

Architecture: A Survey

(2) Medieval & Colonial Architecture

Fort and Palace Architecture

There are many references to forts and fortifications in ancient and medieval literature dating from the Vedic times. In the *Ṛgveda* the word *pur* refers to a large settlement that was protected by fortifications or other means. The *Aitareya Brāhmaṇa* refers to the three Agnis (fires) as three forts which prevent the *asuras* (demons) from disturbing the sacrifice. Kautilya's *Arthaśāstra* gives a detailed account of an ideal fortified city. *Durg* is the Indian term for 'fort', and means 'difficult to trespass', signifying the importance of a strategic site, a strong wall and a moat to make it an impregnable bastion. There are six types of forts: the *dhanva durg* (desert fort), the *mahi durg* (the mud fort), the *jala durg* (the water fort), the *giri durg* (hill fort), the *vṛkṣa* or *vana durg* (the forest fort) and the *nara durg* (fort protected by men).

India is dotted with forts built by various rulers, such as the Rajputs and the Muslim dynasties. In northern India, fort architecture was a combination of traditional architecture and Central Asian and Persian influences. The South being geographically isolated, its architecture was not influenced to that level and generally retained its own styles.

The Rajputs were creative builders and erected some of the most illustrious and impressive forts and palaces. Some of the forts are at Kangra, Rai Pithora, Chittorgarh, Gwalior, Kumbhalgarh, Jaisalmer, Meharangarh, Junagarh, Amber, Jaigarh and Shrirangapatnam . These forts and palaces have complex compositions.



Wall of Rai Pithora fort built in 1180 CE by Prithviraj Chauhan.

The Kangra Fort (Himachal Pradesh) was built by the royal Rajput family of Kangra (the Katoca dynasty), which traces its origins to the ancient Trigarta kingdom mentioned in the *Mahābhārata*. It is the largest fort in the Himalayas and probably the oldest dated fort in India. The fort was first mentioned in Alexander the Great's war records, which would bring it to the 4th century BCE.



Kangra Fort and its Laxminarayan temple

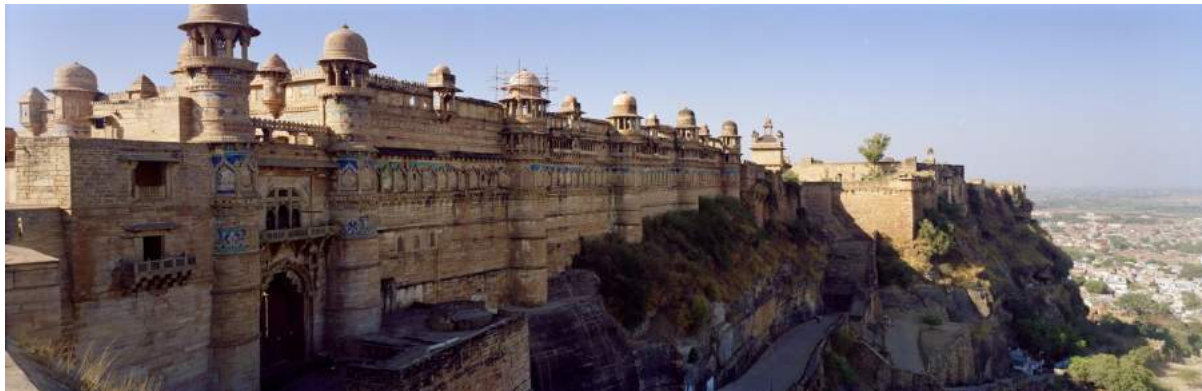


Left: Chittorgarh Fort, Right: Vijaya stambha (source: Wikipedia)

Chittorgarh, the oldest surviving fort, is said to have been constructed by the Mor kings between the 5th and the 8th centuries and is named after one of them, Chitrangada Mori, as inscribed on the coins of the period. The fort complex comprises 65 historic built structures, among them four palace complexes, nineteen main temples, four memorials and twenty functional water bodies. The first hill fort with one main entrance

was established in the 5th century and successively fortified until the 12th century. The second, a more significant defence structure, was constructed in the 15th century during the reign of the Sisodia Rajputs. Besides the palace complex, located on the highest and most secure terrain to the west of the fort, many of the other significant structures, such as the Kumbha Shyam, Mira Bai, Adi Varah and Shringar Chauri temples, and the *vijaya stambha* (pillar of victory) memorial were constructed in this second phase.

