Translated paper

How mohallas were formed: Typology of mohallas from the viewpoint of spatial formation and the urbanization process in Varanasi, India

Kiwamu Yanagisawa[1] (iD) **and Shuji Funo[2]**

[1]Department of Architecture and Architecture Engineering, Graduate School of Engineering, Kyoto University, Nishikyo, Kyoto, Japan; [2]Department of Architecture & Architectural Engineering, College of Industrial Technology, Nihon University, Narashino, Chiba, Japan

Abstract

This paper focuses upon some *mohallas* in Varanasi's old urban area. The *mohalla* is a traditional neighborhood unit common in North Indian cities. *Mohallas* were elemental components of the city in the Mughal period as administrative tax units as well as autonomous organizations. Currently, however, they have lost their administrative meaning, and their geographical extent and boundaries are becoming unclear. Based on field surveys, this paper reveals features of the spatial formation of *mohallas* such as size, boundary form, distribution of facilities, and street pattern, and links them to the historical urbanization process of the city. *Mohallas* in Varanasi can be broadly classified into two types. One has a linear or tree shape along streets, and the other has a broad territorial shape. The spatial features of those two types are different in various aspects and reflect the degree of urbanization at the time when the *mohallas* were established.

Keywords

Banaras, mohalla, neighborhood unit, North Indian city, Varanasi

1. Introduction

Varanasi is famous as one of the holiest cities in Hindu India, visited by numerous pilgrims from all over India and from overseas. However, the city was under the control of Muslim dynasties for a long time during the 12th and 18th centuries. Consequently, it is not appropriate to understand the spatial formation of the city only from the viewpoint of the relationship with Hindu religious factors. This paper therefore focuses upon the spatial formation of the *mohalla* [Note 1], which is one of the legacies of Muslim control and for which residents are one of its formative factors. *Mohalla*, which may originate from the Western Islamic world, is a traditional neighborhood unit common in North Indian cities. A city was regarded as an aggregation of *mohallas*, and the establishment of a new *mohalla* meant an expansion of the city. Seen in that light, revealing the spatial features of *mohallas* is an important issue in understanding the basic structure of North Indian cities and not just Varanasi. However, currently, the institutional meaning of *mohallas* has been almost lost, and their function for several activities of local

residents has been decreasing. The municipality does not make any maps of *mohallas* that show their areas or boundaries.

First, this paper discusses the historical and social background of the *mohalla* based on previous studies. Next, based on a field survey, the spatial formation of some *mohallas* in Varanasi is revealed and linked to the historical urbanization process of the city [Note 2].

The survey area is the area around *Vishvanath* temple [Note 3], which has been one of the core residences of Hindus since the 12th century (Figure 1). This area is also one of the earliest developed areas in the city and has historical continuity, being relatively unscathed by the devastation caused by Muslim armies. In addition, even today, this area is the heart of the city where many important religious facilities are gathered. The survey was based on the maps covering all the Old City area of Varanasi and drawn to a scale of 1/1000 between the period of 1928 to 1929 [Note 4]. These maps show the names of *mohallas*, though without their boundaries. The city map drawn by Prinsep in 1822 is also used to trace changes in the city [Note 5].
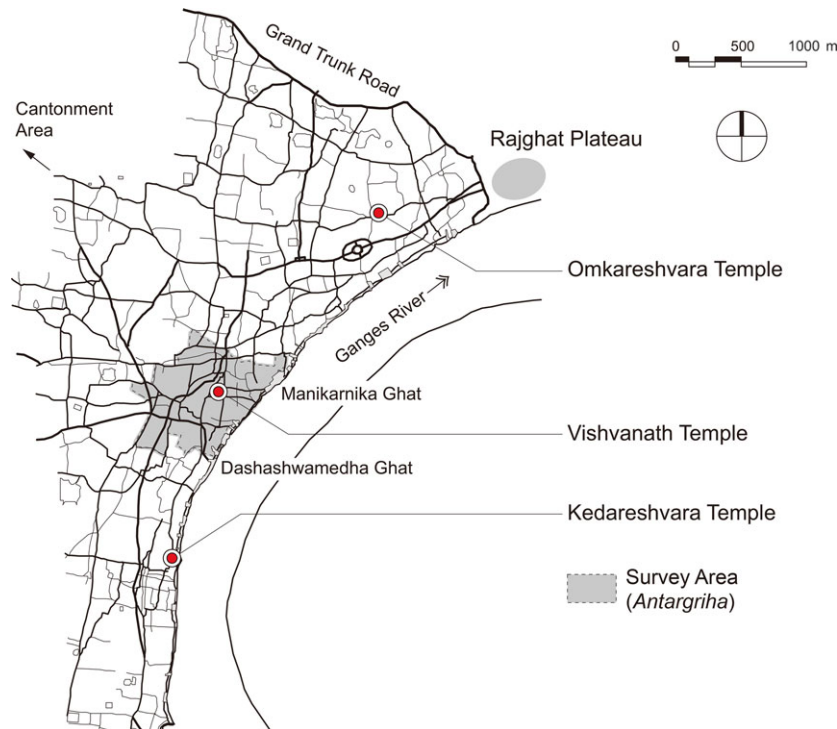
Figure 1. Map of Varanasi old city and survey area

There are few studies on the *mohallas* of North Indian cities. In the field of social history, Bayly (2002)[1] and Freitag (1980, 1989)[2,3] refer to social functions of *mohallas* through their discussion of change in North Indian society between the end of the 18th century and the early 20th century. Kumar (1989) offers a general introduction of the cultural and social characteristics of Varanasi *mohallas* in Varanasi. Singh (1996)[4] describes in detail the settling process and the distribution of various cultural groups in Varanasi. Although its consideration of the *mohalla* is limited, it mentions the specific history of *mohallas* in the city.

