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# Old Lahore and old Delhi: variations on a Mughal theme

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In the latter part of the sixteenth century and in the seventeenth century, the Mughal emperors of India were engaged in a rather remarkable burst of city building. This included the foundation of two completely new cities, as well as a variety of major developments in their preexisting capitals, provincial centers and summer retreats. Most of this attention was focussed on Lahore, Agra, and the new cities: Fatehpur Sikri and Delhi. Only the monuments and the trace of its walls remain in Fatehpur Sikri, which was abandoned shortly after its foundation. The remaining three cities, however, are all very much alive today. Each has evolved into a modern metropolis, but the remains of the Mughal constructions still constitute the major landmarks.

This is particularly true of Lahore and Delhi, which Akbar and Shah Jahan respectively enclosed within walls, thus concentrating their development. Lahore had been gradually evolving for centuries before the Mughals appeared, while Delhi was created *de novo* as the splendid capital of Shah Jahan. Since the seventeenth century, these two "walled cities" have experienced gradual growth as well as certain rather drastic changes. But the basic Mughal forms remain, along with comparatively traditional life styles. Thus these two cities provide a rare opportunity to examine by comparison the enduring effects of urban design on the form of traditional cities.<sup>2</sup>

This article will specifically address two questions:

- What differences, resulting from its original planning, distinguish old Delhi from old Lahore?
- How did these differences, as well as other factors over the years, influence the physical form of the two cities?

The morphological descriptions and accompanying illustrations which follow are limited in detail, but provide an adequate basis for the necessary comparisons. (Note: when paired maps of the two cities appear on adjacent pages, they are shown at the same scale).

## The evolution of the walled city of Lahore

Lahore is located where the historical route from the Khyber Pass to Delhi crosses the Ravi River, one of five

tributaries of the Indus (fig. 1). This strategic location of the city, which led to its foundation, is also the reason for its continued growth and importance as a regional trade, military and administrative center. The early history of the city is obscure.<sup>3</sup> References to the city begin to appear in the writings of Arab geographers around the seventh century and seem to confirm it as an important Rajput Hindu town. By the eighth and ninth century it had become the capital of a reigning Brahmin family. But for some reason, perhaps a change of dynasty, the capital was shifted to another city farther north.

Lahore entered its Muslim era in 1021 AD when it was taken by Mahmud of Ghazni. Under the Ghaznavid sultans it regained its importance as a capital. Unfortu-

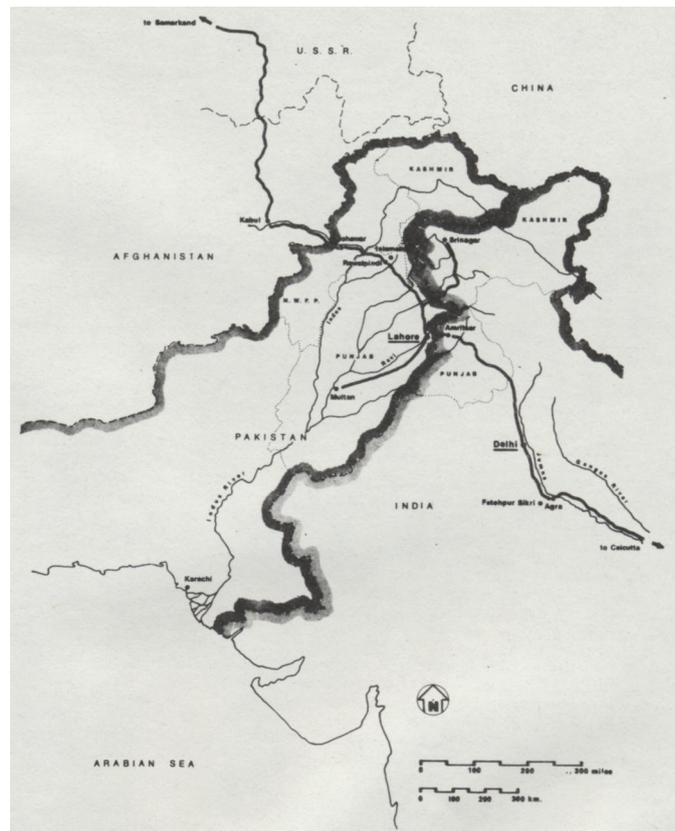


Fig. 1: Lahore and Delhi, on the "Grand Trunk Road" — the traditional route from Central Asia into India.

nately such a city, strategically located in an unstable region, remained an important military objective. Thus the history of Lahore is one of alternating periods of devastation, decay and imperial building, the constructions of the Mughal emperors (1526-1767) being clearly the most significant.

The Mughals consolidated, re fortified and embellished the city they inherited. Outside of their walled city they also covered a vast area with the richly designed mosques, tombs, mansions (or *havelis*) and gardens of the aristocracy. All of this was watered by an elaborate and extensive system of canals. During the subsequent struggles with the Sikhs, who eventually gained control of the area, these "suburbs" were largely abandoned. Visitors in the nineteenth century found them in ruins and partially buried. Around and over these remains the British built their own extensive establishment.<sup>4</sup> This legacy of Western colonialism remains today, largely unchanged, side by side with the old Muslim city; each area retaining its distinctive character. Subsequent extensions and infill have been added, typical of twentieth century urban growth in the developing world. It can be seen in figure 2L that the walled city occupies only a small portion of the total area of the present city (one square mile out of 170).

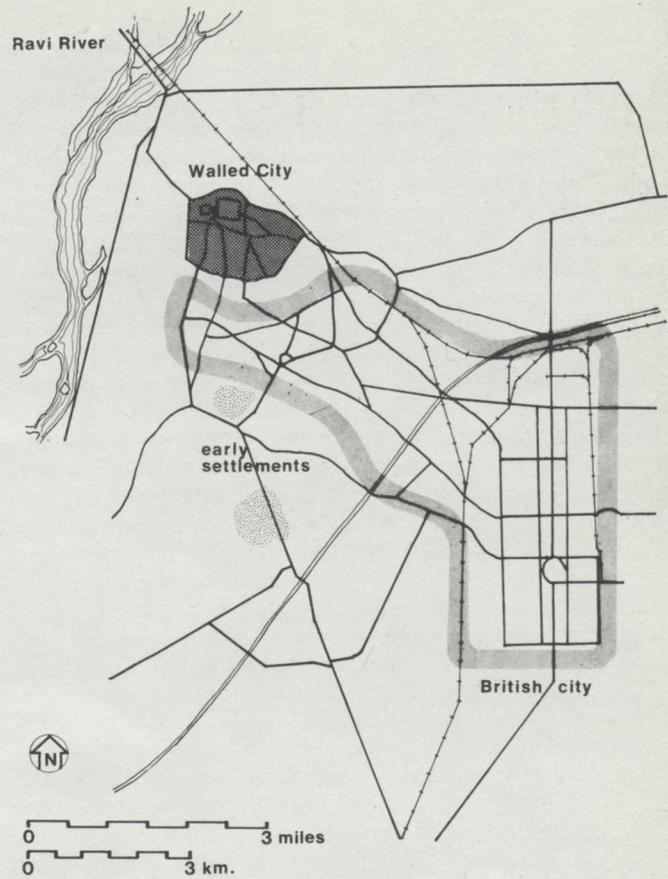


Fig. 2L: Metropolitan Lahore.