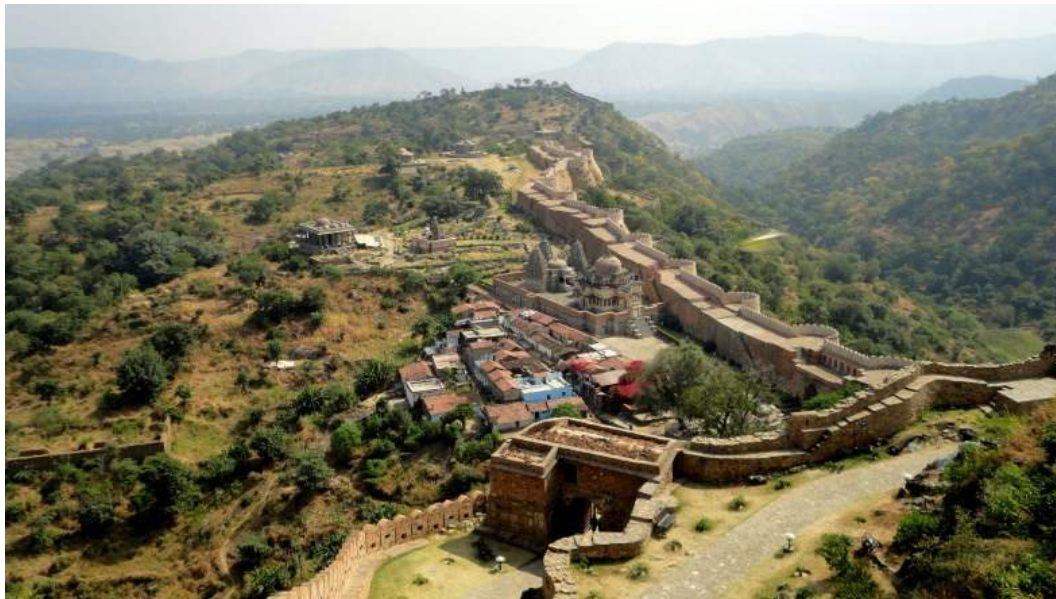
Another important surviving fort is at Gwalior. This fort, bounded by solid walls of sandstone, is sprawled over a hilltop measuring over 2 km in length. The fort complex includes temples, palaces and a number of water tanks. Moreover, the southern path is bounded by intricately carved rock-cut temples of Jain *tīrthāṅkars*. The Telī-kā-Mandir temple follows the Drāviḍa style of architecture, as does the 9th century Caturbhuj Mandir which is an example of a Vaiṣṇavite shrine. The Man Singh palace is a prominent early 16th-century palace built by Raja Man Singh Tomar.



Panoramic view of Gwalior Fort (source: Wikipedia).

The Kumbhalgarh fort is located on the banks of Banas River and is the second most important fort after that of Chittorgarh. Both were built under the rule of Rana Kumbha. The Kumbhalgarh fort is accessed through a series of seven gateways named Aret Pol, Halla Pol, Hanuman Pol, Ram Pol, Vijay Pol, Nimboo Pol and Bhairon Pol. The

fort's perimeter walls extend to 36 km. The frontal walls are three metres thick; the ramparts reach a height of 3 to 5 m, reinforced by circular structures. All gates leading towards the palace compound on the western side of the fort are roofed and flanked by additional structures. There are over 360 temples within the fort, 300 ancient Jain and the rest Hindu.



Top: The walls of the fort of Kumbhalgarh extend over 38 km. *Bottom:* Aerial view of Kumbhalgarh fort (source: Wikimedia commons)

Jaisalmer Fort, built in 1156 by Rawal Jaisal, a Bhati Rajput ruler, stands on the stark stretches of the great Thar Desert, on the Trikuta Hill. Architecturally, Jaisalmer fort consists of three layers of wall. The outer wall (the lowest) is composed of solid stone blocks. From the inner wall, Rajput warriors used to throw boiling water, oil, massive blocks of rocks on the enemies, when they got trapped between the inner and the middle walls.