These studies provide information to depict the social and cultural outlines of *mohallas*. However, these studies did not explore the physical and spatial formation of *mohallas*. In such a situation, Blake (2002)[5] is remarkable, though mainly based on a literature review, in discussing the change in the formative factor of *mohallas* in 18th-century Shahjahanabad. The details are mentioned in the next section. In terms of block formation, there are some studies on North Indian cities such as from Funo et al. (2002)[6] and Yamane et al. (2000, 2008),[7,8] which all note that neighborhood units tend to be formed along streets by the same caste/occupation groups.

2. *Mohalla* in North Indian cities and Varanasi

2.1 *Mohalla* in North Indian cities and its types

The origin of the word *mohalla*, widely used in the Islamic world including North India, is said to be the Arabic word *mahalla*, which originally means "a place where one makes a halt" [Note 6]. It is also a common word in Hindi, meaning quarter or neighborhood. It appears that the concept and institution of the *mohalla* was brought to North India by the full-fledged influx of Islamic culture to India, that is, the establishment of the Delhi Sultanate. As late as the Mughal period, it

was the basic unit constituting the city [Note 7]. The overview of the *mohalla* that can be depicted based on previous studies is as follows.

Mohallas in the Mughal period were administrative tax units as well as autonomous residential units responsible for their own police protection, cleaning, sewage disposal, and street lighting services [Note 8]. *Mohallas* were headed by chiefs or *mohulladars* and functioned as organizing units for social activities such as celebrations, festivals, and negotiations with city authorities [Note 9]. In the British period, it appears that such social functions essentially remained intact [Note 10]. Currently, the institutional meaning of the *mohalla* has been lost, and its organizing function has decreased with the recent erosion of the traditional social structure.

Mohallas, as described in previous studies, can be classified into types based on their formative factor. First are those designated as "elite *mohallas*" by Blake (2002) were formed around great stone houses or *havelis*, the palaces, or mansions of powerful elites (such as courtiers or important merchants). *Mohallas* of this type were occupied by members of the elite family and their dependents of various classes engaged in various services, and they were grouped together into gated areas as a kind of extended family, based on patron–client relations [Note 11]. Elite *mohallas* were dominant in the early Mughal period. However, with the decline of the Mughal Empire during the 18th century, elite *mohallas* began to be dismantled and reorganized into "caste/craft *mohallas*" mainly consisting of people in the same caste, craft, or ethnic group [Note 12]. In addition to these two types of *mohallas* cited from Blake (2002), the author offers a third type that can be called "immigration *mohallas*." Sporadic or continuous population inflow from other cities and suburban villages to the city was a general phenomenon in each period of history. Those immigrants developed a new city area by occupying unused land inside or outside of the city at that time and

formed new *mohallas* consisting of people with a shared native place and language [Note 13].

Each of the three types of *mohalla* is different in terms of residential composition and formational process, and consequently, it is considered that each spatial formation was also different to some degree.

Elite *mohallas*, as well as immigration *mohallas*, were probably formed by occupying a certain amount of unused land inside or outside of the city, because they must have been formed in parallel with the construction of the elites' *havelis*. However, caste/craft *mohallas* were formed through the subdivision and reorganization of elite *mohallas* [Note 14] or gradational migration within the city. In either case, they probably were formed based on the existing urban space at that time. The caste/craft *mohalla* and the immigration *mohalla* are similar in terms of residential composition. The elite *mohalla* and the immigration *mohalla* are similar in terms of the spatial change that occurred with their establishment (Table 1).

Descriptions of the spatial characteristics of the *mohalla* are not abundant. Elite *mohallas* were formed around big stone *havelis*, as mentioned above. There were some *mohallas* surrounded by high walls [Note 15]. Although it is not clear what other kinds of spatial characteristics *mohallas* possessed, it is generally said that *mohallas* often had gates [Note 16]. In some North Indian cities, it has been noted that neighborhood units consist of houses facing the same street [Note 17], and this was also partially confirmed in Varanasi, as described later.

2.2 *Mohalla* in Varanasi

According to the census in 1822, there were 369 *mohallas* for a city population of 181 482 [Note 18]. The average size was approximately 500 people per *mohalla*. Although the contemporary census shows no information about *mohallas*, Kumar (1988)[9] mentions that there are approximately 50 *mohallas* of approximately 1000 people in each of the eight wards under the jurisdiction of police stations [Note 19]. Simply comparing the record of 1822 with the approximate figure shown by Kumar, both of which covered roughly the same area, it indicates that the population density had almost doubled and that the number of *mohallas* had increased by approximately 10%.

Despite of the general tendency of the weakening of the *mohalla* as a neighborhood unit also seen in other cities, it is said that Varanasi is the city where the tradition of the *mohalla* still remains deeply rooted [Note 20]. Even now, *mohallas* are the organizing units for most of the celebrations and festivals held in Varanasi, and some festivals are held fanatically with heated competition between *mohallas*. It is said that Muslims prefer to arrange marriages between families in the same *mohallas* and that each of the *mohallas* have two or three predominant castes and occupations [Note 21]. Surveying the distribution of shops and workshops, there is a clear tendency for the same occupational groups to cluster together on each street, except in the new commercial areas along broad streets.

3. Outline of the survey area

As a preparation for the consideration in the following sections, the situation in 1822, religious segregation, and street pattern of the survey area are mentioned briefly.

3.1 Situation in 1822

Although currently the survey area is filled up evenly with buildings from two to five stories of brick or concrete, the map from 1822, showing the structural classification of buildings into *pukka* (stone or brick) and *kachcha* (mud or adobe), indicates that the degree of urbanization was significantly different by location (Figure 2). It appears that while *pukka* blocks were densely urbanized with multi-storied buildings as seen today, *kachcha* blocks were relatively sparse with low-rise buildings and were urbanized later. The *pukka* zone covered from the central part around the Vishvanath temple to the eastern and northern parts of the survey area, and the *kachcha* zone covered most of the western and southern part. Ponds and streams flowing to the Ganges located on the southwest part were drained off between the end of the 19th century and the early 20th century, and this became one of the busiest commercial sectors in the Old City.