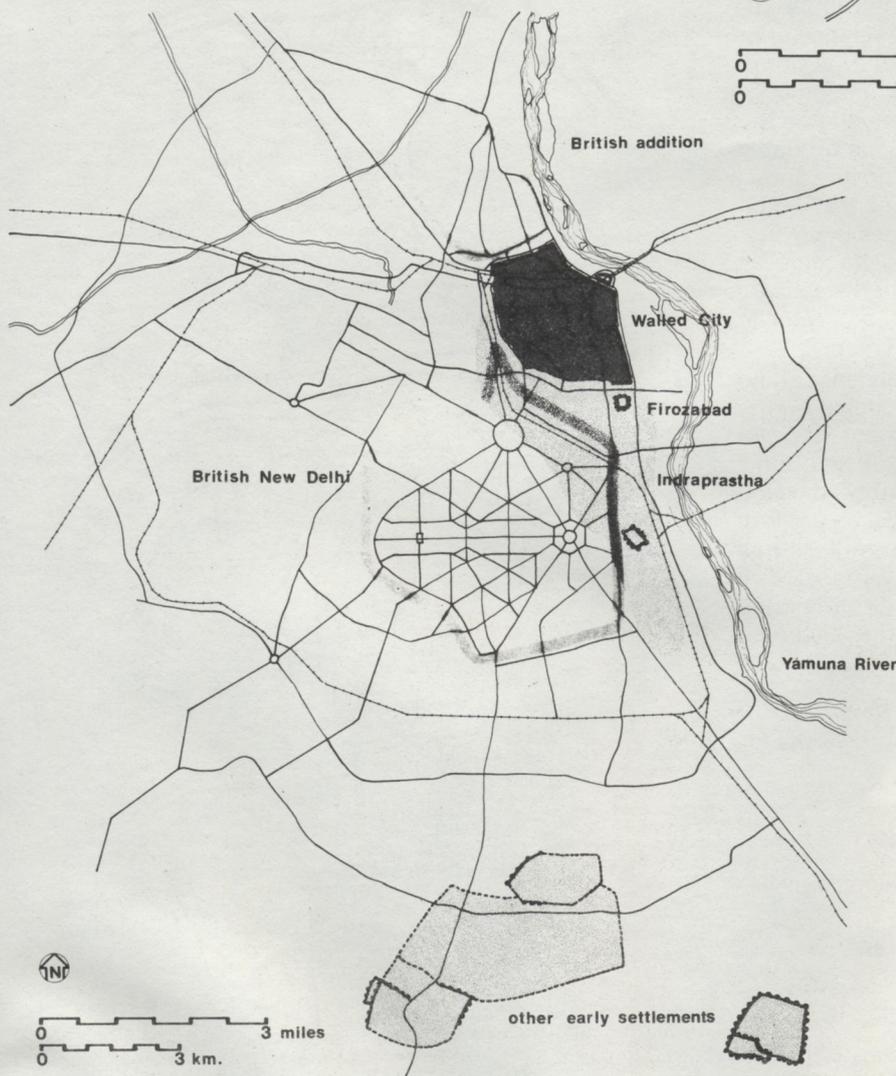


Fig. 2D: Metropolitan Delhi.

Today, old Lahore houses a multitude of activities. It is a major marketing center — not only for the city itself, but for all of northeast Pakistan. Wholesale and retail markets for cloth, grain, shoes, foodstuffs, utensils, jewelry and many other items exist side by side. Virtually all of its major streets are lined with shops. Approximately 206,000 people make their homes in the walled city. The overall gross residential density is about 425 persons per acre. But in some quarters the net figure is more than double that. The walled city is also a major production center. In its bazaars and residential streets, in fact even in the homes themselves, can be found a wide variety of tiny workshops: shoemakers, tailors, printers, machinists, jewelers, manufacturers of plastic items, etc.<sup>5</sup>

The old Mughal fort and the adjoining Badshahi mosque lie on the northern side of the city. These, along with several other Mughal monuments and certain of the bazaars make the walled city a major tourist attraction. There are also a large modern hospital complex, Lahore's red light district, and an estimated population of 5,000 cows and water buffalo which provide the city's milk. The Mughal structures, bazaars and other activity make the walled city a major tourist attraction today.

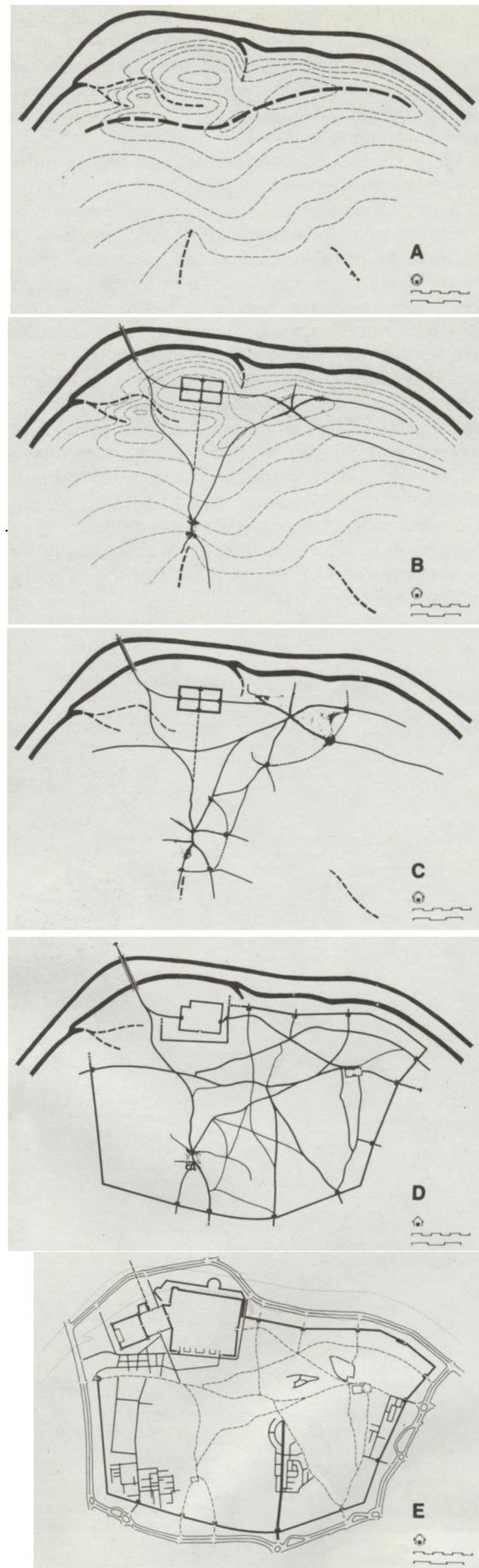
Without recorded evidence of the morphology of the city, one is left to speculate on the successive patterns of its physical growth. The relative topography within the walled city and the locations of roads, streets and gates provide the best clues. Based on these, the series of very hypothetical historical plans included as figure 3L can be advanced. The first of these assumes the location of the original Hindu fort on the same site as the present one.<sup>6</sup> From the gates of the fort, roads probably led off to the south to other settlements in the Indus valley, and northwest and southeast along the traditional route from the mountain passes to the Ganges plain.

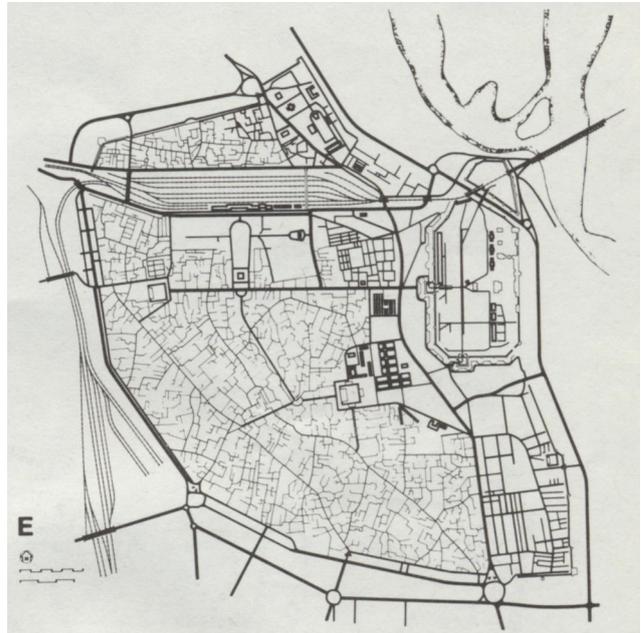
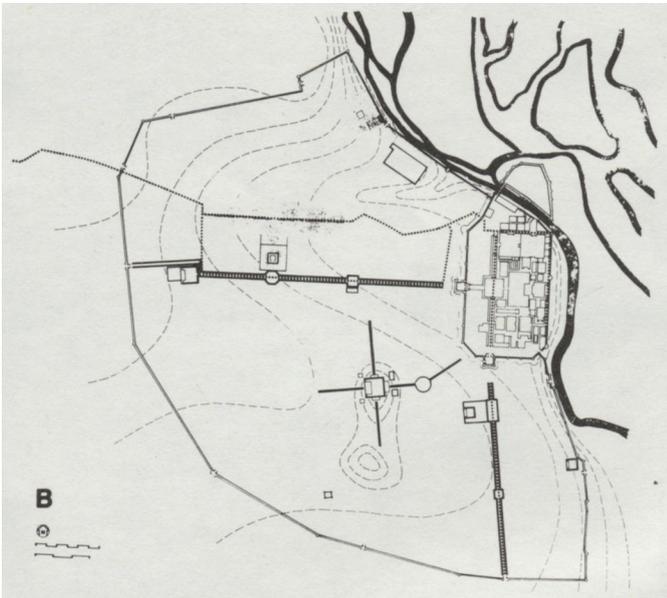
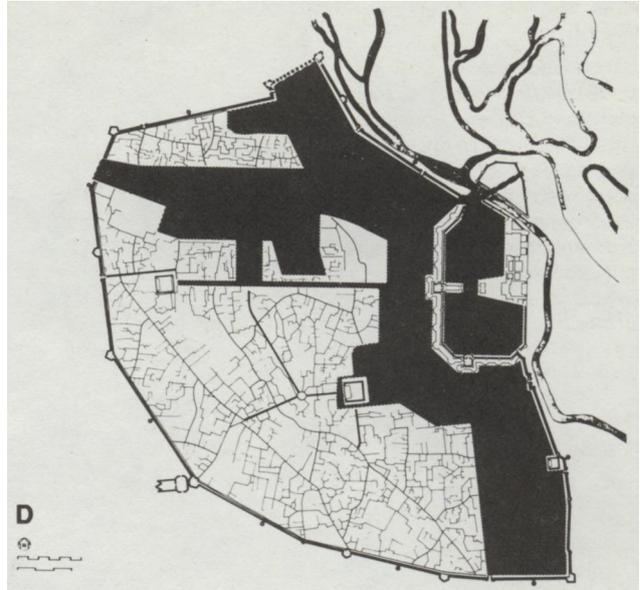
As the Hindu settlement prospered and became an important center, growth probably extended eastward from the original fort along the river bank, and later to the south, as shown in the second historical map.