Jaisalmer Fort (source: fotopedia).

Mehrangarh fort is an architectural marvel that stands proudly on a 125-m-long hill in the historic city of Jodhpur. Rao Jodha, the founder of Jodhpur, started the construction of this fort in the 15th century, but it was completed during the reign of Maharaja Jaswant Singh two centuries later. The fort wall spreads over some 5 km. The fort is situated 120 m above the city and is enclosed by imposing thick walls. The Jaypol or the gate of victory is the starting point of the fort. Maharaja Man Singh who ruled Jodhpur in the 19th century used this gate to commemorate his victory over the armies of Jaipur and Bikaner. Apart from this gate there are six other gates. The Iron Gate preserves the handprints of the wives of Maharaja Man Singh who immolated themselves

on their husband's funeral pyre. The area within this fort is covered with spacious courtyards and decorated palaces. The main palaces of the fort include Motī Mahal (Pearl Palace), Phūl Mahal (Flower Palace), Śīśā Mahal (Mirror Palace), Sileh Khānā and Daulat Khānā. Some artifacts of the era like musical instruments and royal attire are also preserved in the palaces.



Mehrangarh Fort, Jodhpur (source: fotopedia)



Junagarh fort at Bikaner (source: Wikipedia)

The Junagarh fort, located in Bikaner, is one of the most impressive fort complexes in India. It was built by Raja Rai Singh in 1588. It is one of those few forts that

are not built on a hilltop. There are 37 red sandstones (Dulmera) and marble inside the premises of the fort, which include palaces with intricately carved windows, beautiful balconies, towers, temples and pavilions. The highlights of the fort are Candra Mahal, decorated beautifully with mirrors, paintings and carved marble panels, the Phūl Mahal, the Karan Mahal and the multi-storeyed Anūp Mahal, which was once used as the governance chambers for the rulers. Gaṅgā Niwās, Dūngar Niwās, Vijai Mahal and Raṅg Mahal are also fine examples of the splendid architecture.

Amber Fort, set in a picturesque location, a little away from Jaipur, the capital of Rajasthan state, was built by the Kacchawāha Raja Man Singh in 1592. Its architectural style is a blend of Hindu and Mughal architecture. Huddling on the hilltop, the fort showcased some unique work of delicate glass mirrors on the walls and ceiling that reflect the golden rays of the sun all over the premises. The fort is built in red sandstone and white marble. The entrance to the fort is through the Sūraj Pol which opens into the Jaleb Chowk, the main courtyard. The most prominent structures inside the Amber fort are the Diwān-i-Ām (the hall of public audience) and the Diwān-i-Khās (the Hall of private audience).



Amber Fort (source: Wikimedia)

The magnificent Jaigarh Fort or ‘victory fort’ constructed near Jaipur by Sawai Jai Singh in 1726 is rugged and similar in structural design to the Amber Fort. The fort is built with thick walls of red sandstone and is spread over a vast range of 3 km in length, with a width of 1 km. The fort houses an enormous 50-ton cannon on wheels known as ‘Jaivana Cannon’ and a huge palace complex. This includes the Laxmī Vilās, Lalit Mandir and the Vilās Mandir.



Left: Double wall Jaigarh fort, Right: Diya Burj (Lamp tower) in Jaigarh fort

In contrast to the complex compositions of forts and palaces built by Rajputs, the Islamic forts and palaces, like Purānā Quilā (‘old fort’) and Lāl Quilā (‘red fort’) in Delhi, tend to be symmetrical. The architecture of these forts is a blend of Islamic, Persian and Indian styles of architecture. These were built of sandstone or marble and were endowed with *jharokhās* (a type of overhanging balcony), *chattrīs* (elevated, dome-shaped pavilions), *chajjās* (projecting eaves or cover usually supported on large carved brackets) and *jālīs* (perforated stone or latticed screen used for ventilation as well as decoration).