3.2 Religious segregation

The residential areas of Hindus and Muslims in Varanasi are spatially separated, so there are *mohallas* dominated by Hindus and ones dominated by Muslims. This religious segregation is clearly shown by the distribution of religious facilities such as Hindu temples and mosques [Note 22]. In the survey area, Muslims predominantly live in the northwestern part where many mosques are located, and Hindus occupy the other parts (Figure 3).

3.3 Street pattern

The streets of the survey area are very complicated. Their width is from 1.5 to 5 m, except for some broad streets approximately 15 m wide constructed between the end of the 19th century and the early 20th century. The hierarchization of streets based on their width is hard, for there are considerable local changes in street width and, in terms of usage, there are some busy lanes 2 m wide and some desolate streets 5 m wide. Therefore, an attempt was made in this paper to grasp the street pattern using the schematic method given below.

1. Broad streets constructed in the recent period and penetrating old blocks are erased.
2. Blind alleys (including the results of the first step) are erased.
3. For the remaining streets, those more than 150 m in length are designated primary streets and the others are designated secondary streets for the sake of simplicity [Note 23].

The resulting diagram of street patterns (Figure 4) shows the following feature. In the central and eastern parts, which were once in the *pukka* zone, there is a relatively regular pattern of

Table 1. Classifications of *mohallas* by formative factors

|	Elite *mohallas*	Caste/craft *mohallas*	Immigration *mohallas*
Periods	Early Mughal period	Later Mughal period	-
Residential composition	Patrons and clients	People of the same caste/occupation	People with a shared language/native place
Formational process	Construction of *havelis*	Reorganization of elite *mohallas* or gradational migration within the city	Immigration from outside of the city
	Development of unused land	Based on existing streets	Development of unused land
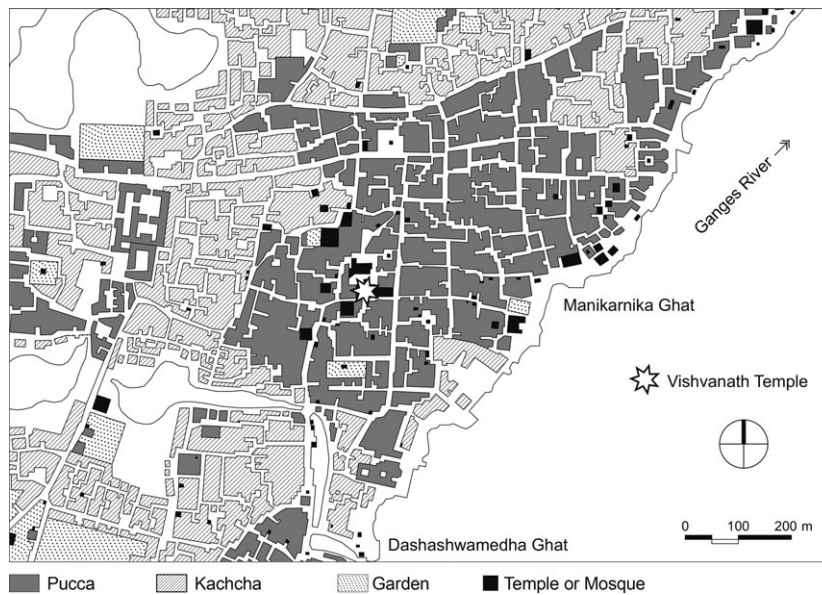
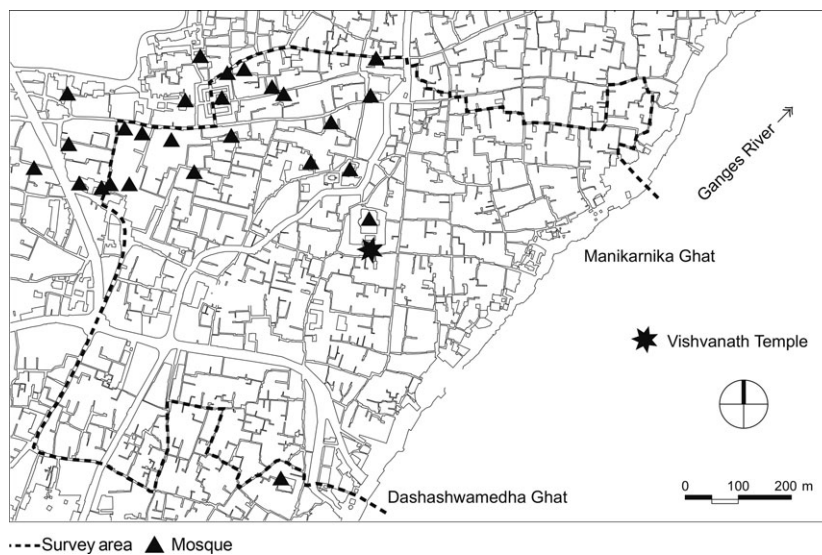**Figure 2.** Survey area in 1822 (based on the map drawn by Prinsep)

Figure 3. Distribution of mosques

primary streets accompanied by many blind alleys. On the other hand, in the southern and especially northwestern parts, which were once in the *kachcha* zone, a pattern is found of complicatedly twisting secondary streets subdividing blocks, and there are relatively few blind alleys.

4. Spatial formation of the *mohalla*

Fifty-three *mohallas* are found within the survey area (Figure 5, Table 2). Maps from 1929 show 52 *mohallas*' names within the same area, and 47 of them correspond with present *mohallas*. Thus, there has been probably no major change in the number and size of the *mohallas*. In general, a *mohalla* consists of houses located along both sides of one or more streets. In other words, the *mohalla* that a house belongs to is determined by the street that the house faces.