The road structure in the area immediately east of the fort and on the river bank suggests that it became fairly early a focal point of the extramural settlement. It probably contained most of the market activity at one time. Roads from the hinterland would probably develop branches leading directly to this point as well as the fort. It is even possible that a second and perhaps a third wall protecting this development appeared, as suggested in the third map. The assumption that another early community later grew up to the south of the fort is based on the convergence of many roads at that point.<sup>7</sup>

**Fig. 3L:** The probable historical evolution of Lahore, showing:

- A. The original site on a ridge south of the Ravi
- B. The first Hindu fort and two "support" vilages
- C. The expansion of the vilages
- D. Akbar's wall and expanded fort
- E. Later infill, including the Badshahi Mosque, redeveloped Shahalmi Bazaar and the Ring Road



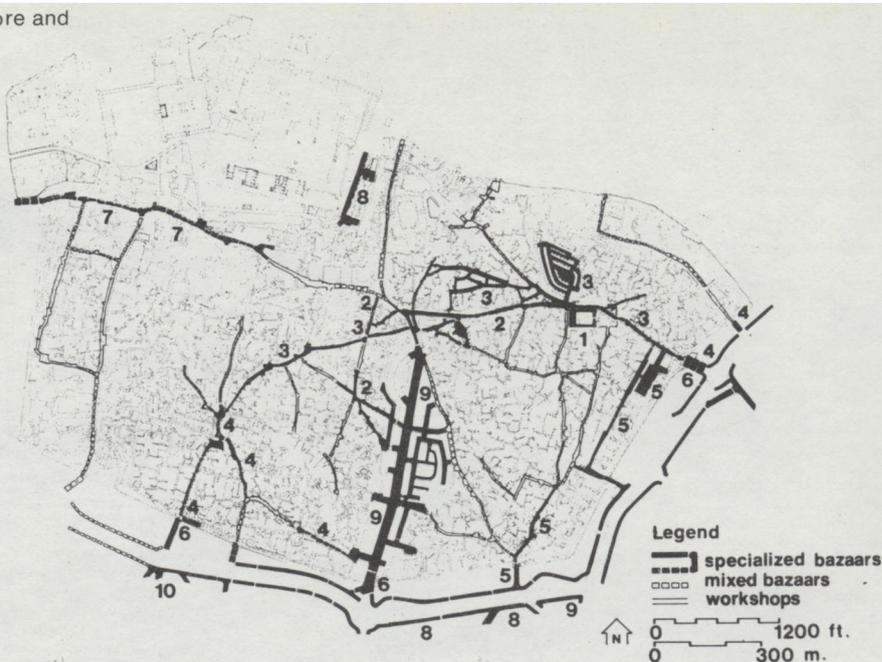


**Fig. 3D:** The historical evolution of the walled city of Delhi, showing:

- A. The original site with Islam Shah's old fort on the river and the ruins of Firozabad south of the dotted line.
- B. The developed infrastructure of Shahjahanabad.
- C. The spontaneously developed "flesh" of Shahjahanabad: the *havelis* (mansions) of the elite and the *mohallahs* which grew up around them.
- D. Areas obliterated by the British.
- E. The present city, with colonial and postcolonial development shown darkened.

**Figs. 4L and 4D:** The current bazaars of old Lahore and old Delhi:

1. central mosque
2. books, leatherworkers, shoes
3. cloth and clothing accessories
4. retail food, meats and produce
5. Wholesale food, wool
6. pottery and baskets
7. entertainment
8. auto and truck parts, repairs
9. chemicals, machinery, industrial products, wholesale paper and printing
10. (unlabeled in legend)



The present form of old Lahore was consolidated during the Mughal period. The wall whose trace is evident today was constructed by Akbar around 1568. It contained thirteen gates, of which the more important guarded the old main roads. These roads were fixed in their alignment by the gates at their outer ends and by the fort and original settlements at their inner ends. A few adjustments to the city's design were made in the middle of the seventeenth century when two monumental focal mosques were built. Thus the main lines of the walled city's present street pattern were established, as shown in the fourth historical map.

As in most traditional Muslim cities, these main routes determined the location of the vast network of bazaars. These, along with the mosques, formed the public realm of the city — linear in form, rather than focal as in medieval European cities with their market squares. The principal bazaars were highly specialized by commodity, and quite logically arranged. Near the central mosque, incense and religious books were sold. The leatherworkers who supplied the book bindings were located nearby, and thus the slipper bazaar. Radiating outward from these were the related cloth and embroidery bazaars and the jewelers. A second — and semispecialized — group of bazaars was diffused throughout the residential quarters of the city. These included the food sellers, tailors, oilpressers and other merchants providing the daily needs of the people. Finally, near the gates of the city were located those bazaars dealing in bulk commodities too difficult to carry through the narrow pedestrian streets; wholesale grain and spices, wool, pottery, fresh produce, etc. In old Lahore these commercial patterns haven't changed a great deal, up to the present time (see figure 4L).<sup>8</sup>

Behind and between the bazaars were the city's private realms — the residential communities. These were organized in two levels. First there were larger quarters tied in name and location to important residents or local places. In Lahore there were nine of these quarters within the walls. Their boundaries were rather indistinct. These survive today more or less in the same form and scale, although most are now named after the nearest gate. Figure 5 shows a representative quarter with its implicit boundaries.

Within each quarter was a large number of smaller, more tightly knit communities. These were extremely private places accommodating separate clans or large families, occupational groups (usually operating a nearby bazaar), or groups who had migrated from a common place outside the city. These communities, called *mohallahs*, usually took the form of cul-de-sac branches off the bazaars. Sometimes they even had their own gates, which were closed at night. Twentieth century evolution in Lahore has eroded much of the distinct social character of the *mohallahs*, but vestiges remain and their earlier physical patterns are still traceable.

The evolution of old Lahore from its Hindu origins through the early Mughal era clearly set the physical structure of the city. In contrast to what we will learn of old Delhi, in Lahore most of this development was spontaneous. Each new building, each new street was added in a way that made common sense in terms of economic or domestic requirements. Even the complement of monuments evolved in the same way. For although each

unit (mosque, garden or palace compound) had a formal site plan, it was conceived as an independent entity, almost entirely unrelated to its surroundings. Two examples of this small scale formal planning in a larger unstructured context can be seen in the plan of the city today. In the southwest corner there is an area — largely residential — whose street pattern is almost gridded. This was probably later Mughal development on open land which had been enclosed by Akbar's wall. It was most likely first occupied by the Persian style gardens of courtiers to whom the land was assigned. In later years, under growing pressure for living space, the land was probably subdivided for more housing along the pattern used in the gardens. Similarly, the gridded area along the eastern wall was a wholesale food market planned by Akbar for another vacant site (see the last map of figure 3).

Developments (or demolitions) during Lahore's colonial and independent periods also have left their mark on the city, although not so powerfully as to erode the dominance of its informal design patterns. In fact, the partial destruction of the city wall by the British, surprisingly, tended to reinforce the original character. In the process the city's moat was replaced by a circumferential public garden; part of this space was later used for construction of a broad circular thoroughfare for heavy vehicular traffic. The garden and the Ring Road have had the practical effect of another wall.