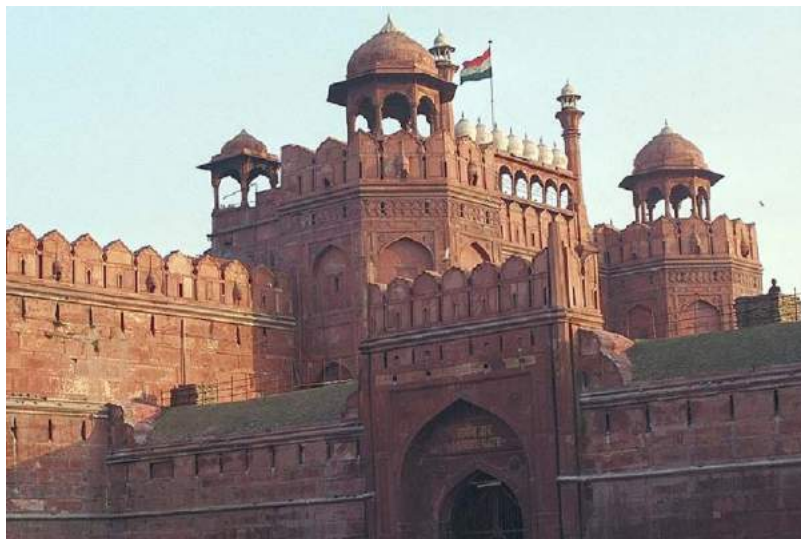
West gate of Purānā Quilā in Delhi (source: Wikipedia)

The Purānā Quilā was constructed by Humayun and Sher Shah. The walls of the fort rise to a height of 18 m, traverse about 1.5 km, and have three arched gateways: the Humayun Darwāzā, Talāqī Darwāzā and Barā Darwāzā. All the gates are huge, double-storeyed and built with red sandstone. They are flanked by two huge semi-circular bastion towers, decorated with white and coloured-marble inlays and blue tiles. They are also replete with ornate overhanging *jharokhās* (balconies) and are topped by pillared *chattrīs* (pavilions).

Another important fort is Agra's majestic Red Fort built by Emperor Akbar. It contains numerous impressive structures like the Jahāngīr Mahal, Khās Mahal, Dīwan-i-Khās, Dīwan-i-Ām, Macchī Bhawan and Motī Masjid. This Agra fort is enclosed by a double battlemented massive wall of red sandstone. Most of the buildings added later used marble as the chief construction material.

Delhi's Lāl Quilā (Red Fort) and Agra's Tāj Mahal built in the mid-17th century by Emperor Shahjahan are the pinnacle of Mughal architectural achievement. The Lāl Quilā,

built of red sandstone is octagonal in shape, with two longer sides on the east and west. The perimeter of its strong ramparts is about 2.4 km. The Red Fort rises to a height of 33.5 m on the town side and 18 m along the river. A wide moat surrounds the fort, which was originally connected with the Yamuna and was always filled with water. The two main gateways, known as Lahori Gate and Delhi Gate (so named as they face Lahore and Delhi respectively) are three-storey-high and flanked by semi-octagonal towers. The main entrance to the Lāl Quilā is through the Lahori Gate. Beyond the gate, there is a roofed passage, flanked by arcaded apartments leading to the palaces, known as Chattā Chowk. Some of the main buildings within the fort are: the Dīwān-i-Ām (hall of public audience) the Dīwān-i-Khās (hall of selective audience), the Hamām (bathroom set), the personal mosque of Aurangzeb, Motī Masjid (Pearl Mosque) and Mumtāz Mahal.



Delhi's Red Fort

Golconda Fort, originally a mud fort founded by the Kākatiyā dynasty of Warangal during the 13th century, was later reconstructed into a massive fort by various Qutb Shahi rulers during the 16th century, on the outskirts of Hyderabad. The fort, on an isolated granite hill, rises about 120 m above the surrounding plain. The contours of the

fort blend with those of the hill. Nowadays the ruins have a desolate majesty in the midst of an arid plain.