4.1 Boundary forms

In the survey, the author first tried to make a boundary map of the *mohallas* by asking the residents of several houses on every street about the name of the *mohalla* to which they belong and asking what indicates the boundaries of the *mohallas*. The extent and boundary of each *mohalla* can be obtained by gathering all the plots of houses belonging to each *mohalla*. However, as most parts of the boundaries are located inside blocks that are invisible from streets, the author drew those boundaries based partly on the measurement survey and partly by speculating on the boundaries of the plots from the maps from 1929 and aerial photos [Note 24]. Boundaries of *mohallas* actually are recognized only on streets, as residents are not aware of invisible boundaries inside blocks.
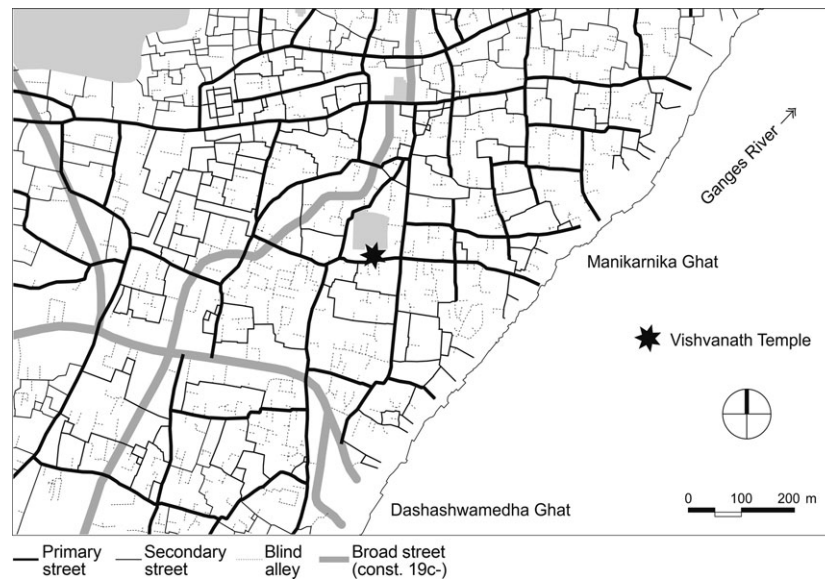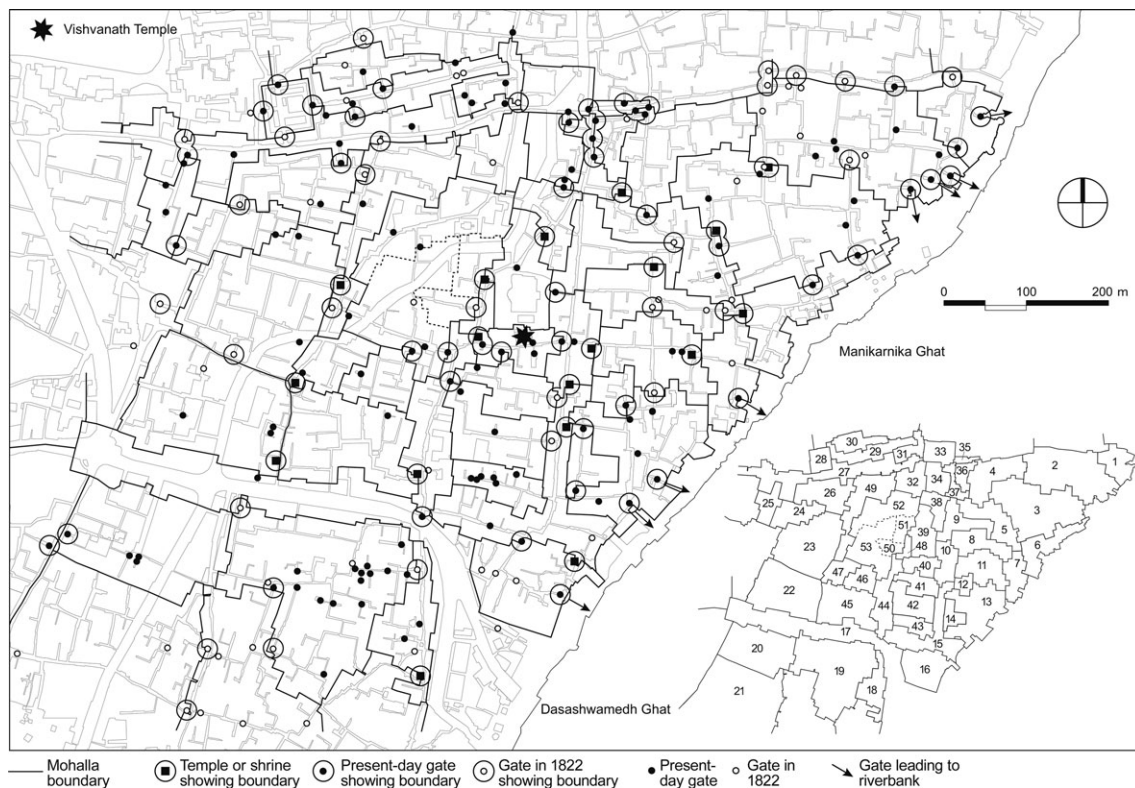
Figure 4. Street pattern

Figure 5. *Mohallas* in the survey area and their boundaries

The most common form of boundary is a crossing. Although it is rare that streets themselves draw boundaries, there are some instances of this (the boundaries of #22/23, #22/45 and the west side boundaries of #20 and #21).