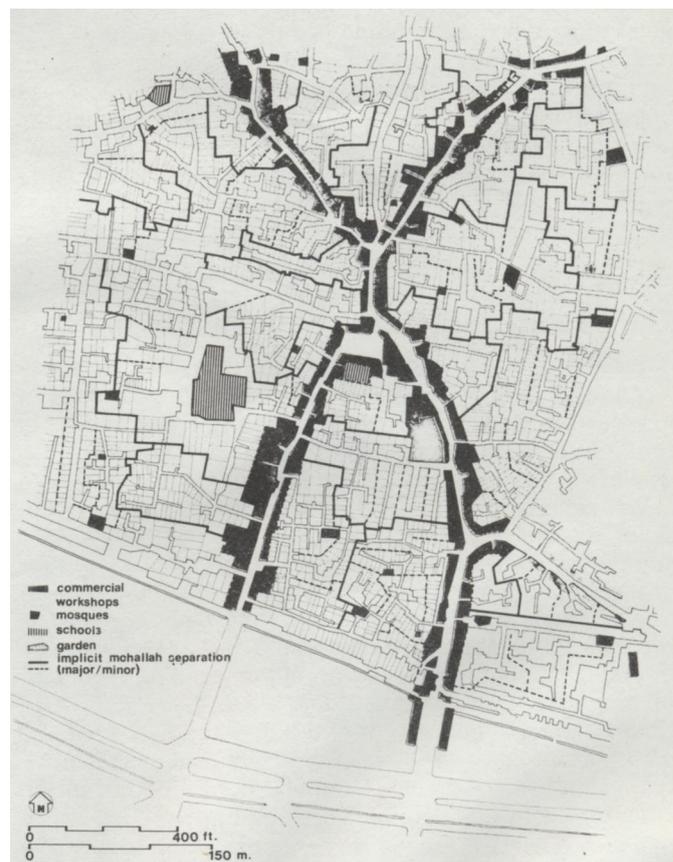


Fig. 5: A typical quarter in old Lahore.

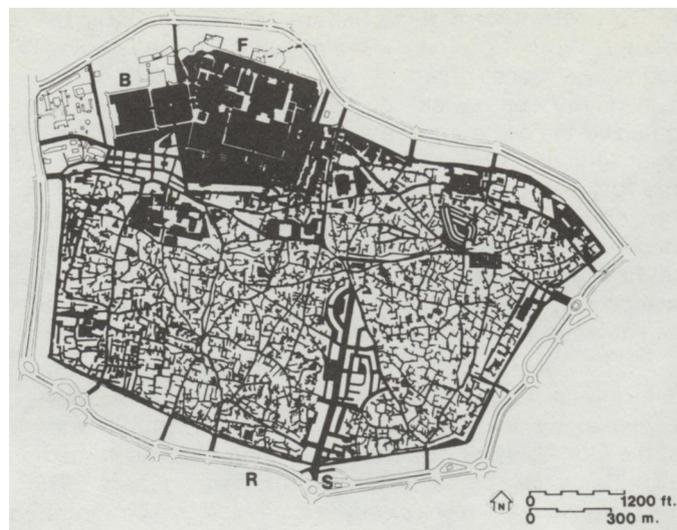
More recently a significant "urban renewal" project was undertaken in an area on the south side of the walled city, called Shahalmi Bazaar. This former Hindu quarter was put to the torch and totally destroyed in the 1947 partition riots. The scope of that area's redevelopment becomes immediately apparent on the map (fig. 6L), since the street pattern is totally different from the rest of the old city. The former bazaar is now a wide, dual-carriage-way street which permits entry of heavy trucks and buses into the center of the city. A new road around the fort is the only other such modern artery in the walled city. The new Shahalmi "bazaar" is lined with large scale office and commercial blocks of a disconcertingly alien character.

Obviously the twentieth century has also brought changes to the social character of the walled city. The elite families, who once provided the communities' leadership and a gracious cultural life, have moved to the "modern" parts of Lahore. They have been succeeded by the more prosperous merchants. Also, the traditional extended family structure has eroded substantially. Residential densities are about four times what they were during the Mughal era. Much of this new population are refugees who fled from India in 1947. Living space is greatly reduced. A typical family of six might occupy two small rooms in a large building which once housed only one family rather than eight.

In spite of these changes, however, the life style in the walled city is still more traditional in character than "modern." The nature and scale of trading haven't changed much. Even though kinship patterns no longer form the basis for mohallah organization, the physical structure of these "neighborhoods" preserves a friendly and intimate scale. Religion is still an important part of daily life, and the dozens of mosques are actively used. And, perhaps more than anything else, the narrowness of the streets both excludes penetration by large vehicles and promotes personal interaction. The resulting environment is a familiar and comfortable one for a large majority of the population — those who have had neither the wealth nor inclination to adopt a Western life style.

### The evolution of the walled city of Delhi

If the situation of Lahore was strategic, that of Delhi has always been infinitely more so. For its location is at the narrow junction of the Indus watershed with the broad Gangetic plain (see figure 1). It is in fact the gateway to the south of India and to Bengal in the east. There have been many cities on the site of present metropolitan Delhi, as indicated in figure 6D). Each of these was located on a somewhat different site from its predecessor — most of them about ten miles south of the place where Shah Jahan would build his capital. Only two of the previous settlements left ruins which partially overlapped the later Mughal site — Indraprastha, probably founded in the fifteenth century BC and Firozabad (1354 AD). Delhi's Muslim cultural orientation began in 1206 AD with the arrival of the first of the Delhi Sultans from Afghanistan. However, the Mughals didn't appear on the scene until the city's capture by Babur in 1526. It remained, however, for his son Humayun to secure the region and establish his capital in Delhi. During the reign of these two Mughals and their successors, Akbar

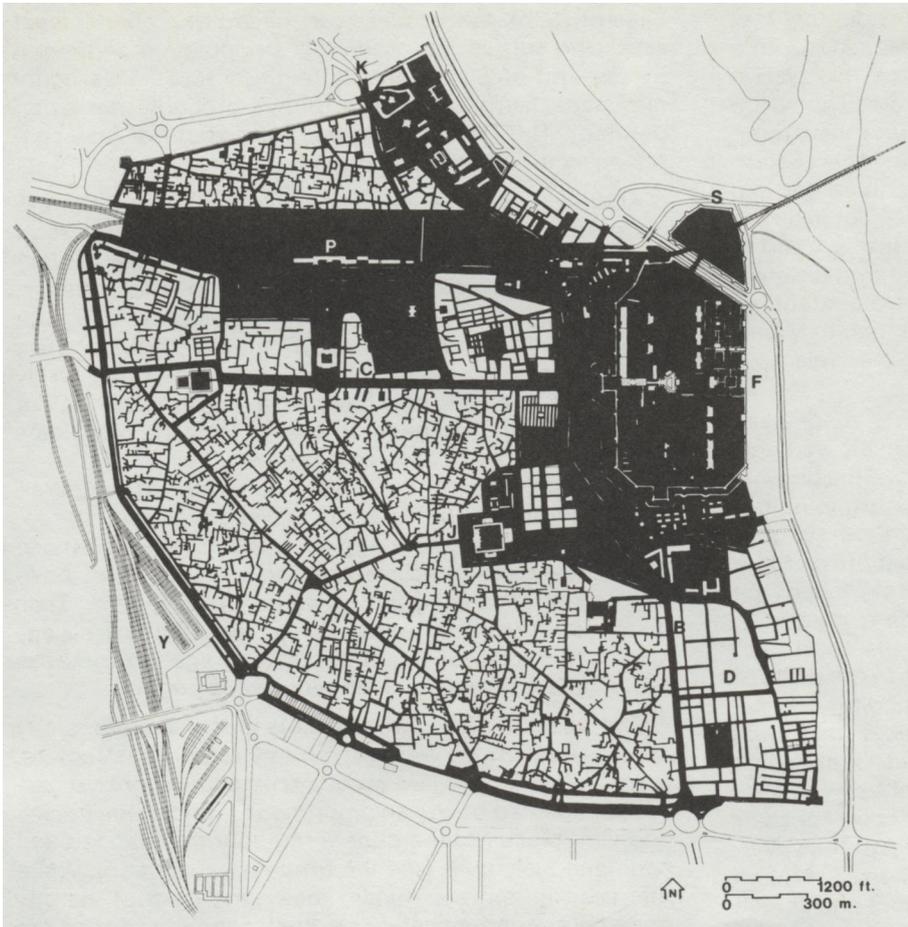


**Fig. 6L:** The walled city of Lahore, showing the Mughal fort (F), the Badshahi Mosque (B), Shahalmi Bazaar (B) as rebuilt after 1947, and the Ring Road (R).

and Jehangir, Delhi remained a place of political importance. But the court shifted its residence repeatedly between there, Agra, Fatehpur Sikri and Lahore. In 1638, however, Shah Jahan, the greatest of the Mughal builders, determined to construct an entirely new capital at Delhi. This remarkable city, which he modestly named Shahjahanabad, was located immediately on the west bank of the Yamuna, partially atop but slightly north of Indraprastha, the original Hindu settlement. By 1659, its major elements were completed. (See the first two maps of the historical series in figure 3D.)

