). Patan: Reading urban form in cultural landscape. *Contributions to Nepalese Studies*, 36(2), 239-258.
- Shokoohy, M. (1994). Urban Fabric. In M. Shokoohy & N. H. Shokoohy (Eds.), *Kirtipur: An urban community in Nepal - Its people, town planning, architecture and arts*. London: Araxus Books.
- Shrestha, M. N. (1981). Nepal's Traditional Settlement: Pattern and Architecture. *Journal of Cultural Geography*, 1(2), 26-43.

- Shrestha, C. B., Khatry, P. K., Sharma, B., & Ansari, H. (1986). *The Historic Cities of Asia: Kathmandu*. Kathmandu: Center for Nepal and Asian Studies, Tribhuvan University.
- Slusser, M. S. (1982). *Nepal Mandala: A cultural study of the Kathmandu Valley (Vol. 1)*. New Jersey: Princeton University Press.
- Tiwari, S. R. (n.d.). *City space and life then, 150 years ago - A presentation of concept and realities*. Retrieved April 26, 2012, from <http://www.kailashkut.com/pagepublications/cityspaceandlife.pdf>.
- Tiwari, S. R. (1989). *Tiered Temples of Nepal*. Kathmandu: Sunita Tiwari.
- Toffin, G. (1990). Mythical and Symbolic Origins of the City: The Case of the Kathmandu Valley. *Diogenes*, 38(152), 101-123.
- Venugopal, J. (2012). Vastu Purusha Mandala: A human ecological framework for designing living environments. Paper presented at the *International Conference on Advances in Architecture and Civil Engineering*, Bangalore, India.