As references indicated, many gates are found at boundary points on streets (Figure 6-left). The distribution of the gates is not uniform (Figure 5). There are many gates in the eastern and northern parts of the area, most of which indicate the boundaries of *mohallas*. Other gates are often located at the entrances of small and intimate blind alleys inside *mohallas*. Many gates of this type are found in the northwestern and southern parts. Gates, which most of the *mohallas* once had, are gradually being removed as the duty of policing is taken over by the municipality [Note 25]. However, it should be noted that most of the gates shown on the map from 1822 were located on the present boundaries of *mohallas*, although the gates now have disappeared. This fact supports the validity

Table 2. Names and areas of *mohallas* in the survey area

No.	Names of *mohallas*	Area*
1	*Patni Tola*	72
2	*Siddheshwari*	277
3	*Garbasi Tola*	284
4	*Sukh Lal Sahu*	123
5	*Brahmanal*	105
6	*Manikarnika*	98
7	*Lalita Ghat*	66
8	*Neel Kanth*	87
9	*Nepali Khapra*	78
10	*Saraswati Phatak*	61
11	*Lahori Tola*	107
12	*Dharmakoop*	24
13	*Meer Ghat*	174
14	*Gali Derh Mall*	33
15	*Tripura Bhairvi*	143
16	*Man Mandir*	120
17	*Dasashwamedh*	420
18	*Bhuteshwar Gali*	80
19	*Agast Kunda*	343
20	*Lachhman Pura*	213
21	*Jangambari*	-
22	*Baradeo*	234
23	*Hauz Katora*	242
24	*Pathar Gali*	76
25	*Purani Adalat*	52
26	*Chahmehman*	113
27	*Dal Mandi*	-
28	*Naya Chauk Bazar*	37
29	*Chattatala*	78
30	*Bandi Tola*	55
31	*Naryal Bazar*	38
32	*Kundigar Tola*	61
33	*Chauk*	52
34	*Chaparia Gali*	51
35	*Rani Kuan*	11
36	*Kunj Gali*	30
37	*Kachauri Gali*	30
38	*Rajgir Tola*	50
39	*Gyan Bapi*	83
40	*Vishwanath Gali*	47
41	*Kalika Gali*	56
42	*Shakarkand Gali*	89
43	*Rani Bhawani*	45
44	*Shakshi Binayak*	92
45	*Terhi Neem*	155
46	*Nichi Brahma Puri*	50
47	*Bhandari Gali*	47
48	*Dhondhi Raj Binayak*	16
49	*Ghughrana Gali Bansphatak*	135
50	*Aparnath Gali*	24
51	*Gali Nandu Pharia*	32
52	*Adi Bisheshwar*	115
53	*Kotwal Pura*	130

*Estimated from Figure 5 (100 m²).

of the survey results and indicates that the boundaries of *mohallas* still remain unchanged even after those gates were lost. It should also be noted that there are many gates at the

entrance point to the riverbank from the city area along the Ganges River. Although mainly for defensive purposes, this also suggests that the riverbank area has not belonged to any *mohallas* and has been recognized as a public space of the city.

In several cases, temples and shrines seem to indicate symbolic boundaries [Note 26] (Figure 5, Figure 6-right). Some of these temples and shrines give some *mohallas* their names. Although it is not confirmed yet whether these temples and shrines possess the characteristic of "guardians for the boundary," there is a possibility that they relate in some way to the neighborhood guardian deities enshrined in suburban villages [Note 27].

4.2 Names

The names of *mohallas* derive from various sources, and some of them provide clues to an understanding of the characteristics and background of the *mohallas* and ultimately of historical changes in the city (Table 2).

1. Persons: *Mohallas* are often named after their patrons or important persons who probably were related to their establishment, for example, #4 *Sukh Lal Sahu* (after a famous trader in the 18th–19th centuries), #16 *Man Mandir* (after *Man Singh*, the king of Amber in the 16th–17th centuries), and #43 *Rani Bhawani* (after a powerful zamindar of Natore in the 18th century). These names suggest the age and the residential composition of these *mohallas* to some extent, and also the possibility that they were formed as "elite *mohallas*" (mentioned above). However, there is no trace of anything like a *haveli* in these *mohallas* except #16, where the *mohalla* near Man Singh's palace is called *Man Mandir*.

2. Ponds and streams: Some *mohallas*' names derive from ponds and streams, and they directly indicate the process by which the *mohallas* were established. In the survey area, #5 *Brahmanal*, #19 *Agast Kund*, and #23 *Hauz Katra* are examples of this [Note 28]. These *mohallas* were on the land where the ponds and streams giving their name were once located. Some of them were drained off during the 18th century through the early 20th century. Another *mohalla*, #17 *Dasashwamedh,* was also formed in the same situation, in spite of this not being shown by its name (Figure 2).

3. Facilities: Many *mohallas* are named after Hindu deities (#2, 8, 15, 18, 21, 22, 40, 41, 44, 47, 48, 49, 50, and 52). Accordingly, the temples or shrines in which those deities are enshrined are in those *mohallas*. Neighborhood residents routinely visit those temples and shrines, which function as the cultural and religious center of the *mohalla*. In other cases, some *mohallas* are named after *ghats* [Note 29] (#7 and 13), wells (#12, 26, 35, and 39), markets (#28, 31, and 36), and a gate (#10), which are important facilities located in those *mohallas*. The name of #24 *Purani Adalat* means "old court"; in the map from 1822, this area was occupied by a big stone court building with courtyards. It shows an instance of a *mohalla* formed by a subdivision and reorganization of a large site where a big building such as a *haveli* had been located. This *mohalla* now is a residential quarter, although the great structure of the gates still remains; these once led to the courtyard of the old court.