As mentioned earlier, Delhi had looked to the west since the thirteenth century. During the Mughal era the orientation of the court became predominantly Persian. That language replaced Turkish in the court of Akbar and subsequently many Persian poets and artisans were imported. Moreover, there was substantial commercial and diplomatic contact between the Mughals and the Safavid empire. It is not surprising therefore that Shah Jahan's plans for his new city would be influenced by Persian urban design practices. This is especially so considering the recent construction of a fabulous new capital at Isfahan by Shah Abbas (1589-1627)<sup>10</sup> The Persian influence in part accounts for the formalism and symmetry of the palaces, gardens and boulevards of Shahjahanabad as well as for the style of its major buildings. At the same time, however, the Persian formalism may have been reinforced by long standing Hindu traditions of city building codified in the Silpa Shastras during the ancient Vedic era (roughly 1500-600 BC).<sup>11</sup> In any case, the formalism of old Delhi contrasts markedly with the informal growth of old Lahore.

Shah Jahan's architects, Ustad Hamid and Ustad Ahmad clearly brought to their task some formal influences.<sup>12</sup> At the same time they were confronted with certain site features which would preclude absolute symmetry: two noticeable rocky hillocks in an otherwise flat plain; the river with its irregular and constantly shifting course and its severe monsoon floods; the ruins of two



**Fig. 6D:** The walled city of Delhi, showing the fort (F), Chandi Chowk (C), Faiz Bazar (B), the Jama Masjid (J), Selimgarh (S), Kashmiri Gate (K), Daryaganj (D), the railway passenger station (P), and the freight yards (Y).

previous cities on the south side of the site; beside the river a small but massive fortress, built by the Afghan ruler Islam Shah in 1546; and a previously developed network of long distance roads. In spite of these irregularities, however, the main lines of Shahjahanabad retained their formal geometry.

The twin foci of the city are the Red Fort and the Jama Masjid (Friday Mosque). The fort was built immediately on the river bank and adjacent to Selimgarh, the fortress of Islam Shah. The Red Fort took the shape of an elongated octagon of roughly 500 by 1000 yards. Its axes were precisely aligned with the cardinal points of the compass. From the two gates of the fort on the west and south sides extended elaborate boulevards. Each was lined with trees and carried a deep, stone-lined canal down its center. They were quite similar in character to the famous Chahar Bagh in Isfahan. Clearly these two boulevards, along with the fort, were intended as the dual spines of the city's plan, emphasizing the power and magnificence of the Mughal court. Of these boulevards, *Chandni Chowk*, running west of the fort was the more important. It extended to a major gate in the wall of the city, but not directly. Its straight axis was interrupted by a large mosque which the roadway sidestepped to the north before continuing. Thus Chandni Chowk was pro-

vided with monumental visual termini at both ends. Between those points the boulevard was punctuated by two small open spaces or *chowks* — one square, the other octagonal. The latter of these gave its name to the entire street. It established a cross axis to the north for the construction of a large *serai* by Jahanara Begum, one of Shah Jahan's daughters. Behind that large building in turn was centered an immense Persian style garden, nearly a thousand yards long. The east-west axis of this garden lay along a section of the canal commissioned by Shah Jahan to bring water from the Yamuna about six miles upstream from Delhi. Subsequently other palaces and gardens were added to the north of Chandni Chowk, establishing the dominance of courtiers in that half of the city. The southern half became more densely built and accommodated the bulk of the ordinary folk of the city.

In the midst of this southern sector, the Jama Masjid served as Shahjahanabad's spiritual focus. Located about 500 yards southwest of the Red Fort, this elegantly designed structure is by far the largest mosque in south Asia. Its grandeur is accentuated by its location atop one of the city's two hills. (The other, more of a ridge actually, forms the northern boundary of the city.) Thus it provides a vertical point of reference in contradistinction to the horizontal one of the fort and its radiating axes.

Nonetheless, a system of four axes — considerably less striking — also extends from the Jama Masjid. Due to the orientation of the mosque toward Mecca, this system is not quite aligned with that of the Red Fort. The north-south axes of the mosque quickly blend into the irregular street pattern of the surrounding city. The eastern and western axes were slightly more monumental and contained a small round chowk as a kind of “knuckle” to blend the streets to the southern gate of the fort and to the city’s main well. These chowks repeat in a different way those used to modulate the boulevards extending from the fort. Each set, in its different context, provides a more human scale to the design and sets up a series of activity nodes as well.

The configuration of the walls of Shahjahanabad raises an important question. Except along the river, we know that the wall and six of its gates were a part of the original city design. Why then is the shape so amorphous in a design whose internal structure is otherwise so geometric? First of all, the main preoccupation of Shah Jahan and his architects was clearly with the foci of the city rather than its edges. This was to be a royal city, expressive of the power and grandeur of the court. Accordingly, less design attention was given to the walls of the city than to those of the fort. Surrounding the fort provision was made for the gardens, palaces, and mosques of the royal family. These were used to embellish the main axes of the city. Behind these, sites were allocated to other important members of the court for their mansions. Their precise location and design, however, was not a part of the grand esthetic scheme. Around these mansions, in turn, were built the clay and thatch huts of the rest of the population, most of whom depended on one or another of the nobles for their patronage. This arrangement formed the basis for a system of mohallahs similar to that in old Lahore. The spatial configuration of the mohallahs remained based primarily on nodes rather than edges. In any case, the locational decisions were left to individuals rather than centralized regulation according to some overall design. In short, the farther from the fort and its radial axes, the less the concern for urban design. Placement of the city walls, therefore, appears to have been primarily a functional matter in which provision for adequate space for the anticipated population was the predominant concern.

The fact that originally old Delhi’s walls were built of mud in a short four month period reinforces the conclusion that the walls were of little esthetic concern. Rain soon destroyed that work and the walls were reconstructed of stone, presumably along the same alignment. Again, the matter appears to have been a functional consideration. The alignment of the walls was also probably influenced by the location of preexisting structures and ruins in the area. Thus, on the southern side of the city, the wall was built in a long sweeping curve rather than in a geometric form.

The completion of Delhi’s walls ended two remarkable decades of building by Shah Jahan and his family, which produced the highly formal internal structure of an elegant imperial capital. It is this internal structure which sets Shahjahanabad apart from Lahore. After the completion of this “skeleton,” however, the “flesh” of the city was added in the spontaneous manner similar to that old Lahore, and common to most traditional cities. In the

case of Delhi, this process proceeded at a phenomenal rate. One source<sup>13</sup> puts the city’s population at 150,000 by the end of Shah Jahan’s reign in 1657. This figure may seem surprising large, but is probably not exaggerated. The Delhi region had been more or less continuously urbanized for centuries.

Additional population came in part from the work force required for the massive construction effort of Shah Jahan. These workers would augment the military establishment and the vast numbers of servants, artisans, tradesmen, officials and clerks necessary for the support of a large and lavish court. Finally, the enclosure of a two square mile area within high stone walls surely provided a relatively safe haven in a region where violent changes of rule had been common. Thus the mohallahs of old Delhi were quickly established.

The social structure of old Delhi’s mohallahs paralleled Lahore’s. The original basis, as previously described, was the patronage of wealthy families whose homes were scattered through the city. Later on, however, other organizing principles began to appear. Thus quarters with distinct occupational specialities grew up. This in turn resulted in substantial segregation by caste, religion, family and place of geographic origin.

The basic picture of old Delhi is thus complete: a city with a Persian style, highly formalized infrastructure, embellished by elegant monuments and expansive gardens, and filled out by an amorphous fabric of the homes and workplaces of the poor — the latter unplanned and spontaneously built (see the third historical map). While this description is still valid today, the form of the city nonetheless underwent some drastic changes during the British colonial era.