4. History of the residents: An example is #3 *Garbasi Tola*, whose name means "living place of old residents of the

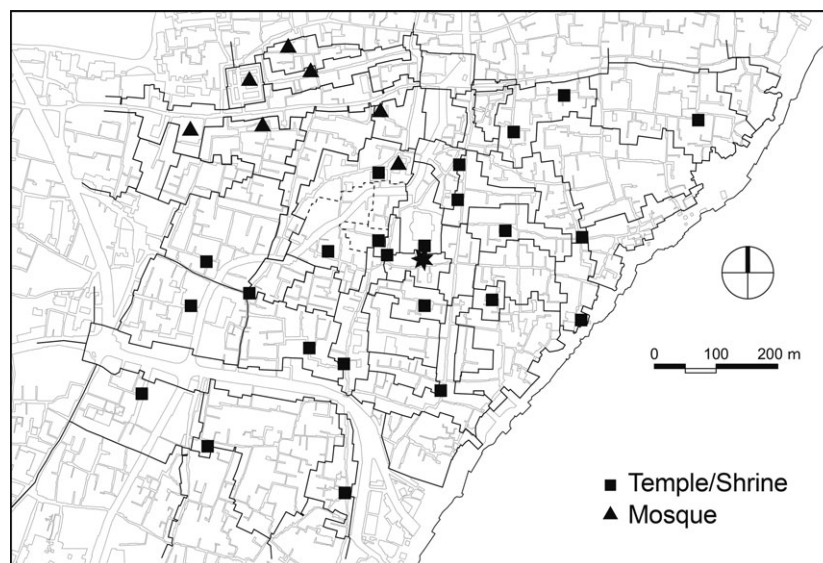**Figure 6.** Gate and shrine indicating *mohalla* boundaries

Figure 7. Religious facilities as *mohallas'* cultural nuclei

fort," and indicates that this *mohalla* was founded when the forest was cleared by people who moved from the Rajghat fort in the northeastern part of the city when a Muslim army attacked and destroyed the fort in the 12th century [Note 30].

4.3 Facilities
Temples and shrines (mosques in Muslim quarters) that can be regarded as the religious and cultural center of their neighborhoods are found in 28 *mohallas* (Figure 7). Most of the *mohallas* have small squares as nodes of the complicated network of their narrow streets, and central facilities there often are located close to each other. Those small squares are the public space of the *mohallas*, usually a venue for neighborhood communication, and canopies, tents, stages, and so on emerge temporarily there as outdoor theaters during celebrations and festivals.

Water for daily life was supplied mainly by wells until the early 20th century. Those wells were often installed in small squares and sometimes in blind alleys, taking the form of on-street wells. Also, some wells were installed inside blocks or houses. While the maps from 1822 and 1929 show the locations of many wells, their distribution is not uniform (Figure 8). In the central, eastern and northern parts of the survey area, there are remarkably more wells inside blocks or houses and fewer on-street wells. This indicates the differences in the economic condition of the residents and the fact that there were relatively more rich houses with their own wells in that area [Note 31].

Although every *mohalla* is not necessarily equipped with all the facilities mentioned above, it can be said that those are the standard sets of facilities supporting the function of *mohallas* as neighborhood units.
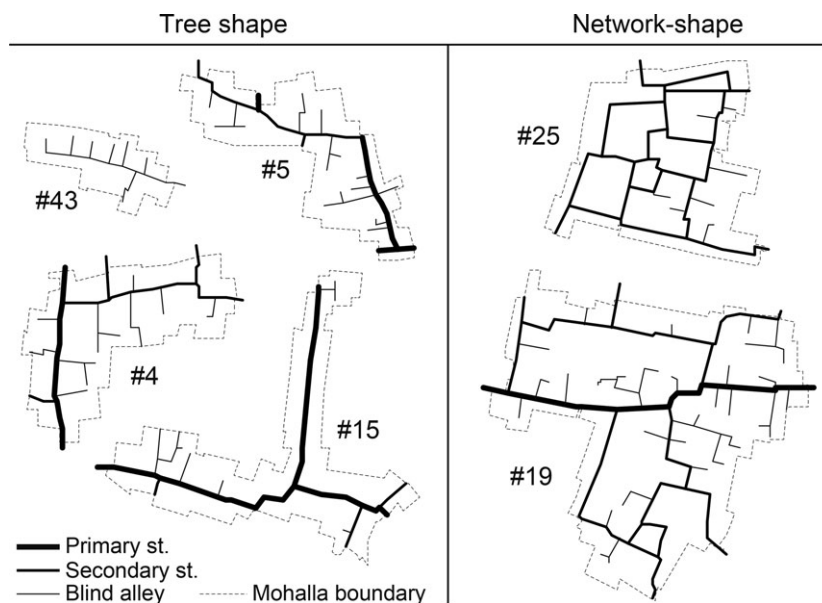
Figure 8. Distribution of wells in 1822 and 1929

Figure 9. Two types of street patterns in *mohallas*

4.4 Size and shape

Mohallas considerably vary in size, from small ones of approximately 1000 square meters along a short street (#35) to massive ones of more than 30 000 square meters with numerous streets (#19). Figure 5 and Table 2 show that the size of a *mohalla* tends to be smaller near the center of the survey area, particularly around the Vishvanath temple and is larger in the outer areas, especially in the western and southern parts.

In terms of shape and street pattern, *mohallas* in the central areas mostly have a linear or tree shape with primary streets (mentioned in Section 3.3) as trunks and blind alleys as branches. However, *mohallas* in the outer regions mostly have broad and territorial shapes covering complicated networks of secondary streets (Figure 9).

4.5 Typology and formational process

Here, those *mohallas* can be classified based on the size, shape, and street pattern and separated into two types: those that can be designated "street *mohallas*" are smaller mohallas with a linear or tree-shaped street pattern, and those that are "territorial *mohallas*" are broader *mohallas* of a territorial shape with a network-shaped street pattern.

It is clear that the former type tends to be located in the central part of the survey area and the latter in the outer parts (Figure 10). The distribution of street *mohallas* and territorial *mohallas* mostly corresponds with the *pukka/kachcha* zoning (Figure 2) as well as with the distribution tendency of gates and wells (Figure 8). This situation is considered to reflect the formational process of the *mohallas* and the degree of urbanization at that time.
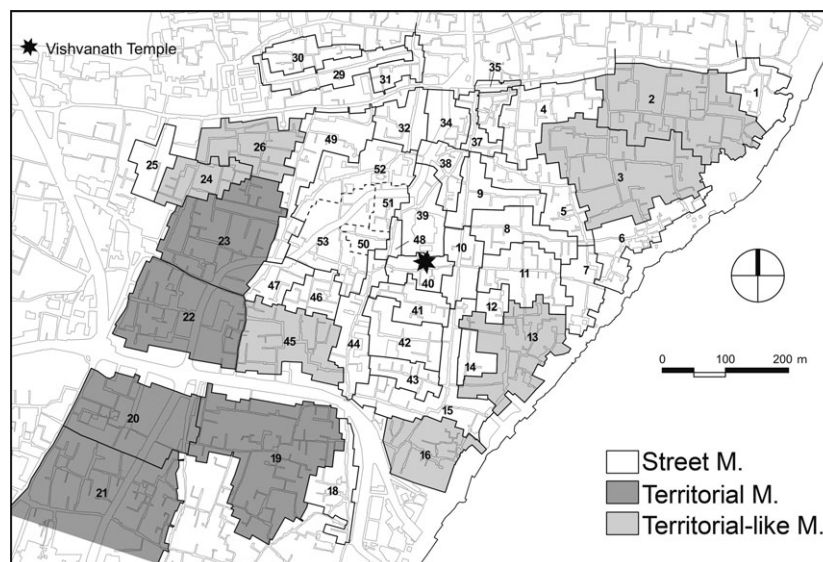
Figure 10. "Street *mohallas*" and "territorial *mohallas*"

Table 3. Characteristics of "street *mohallas*" and "territorial *mohallas*"

	Street *mohallas*	Territorial *mohallas*
Size of *mohallas*	Relatively small (68)*	Relatively large (203)*
Shape of *mohallas*	Linear/tree shape	Territorial shape
Street pattern	Tree shape w/primary sts. and blind alleys	Network-shape w/secondary sts.
Boundary form	Mainly crossings	Sometimes streets themselves
Urbanization	Earlier (former *Pucca* Zone)	Later (former *Kachcha* Zone)
Formational process	Based on existing streets	Development of unused land

*Mean area of the *mohallas* (100 m²).

Streets *mohallas* are located mainly in the former *pukka* zone that was urbanized earlier. Although the extent and boundaries of the *mohallas* may have changed during their history, it is speculated that when a certain *mohalla* emerged in a highly urbanized place where streets had already become well developed, the *mohalla* must have been formed along the existing streets from that time. It then must have grown by gradationally developing new blind alleys inside blocks, and this probably imparted a tree-shaped street pattern to the mohalla. The urbanization of the survey area proceeded with the Vishvanath temple at its center, as the *pukka* zone showed. Therefore, such a formational process will relate to street *mohallas* gathered around the temple.

In contrast, territorial *mohallas* are located in the former *kachcha* zone that was densely urbanized in a relatively recent period. *Mohallas* #19, 20, 22, 23, and 45 were at least partly developed by the draining of ponds and streams during recent centuries. Although *mohallas* #2 and 3, which were included in the *pukka* zone, seem to have been urbanized early, the name of #3, as mentioned in Section 4.2, suggests that it was founded by migration within the city. In other words, such a

formational process proceeding in parallel with mass migration and reclamation of non-residential land such as forests and ponds will relate to territorial *mohallas*. This is because in such cases, a new territory of settlement first must have been roughly marked off. Then, streets and houses were constructed inside it. This process probably gave a territorial shape to the *mohalla*. This assumption may be also supported by the fact that, as mentioned in Section 4.1, the cases in which streets themselves draw boundaries of *mohallas* are found only in territorial *mohallas*.

The characteristics of two types of *mohalla*, as considered above, are arranged in Table 3.

5. Conclusion

The discussion is summarized as follows.

1. It is noted that there have been three types of *mohallas* based on their formative factors: "elite *mohallas*," "caste/craft *mohallas*," and "immigration *mohallas*." Elite *mohallas* and immigration *mohallas* were formed by occupying unused land inside or outside of the city, and caste/craft *mohallas* were formed based on the existing urban space. Therefore, it is considered that the spatial formation of each was also different to some degree.
2. The extent and boundaries of 53 *mohallas* in the survey area are revealed based on a field survey. In general, a *mohalla* consists of houses located along both sides of one or more streets.
3. The most common form of boundary is a crossing. Gates, which are located more in the central, eastern, and northern parts of the survey area, also often indicate boundaries. Locations of the gates shown on the map from 1822 correspond with present boundaries of *mohallas*, and it indicates that the boundaries of *mohallas* still remain unchanged even after those gates were lost. Some cases in which streets themselves draw the boundaries of *mohallas* are found.
4. *Mohallas* are named after persons, ponds, streams, facilities, the history of the residents, and so on. Some names provide clues for an understanding of the characteristics

and background of the mohallas, and ultimately of historical changes in the city.

5. Temples, shrines, and mosques working as cultural nuclei, small squares, and wells are considered to be the standard set of facilities supporting the function of the *mohallas* as neighborhood units. The distribution of wells is significantly different among various parts of the survey area.

6. From the perspective of spatial formation, *mohallas* found in the survey area can be classified broadly into "street *mohallas*" and "territorial *mohallas*." The distribution of the two types mostly corresponds with the *pukka/kachcha* zoning in 1822 and with the distribution of gates and wells. The former types are located in the central parts that were urbanized earlier, and the latter are in the outer parts, which were urbanized later. It is assumed that street *mohallas* were formed along existing streets and territorial *mohallas* were formed in parallel with the development of new residential areas.