The Mughal empire, already in a weakened condition, effectively came to an end with the savage raid of the Persian, Nadir Shah, in 1739. This event inaugurated a period of instability and dominance by various successive outside masters. The last of these were the British, who assumed the administration of the city in 1803, leaving the subsequent Mughal shahs as a series of pathetic powerless figureheads.

In the first decades of British rule, the physical changes to the walled city were relatively minor. In Daryaganj, the southeasternmost quarter of the city and formerly the site of several princely *havelis* (mansions), a cantonment was established for the “native” regiments of the army. On the north, in a band from Kashmiri Gate to Selimgarh, a variety of civil and military structures appeared, again displacing some magnificent palaces and *havelis*.

The character of the British impact on old Delhi changed dramatically following 1857. At this time rebellious native soldiers seized the city. Not only did the city incur tremendous damage in the ensuing battle, but following its recapture by the British, a swath of land about three to four hundred yards wide was cleared around the Red Fort to permit better artillery fire. About two thirds of the area inside the fort was also levelled in order to construct barracks for the garrison stationed there. Thus by the 1860s, virtually the entire eastern third of the city was transformed by the British.

Yet other changes followed rapidly. The trees lining Chandni Chowk and Faiz Bazaar were cut down and

their canals filled in order to pave these thoroughfares from curb to curb. Other broad roadways capable of serving heavy military traffic were added. Finally, multiple railway lines joining the city to Bombay and Calcutta sliced through the northern part of the walled city and encircled it on the south and west. The railway crossed the Yamuna on a new bridge and penetrated the old fortress of Islam Shah. Delhi's main passenger station, with its associated marshalling yards and two flanking roadways, was constructed inside the old city. This required clearance of a path over three hundred yards wide from one side of the city to the other. The area north of the railway thus became almost completely cut off from the rest of the city. Delhi's main freight terminal was established on the southwest edge of the city, again along with extensive yards and roadways (see the last map of figure 3D).

After 1911, when King George V announced that the capital of India would be shifted to Delhi from Calcutta, British urban planners turned their attention to the construction of a vast new Delhi — historically the eighth city in the locality south of Shahjahanabad. The old city had already been transformed by the surgery of the nineteenth century. What had been a relatively closed city, in spite of its two major Mughal boulevards, had become quite open to heavy through and peripheral traffic. This has created conditions highly attractive to wholesale commerce, which has grown phenomenally in old Delhi. At the present time old Delhi contains the largest mercantile concentration in northern India. This activity has virtually undermined the exclusively residential character of the city. Despite traffic jams which block the major arteries, even the innermost lanes are lined with the workshops of printers, machinists, paper merchants, grain merchants, etc (see figure 4D). The pressure of this activity, along with the attraction of a more spacious environment in New Delhi, has caused the relocation of the walled city's former elite, whose havelis now serve as warehouses.

The new commercial activity has, in turn, drawn more and more poor workers and their families to the area.<sup>14</sup> They find only the most meager and ill-maintained accommodations. The resulting communities have, in recent years, been officially classified as slums, generating the most recent assault on the city. Delhi's urban planners, using renewal and public housing approaches borrowed from the West, have undertaken a number of clearance schemes. The smaller of these have resulted in clusters of high rise blocks of flats which, although alien to their environment, do not substantially interrupt the fabric of the city. One recent project, however, involved the destruction of a rather large area on the south edge of the city. Around 450 families were displaced. On the cleared site less than two hundred new European style apartments were built. The site plan of the complex is totally unrelated to the structure of the surrounding area and the buildings are quite out of place. The project was a cause célèbre during the first administration of Indira Gandhi, resulting in some serious questioning about the nature of appropriate planning for the walled city. Perhaps more sensitive approaches will result from this concern.

## A comparative summary

It is obvious from the brief sketches of these two cities that much more conscious urban design attention was devoted to Mughal Delhi. However, before considering the impact of this on the contemporary city, it will be useful to summarize all of the similarities and differences between the two cities. These can be categorized as follows:

**Early historical considerations:** Old Lahore was a city which grew slowly over time. Akbar's wall enclosed an area which was probably once the site of a fort and two outlying villages which eventually grew together and filled the whole area. The pattern of these early settlements largely determined the form of subsequent urban development. Delhi, on the other hand, was consciously laid out and built over a period of about twenty years. Its site was mainly clear except for some three hundred year old ruins containing relatively few sizeable or substantial buildings. There may have been some active settlement there when Shah Jahan began his city, but probably of rather low densities. Thus his architects were able to select a site offering relatively few constraints to the geometric infrastructure they planned.

The existence of the earlier settlement pattern at Lahore dictated an extramural setting for the spacious gardens, monumental tombs, and other grand ensembles which so delighted the Mughals. This resulted in a huge "suburban" fringe of such constructions extending to the east and south as far as six miles in some places. These included the famous Shalimar Gardens and the great canal which brought it water from the Ravi River. In Delhi similar creations could be included in the grand design for the city — within the walls. These occupied a large area on the northern edge of Chandni Chowk. Moreover, Ali Mardan Khan's canal, which in Lahore was strictly functional and located well beyond the walls, became a central design element within Shahjahanabad. These features lent a remarkable elegance to Shahjahanabad. Out of far greater significance were the Jama Masjid, the Red Fort and its two radiating axes. These elements provided a clear, formalized structure to the city. Their layout emphasized the grandeur of the two major monuments and also made possible the organization of many of the city's other architectural embellishments. This could never have been done in Lahore.

**The impact of colonialism:** The British presence in Lahore did not result in significant changes to the physical structure of the old city. Their cantonments and civil station were built over and among the "suburban" Mughal monuments. Only two hospitals and a very small amount of new residential construction were added within the limits of the Mughal city, and these in an area previously unoccupied. The walls were partially razed by the British, but a surrounding garden constructed at the same time served as effectively in containing the fabric of the city and separating it from the rather dense development which by that time had grown up in the immediate vicinity.

In Delhi the colonial mark on the old city was far more drastic. In one sense, at least, this may seem contradictory, for the British razed the walls of Lahore without

"opening" that old city. Yet, in 1803, they reinforced the walls of Delhi (which remained perhaps 90 percent intact after the siege of 1857). But the penetration of the city by other means was devastating. Prior to 1857, the British had already occupied much of the eastern edge of the city with their garrisons and administrative structures. Following the Sepoy Rebellion, British destruction inside the walls accelerated. Their vengeance and concern for future defense led to the clearance of a vast area around (and within) the Red Fort and to the rape of Chandni Chowk and Faiz Bazaar. Finally, the appearance of a railway in Delhi resulted in clearance of a broad swath of land totally separating the northern part of the city from the rest. Although Lahore was also an important rail center in British India, the lines, yards, workshops and stations were at some distance from the old city.

**Planned redevelopment in the Independent Period:** Both old Lahore and old Delhi have been the sites of "modern" urban renewal projects. In Lahore these were directed at reconstruction of Hindu quarters burned out during the 1947 partition disturbances. In Delhi they were more recent "slum clearance" projects. But in both cases, the character of new development is quite alien to its surroundings and the previous life style of the community. Depending on the size of the projects, they have more or less interrupted the infrastructure of the city.

In Lahore, the largest such scheme brought heavy vehicular traffic into the center of the city for the first time (although to nowhere near the extent in Delhi as a result of British surgery). It also provided many large, fully serviced, cleared sites at the center of the city's economic activity. On these sites there quickly appeared an intense concentration of offices and wholesalers of heavy manufactured goods. These enterprises had previously been concentrated in a newer, nonresidential area outside the walled city where modern streets facilitated transportation.

The impacts of Delhi's planned housing projects have been more subtle. On the surface one can say that while the architecture and layouts of the projects are alien and interrupt the fabric of the city, at least they have not changed the land use. "Slum" houses have been replaced by new apartments built to higher standards. While this is true, displacement has nonetheless occurred for two reasons. First, the life style enforced by the design of the projects has frequently clashed with Indian custom. Second, because of a dire housing shortage, low income residents for whom the units were intended have found it profitable to rent their flats at inflated rates to middle income families with less traditional tastes. Thus both physically and socially, the projects constitute interruptions.

**Size, population and metropolitan setting:** The walled city of Lahore is one square mile in area. Its population in 1972 was 206,000, about four times that during the Mughal era. This results in a gross population density of around 425 persons per acre, but in some places the net density is more than twice that. Old Delhi covers an area of about two square miles and houses a population of 413,000, very nearly the same gross density as Lahore.<sup>15</sup> However due to the much greater amount of

open land and the degree of commercialization in Delhi, the effective net residential densities are considerably higher.