Most of the differences in the spatial features of *mohallas* observed in the survey area, such as size and shape, distribution of gates and wells, and street pattern, can be understood through a correlation with the *pukka/kachcha* zoning in 1822. The urbanization process basically was different between the *pukka* zone, which was highly urbanized earlier, and the *kachcha* zone, which was urbanized relatively later, and this difference has significantly influenced the spatial formation of *mohallas*. It is hard to simply link the three types based on formative factors (elite, caste/craft, and immigration *mohallas*) with the two types based on spatial formation (street and territorial *mohallas*) because of the lack of detailed data on the residential composition of each *mohalla*, such as caste, occupation, and origin. However, at least it can be said that immigration *mohallas* correspond with territorial *mohallas* and possibly that caste/craft *mohallas* correspond with street *mohallas*. Although elite *mohallas* appear to have been almost all subdivided and are rarely seen, given their formational process, they possibly possessed features of territorial *mohallas*.

This paper concretely revealed the geographical extent and the spatial formation of *mohallas* in Varanasi, which were previously unknown in detail, based on a field survey covering a certain area, although there are methodological limitations because it is based on limited interviews on each street. Of course, the extent and boundaries of these *mohallas* may have changed during their history, along with changes in their residential compositions or social conditions. Therefore, it should be carefully examined how much historical continuity has existed in the formation of the mohallas shown above with those in the British colonial period, the Mughal Period, and the former periods. However, neighborhood units including *mohallas* are widely determined by physical conditions such as the shape of the land or the formation of the existing urban area as well as by social conditions. From this viewpoint, the relationship of the spatial formation of *mohallas* and their forming process discussed here may have a certain level of generality.

Disclosure

The authors have no conflict of interest to declare.

Notes

Note 1) In English references, it is spelled in various ways such as *mohullla*, *muhalla*, *mahalla*, and *mahallah*. In this paper, *mohalla* is used with reference to Kumar (1989).[10]

Note 2) The survey was conducted three times: August to October 1999, in October 2000, and in June 2007.

Note 3) Specifically, it is the sacred area of *Antargriha* centering on the *Vishvanath* temple, which is shown by Singh (1993).[11] For details, see Yanagisawa & Funo (2004).[12]

Note 4) "Benares City: Season 1928-29," 16 of 17 sheets in total, traced version of Varanasi Nagar Nigam.

Note 5) "The City of Bunarus: Surveyed by James Prinsep, 1822," a photo duplication of the British Library (IOR/X/9308/2).

Note 6) Houtsman (1987), p. 110.[13]

Note 7) Blake (2002, pp. 83-84).

Note 8) Kumar (1989, p. 30) and Freitag (1989, p. 16).

Note 9) Blake (2002, p. 84), Freitag (1989, p. 123) and Bayly (2002, p. 324).

Note 10) In the case of Varanasi, *mohallas* had assumed such social duties as self-policing until they were taken over by the city municipality in the 1880s (Kumar, 1989, p. 30). See also Bayly (2002, p. 312).

Note 11) Blake (2002, pp. 83-85, 182).

Note 12) Blake (2002, p. 178) and Freitag (1989, p. 18).

Note 13) Singh (1996) particularly discusses this type of *mohalla* in Varanasi.

Note 14) Blake (2002, pp. 178-179).

Note 15) Blake (2002, p. 83).

Note 16) Bayly (2002, p. 182), Kumar (1989, p. 29), Singh (1955, p. 37).[14]

Note 17) Funo et al. (2002), Yamane et al. (1998),[15] Yamane et al. (2000).

Note 18) Prinsep (1833, p. 13).[16]

Note 19) Kumar (1988, p. 65).

Note 20) Kumar (1989, p. 37). Kumar calls Varanasi the "City of *Mohalla*" (Kumar, 1989, p. 29). It is hard to give a definitive reason why the tradition of *mohallas* is especially strong in Varanasi, but there are some possible causes: there were historically many immigrants from around the country and they founded many *mohallas*; there are strong Muslims artisan groups, such as sari weavers, joined to the industrial structure; the general conservativeness caused by characteristic features of a sacred city; and many festivals held on a community basis such as Durga Puja.

Note 21) Kumar (1989, p. 37) and Kumar (1988, pp. 65-66).

Note 22) Yanagisawa & Funo (2004, p. 79).

Note 23) In the eastern part of Vishvanath temple, partly grid-shaped streets are seen, which are regarded as traces of an ancient street pattern (Singh, 1973, pp. 23-27).[17] The distances between parallel streets are approximately 60 or 100 m both in the east–west and north–south directions. Therefore, the author regards it as the standard size of a block in the survey area and assumes a length of 150 m (an approximate length of two blocks) as a marker to distinguish primary streets from secondary streets.

Note 24) "Google Map" (http://maps.google.co.jp, accessed 2007-07-09). The measurement survey was conducted in some blocks.

Note 25) Although many of the remaining gates have no door now, in the 19th century, gatekeepers hired by each *mohalla* closed the gates every night (Singh, 1955, p. 37).

Note 26) It is in such cases that interviewees answered "over/before this temple is so-and-so *mohalla*."

Note 27) Coccari (1989, p. 141)[18] notes that the counterpart of the village guardian of boundaries exists in urban *mohallas*.

Note 28) Brahmanal is the name of a seasonal river that used to be there (Sukul, 1974, p. 197).[19]

Note 29) Ghats are steps or slopes leading down to a body of water such as a river, lake or pond. They are used for religious rituals such as ablution and cremation as well as for all the daily activities including cooking, washing, playing, and so on.

Note 30) Sukul (1974, p. 5) and Singh (1996, p. 122). In addition to this example, #9 Nepali Khapra (means "Nepalese roof tile") and #11 Lahori Tola (means "Lahore quarter") have names related to specific

regions, and there is a possibility that people from those regions once lived there. However, this does not correspond to the present residential composition, and moreover, no definitive description about this is seen in documents.

Note 31) Singh (1995, p. 37) notes a possibility that neighbors who had no well also used the wells inside those houses. This will be one of the reasons why there are few wells on streets where people did not necessarily need wells because they lived very close to the river.

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