Both of these traditional cities now appear as tiny seeds in very large metropolitan agglomerations. Lahore has a total population of around three million and covers an area of about 170 square miles. Metropolitan Delhi accommodates an estimated five million people on 580 square miles (see figures 2L and 2D). In both cases, the development which has appeared in the last century is a mixture of low density, Western style residential areas for the upper classes, industrial and military complexes, and a "modern" commercial and institutional center. All of these are interspersed with hundreds of colonies of squatters housed in tiny self-built huts. Both cities are seats of government, but on vastly different scales. Lahore is the capital of the Punjab, one of Pakistan's four provinces. New Delhi, of course, is a national capital of baroque design built on a monumental scale. Huge areas are taken up by its honorific government buildings, tree-lined boulevards and walls, and housing colonies for government workers, sized and segregated according to rank. The embassies, international agencies and resident expatriates drawn to such a capital occupy considerable area as well. Delhi is clearly a world city; Lahore a regional one.

The impact of this difference on the two walled cities however, is insignificant. It is the relative scales of their commercial activity which is critical. In this respect both Lahore and Delhi serve as the primary market centers for the northern parts of their countries. As one would expect in developing nations, much of the production activity is small scale, traditional and highly labor intensive. The highest concentration of this production and the attendant commerce is in the walled cities. Wholesaling of foodstuffs, cloth and many other commodities produced elsewhere is also concentrated there. This commercialism in Delhi serves a larger market and is a part of a generally more dynamic economy. It is also facilitated by the network of broad motor roads which penetrate the old city, as well as the proximity of the rail freight terminal. Consequently the characters of old Lahore and old Delhi have been greatly differentiated. The former is still a residential community which contains a large amount of production and commercial activity. The latter has become a market and production complex which accommodates a resident population, without the ruling classes.<sup>16</sup>

**Internal structure and pressure for change:** As indicated above, heavy vehicular traffic in Lahore is still kept, for the most part, on the periphery of the old city. This has preserved the location of retail bazaars and minimized the impact of wholesaling. In Delhi, heavy traffic penetrates. For this reason, more than any other, the pre-colonial pattern of bazaars has been distorted and overwhelmed by wholesaling (see figures 4L and 4D). In fact, congestion has become so intense that even wholesale merchants are finding business in Shahjahanabad almost unbearable. Consequently Delhi planners are currently discussing the relocation of certain categories of wholesaling to the periphery of the urban area. This could be done, they suggest, by closing the railway freight terminal on the edge of the old city and by creating new

transportation hubs where land is available for replacement facilities. The open question is what then would become of the old wholesaling district. Would vacated commercial sites be replaced by other businesses? It may be that the forces set in motion by the colonial roadway net cannot be significantly reversed.

In both old Lahore and old Delhi there has been a two-level residential structure. At the larger scale there has been a loosely defined set of "quarters" — perhaps a dozen or so — each accommodating about 20,000 to 40,000 people. The edges of these quarters are indistinct, but a focus or main spine such as a city gate, an important mosque or a major bazaar provides their sense of place and identity for the residents. These quarters still preserve their identity. At a smaller scale there have traditionally been in both cities collections of mohallahs — communities of perhaps 500 to 3,000 residents. These people were usually related by kinship, occupation or caste. Physically the mohallahs were often single cul-de-sacs off a bazaar or perhaps a semicontained tiny network of alleyways. In either case they were quite private places. In some instances they could be closed off by gateways.

The physical structure of the mohallahs can be traced today in both old Lahore and old Delhi (see figure 5 for a representative sample). Moreover, sometimes there is still strong resident identification with the mohallah. But the social links have frequently been eroded by migration to the newer parts of the city, disappearance of the elite families which once provided leadership, the impact of twentieth century technology, and in Delhi, above all by the pressure of commercial activity. The process described above has not occurred evenly in all parts of old Delhi. Some mohallahs are still very attractive places to live and others have been completely commercialized. The impact of major streets is clear in this respect. Almost without exception the degree of social disintegration of mohallahs varies inversely with distance from heavy vehicular thoroughfares.

The mohallahs of old Lahore have experienced a different sort of deterioration. In that case the primary pressure has come from the flood of Muslim refugees who arrived from India in 1947. Occupying any available space, they greatly increased the already high population density of the walled city. In the face of this phenomenon, the attraction of the formerly British districts of Lahore for upper class families was greatly increased. Where conversion of residential property to business use has occurred in Lahore, it has more commonly been in the form of small workshops operating in homes on a "putting out" arrangement. So far, except in the re-planned Shahalmi Bazaar, the larger operations so common in old Delhi are less in evidence. This is, no doubt, related to the relative strengths of the economy in the two cities, but the Delhi situation suggests the difference in transportation infrastructure is the more critical variable.

**Religious communities:** Although both of the cities under study in this article were once important Mughal centers and therefore had Muslim rulers, their populations have almost never been exclusively Muslim. Both Lahore and old Delhi predate the arrival of Islam in the subcontinent. Even during the Mughal era there were large segments

of the population who were Hindu. In fact there were usually a number of highly placed Hindu officials in the government and officers in the army. This population mix continued through the colonial period with Lahore having something of a Muslim majority and Delhi a Hindu majority. At the time of partition of Pakistan and India, there were large migrations of Hindus (and Sikhs) from Pakistan and Muslims in the opposite direction. This left Lahore with a population 95 percent Muslim. (Almost all of the remainder are Christians.) In old Delhi, however, only an estimated 25 percent of the population is Muslim.

Historically, there has been a tendency in both old Lahore and old Delhi toward segregation of the two religious communities into different quarters and mohallahs. This segregation has been neither enforced nor wholly unalloyed. Rather it has been largely as a consequence of the social structure of mohallahs previously described. Family, occupation and caste are closely intertwined with religion. Groupings based on the first three are likely to create separate religious groupings as well. For example, it has been common for more businesses to be run by Hindus and for certain crafts to be dominated by Muslims.

In spite of the current presence of several clearly Hindu and Muslim quarters in old Delhi (such patterns no longer exist in Lahore), it is curious that almost no physical distinction exists. The cultural traditions of each community are both strong and distinct. Much has been written about the nature of the "typically" Muslim city and, in ancient Vedic literature at least, about the prescribed form of Hindu cities. Yet today a visitor to old Delhi locates the religious communities by the presence of certain trades, the appearance and clothing of people, place names and the kinds of foods sold in the streets. The only physical clue is the locations of temples and mosques. No doubt the same was true in Lahore prior to partition. It seems that centuries of coexistence have produced some elements of a common regional culture at least as strong as the religions themselves.

**Atmosphere:** Perhaps owing to the artistic influence of Persia, there was a remarkable graciousness to Mughal life. This was most obvious at the court and among the elite. But this same quality seemed to infuse the lives of much of the population. It was reflected, of course, in the sumptuous and monumental buildings and in the art and poetry of the court. But poetry, elegance in story telling, craftsmanship, and a courteous and dignified personal bearing were common qualities as noted by many foreign travellers.<sup>17</sup> These traditions survived to varying degrees in Lahore and Delhi even through the colonial era, although today they are mostly memories in both places.<sup>18</sup> In Delhi it was the abundance of elegant architecture and gardens which, more than anything else, expressed this gracious life style. The British demolitions and encroachment of commerce and vehicles have taken their toll. Perhaps the antagonism to British rule also affected the sophisticated manners, as has the ubiquitous spread of Western culture and the sheer size of metropolitan Delhi. In Lahore the same erosion has occurred, but the memories of former graciousness are fresher.<sup>19</sup> The West comes more slowly to provincial places, and Lahore has long been known as a cultural

center. While Delhi may be the Washington of South Asia, Lahore has been a Boston. Perhaps because of this, as well as the surviving pedestrian character, the visitor senses more of the former ambience in a walk through old Lahore and in listening to the reminiscences of older citizens.

## Conclusions

Successful examples of urban design should realize two objectives. They should provide a clarity and order to the form of the city — structuring its fabric and organizing its individual works of architecture. In accomplishing this, the urban designer orients the inhabitants of the city and provides them with a sense of place at a variety of scales. Second, successful urban design improves the esthetic quality of the environment. This can result in a variety of emotional responses in the viewer, often deliberately induced: pleasure, calm respect for power, or pride.

Both organization and esthetics were obviously in the minds of Shah Jahan and his architects in the planning of his new capital at Delhi. Their success in achieving them clearly distinguished Shahjahanabad from old Lahore. Both cities had magnificent forts and mosques but the latter city evolved over the centuries without a formal predetermined skeleton like Delhi's. The order provided by Chandni Chowk and Faiz Bazaar still clearly orients both residents and visitors to that city. They still succeed in emphasizing the grandeur of the Red Fort. Moreover, just as this horizontal frame of reference still works, so does the vertical one provided by the Jama Masjid set atop its hill. Some of the details of this urban structure also remain. The length of Chandni Chowk is still effectively modulated by the small open spaces which divide it into thirds. Its western visual terminus is still provided by the Fatehpuri Masjid. The British built their city hall on the site of Jahanara Begum's serai (fronting on Chandni Chowk) and more or less preserved her garden, thus retaining two important subaxes of the composition.

As we have seen, however, many of the original design details have disappeared. Faiz Bazaar has lost its modulating spaces, and several of its flanking structures were demolished by the British. The canals and trees of both boulevards have been removed, robbing them of their ambience and opening them to heavy traffic. Their flanking arcades retain their original commercial function, but are half buried behind an amazing confusion of signs. Much of the interior of the Red Fort was razed and either left vacant or replaced by a series of ungainly looking barracks. The designed system of streets and small chowks which once linked the fort and the Jama Masjid has also been cleared away along with the shops, mosques, and houses which flanked and animated them. In spite of all of this, however, the main lines of Ustad Ahmad and Ustad Hamid's design for Shahjahanabad still give it a visual cohesion which old Lahore could never have.

Two other factors which distinguish these cities seem contradictory. Old Delhi is far more congested than old Lahore, but is also more open. Most of the openness, though, resulted from the clearances of the British in the

late nineteenth century. These clearances made possible the penetration of the city by broad motorways and railways which subsequently generated an overwhelming amount of commercial trade, and with it, congestion. Lahore, by contrast, has for the most part retained its pedestrian character. Its shops are serviced by pushcarts. Wholesale merchants have remained in their original locations near the walls where they are accessible to the Ring Road with its truck traffic.

Both of the major factors which distinguish these two Mughal cities today have to do with their infrastructure. The axes established by Shah Jahan for esthetic reasons and as an armature for subsequent spontaneous growth made a deliberate contribution to the quality of life in the city. Delhi thus acquired the best features of both formal and informal planning. The corridors cut through pre-existing fabric by the British in a surgical fashion, and for strictly functional reasons, led to alarming deterioration of the quality of life. There is clearly a lesson in this for contemporary urban planners and designers.

One final point needs to be made about the form of old Lahore and old Delhi. In both cases the traditional unself-conscious processes of mohallah formation have yielded similar patterns in the more private parts of the city. In spite of substantial deterioration in social structure, this mohallah organization still provides a valuable basis for identification with places and groups. Thus without the benefit of conscious planning, one of the fundamental objectives of urban design has been achieved. This sort of structure, of course, is a feature of almost all traditional cities. Again, there is a message for planners working in the Third World. Look very closely both at your goals and the "slums" you would like to clear.

## References

1. The walls of Lahore no longer exist, and only about half those of Delhi. But rings of open space and major circumferential thoroughfares have taken their place. Like the walls, they serve to contain and compress new internal development. Thus the form of the original cities has not been substantially affected.
2. The term "traditional city" is used here to describe those communities in which a commonly held set of conservative values — evolving only very slowly — determine to a very great extent the pattern of life and the built environment which supports it. Thus even in a case like Mughal Delhi, in which conscious urban design established the "bones" of the city, its "flesh" was largely the unconscious expression of traditional values and evolved slowly and continuously. In fact it can also be said that the layouts and monuments designed by the emperors and their architects followed traditional patterns of regal establishments.
3. The only useful sources in English are: Muhammed Baqir, *Lahore, Past and Present* (Punjab University Press, Lahore, 1952); and Syed Muhammed Latif, *Lahore: Its History, Architectural Remains and Antiquities* (Lahore, 1892).
4. For details of typical British urban development in India, see: Anthony D. King, *Colonial Urban Development: Culture, Social Power and Environment* (Routledge and Kegan Paul, London, 1976).
5. Source: prepublication data from 1972 Census of Population of Pakistan for the nine quarters of the walled city. These do not include the rather large areas occupied by the fort, the Badshahi Mosque and adjacent institutions, where there are no residents.

6. There are two prevalent opinions about the probable location of the early Hindu city. One places it at the site of the present fort and the other at Icchra, a Lahore neighborhood about three miles south of the fort. I am inclined to the former view for several reasons. The early fort would have almost certainly been at the edge of the river which, in its present course at least, flows no closer than two miles to Icchra. (Although there is some evidence that a former watercourse passed near Icchra, it seems doubtful that this was the former course of the Ravi.) Secondly, the topography and archeological evidence found at the fort and nearby suggest that location. Finally, the major roads from beyond the city converge at the fort rather than at Icchra. In most cities these routes seldom change and can be traced even in the expanded fabric of the contemporary city.
7. See Grenfell Rudduck, *Urban Biographies: Karachi, Lahore, Dacca* (Government of Pakistan, Planning Commission, 1965).
8. These patterns are typical of traditional Muslim cities elsewhere. For details see: Georges Marçais, "La conception des villes dans l'Islam," *Revue d'Alger*, ii (1945), pp. 514-33; Xavier de Planhol, *The World of Islam* (Cornell University Press, 1959); and G.E. von Grunebaum, *Islam: Essays in the Nature and Growth of a Cultural Tradition* (Barnes and Noble, 1961), chapter viii: "The structure of the Muslim town."
9. Several good historical references on the development of Delhi are: R. Nath, *Monuments of Delhi, A Historical Study* (Ambika Publications, Delhi, 1979) (this is a translation of Sir Syed Ahmed Khan's *Athar al Sanadid*, 1846, 2nd ed. 1854); Gavin Hambly, *Cities of Mughal India* (Elek Books Ltd., London, 1977); Carr Stephens, *The Archaeology and Monumental Remains of Delhi*, 1876 (reprinted by Ashish Publishing House, Delhi); Y.D. Sharma, *Delhi and Its Neighborhood* (Archaeological Survey of India, Delhi, 1964).
10. See Nader Ardalan, and Laleh Bakhtiar, *The Sense of Unity* (University of Chicago Press, 1973); and Laurence Lockhart, "Shah Abbas's Isfahan" in Arnold Toynbee, *Cities of Destiny* (Weathervane Books, New York, 1967).
11. See Prasanna-Kumara Achârye, *Indian Architecture According to the Mânasâra-Silpasâstra* (Allahabad, 1928); Binode Behari Dutt, *Town Planning in Ancient India* (Calcutta, 1925); and Prabhakar V. Begde, *Ancient and Medieval Town Planning in India* (Sagar Publications, Delhi, 1978).
12. One source (H. Goetz, *India, Five Thousand years of Indian Art*, London, 1959) refers to Ustad Ahmad and Ustad Hamid as Persian architects. However, Dayal (ref. 18) speaks of the architect of the Red Fort as Ustad Ahmad Lahori. In any case the Persian influence is clear. Yet another, and secondary, influence may well have been the Alexandrine cities of Herat and Taxila. Both were rigidly geometric and lay on the route between Persia and Delhi.
13. Sikha Sain, "Functional change and urban structure: Shahjahnabad," unpublished postgraduate thesis, School of Planning and Architecture, Delhi, 1978.
14. They were preceded in 1947 by substantial numbers of Hindu refugees arriving from Pakistan.
15. Source: Census of India, 1971.
16. Another interesting difference is the type of bazaars found within the walled cities. In Lahore they are almost exclusively those selling traditional commodities (cloth, food-stuffs and handmade items of all kinds). In old Delhi, on the other hand, there are huge wholesale markets for manufactured items such as auto parts, paper, chemicals, electronic components and heavy machinery.
17. See François Bernier, *Travels in the Mogul Empire, AD 1656-1668* (S. Chand & Co, Delhi, 1972) (3rd ed.).
18. See Maheshwar Dayal, *Rediscovering Delhi: the Story of Shahjahanabad* (S. Chand & Co, Delhi, 1975) and Ahmed Ali, *Twilight in Delhi* (Oxford, 1967).
19. See M. Saeed Malik, "Lahore's vanishing traditions: Bait-haks, akharas and takias," *Pakistan Times* (December 12 and 16, 1976).