Golconda Fort

The fort has eight gates (*darwāzās*), the main gate being Fateh Darwāzā (Gate of Victory). The door is 4 m wide and almost 8 m high and studded with steel spikes to protect it from charging elephants. The fort also includes a palace, a mosque, a parade ground, and an armoury besides many other buildings.

The famous Srirangapatna fort, also called Tipu's palace, in Mysore, Karnataka, was built in 1537 in Indo-Islamic style. This magnificent fort is considered to be the second toughest fort of India. It has a palace, Lāl Mahal, which was the then residence of the most audacious king of Mysore, Tipu Sultan. The fort was built in a double wall defence system and has four entrances, namely Delhi, Bangalore, Mysore and Water and Elephant gates.

Most of these forts had ingenious water structures designed for harvesting and storage, including step-wells, elaborate reservoirs and channels. (See module **Other Technologies** for more details.)

Mosques

A mosque (*maṣjid*), a place of worship for the followers of the Islamic faith, is primarily decorated with geometric shapes, foliage and floral patterns, and calligraphy. This usually includes a number of distinctive elements: *minbār*, *mīnār*, *mehrab*, domes and prayer hall. *Minbār* is a raised platform from which an Imām (leader of prayer) addresses the congregation. *Mīnār* is the tall, slender tower, usually situated at one of the corners of the mosque structure. The top of the *mīnār* is always the highest point in a mosque that has one, and often the highest point in the immediate area. *Mehrab* is semicircular niche in the wall of a mosque that indicates the *qiblā*, that is, the direction of the Kaba in Mecca, which Muslims should face when praying. The domes, which signify the vaults of heaven and the sky, are often placed directly above the main prayer hall. As time progressed, domes grew, from occupying a small part of the roof near the *mehrab* to encompassing the whole roof above the prayer hall.

Although the domes normally took on the shape of a hemisphere, the Mughals in India popularized onion-shaped domes. Some mosques have multiple, often smaller, domes in addition to the main large dome that resides at the centre. The prayer hall, also known as the *musallāh*, is another important feature of mosque. Some mosques have Islamic calligraphy and Quranic verses on the walls to assist worshippers in focusing on the Koran, as well as for decoration. The Mecca mosque in Hyderabad and the Jāmā Masjid in Delhi illustrate these features of Indian mosques.



Jāmā Masjid in Delhi



Mecca mosque in Hyderabad (source: Wikimedia)

The Mecca mosque is a listed heritage building located in Hyderabad. Muhammed Quli Qutub Shah commissioned bricks to be made from earth brought from Mecca and inducted them into the construction of the central arch of the mosque, which explains its name. This mosque is an awe-inspiring granite giant. Its main hall is 23 m high, 67 m wide and 55 m long, big enough to accommodate 10,000 worshippers at a time. Fifteen graceful arches support the roof of the main hall, five on each of the three sides. A sheer wall rises on the fourth side to provide *mehrāb*. The three arched facades have been carved from a single piece of granite, which took five years to quarry. On the four sides of the roof of the main mosque are ramparts made up of granite planks in the shape of inverted conches perched on pedestals.

Mausoleums

Some of the Moghul rulers built mausoleums (monumental tombs, *maqbarā* in Arabic) as lasting testaments to their legacy. Among the important ones are the Tāj Mahal, the mausoleums of Akbar (at Agra), Humayun (Delhi), Mohammed Adil Shah (Bijapur; it is

also known as ‘Gol Gumbaz’), and the mausoleum of the Lady (‘Bībī kā Maqbarā’ at Aurangabad, built by Aurangzeb in memory of his first wife).



Left: Humayun's tomb, Right: Taj Mahal

The famous Taj Mahal, a UNESCO World Heritage Site, has an extensive complex of buildings and gardens that covers 22.44 hectares. The main chambers of the Taj Mahal house the sarcophagi of Emperor Shah Jahan and his wife Mumtaz Mahal. Four minarets frame the mausoleum, and in the centre of the *mīnār* is the large, white marble dome that encloses the tomb. The buildings are constructed with walls of brick and rubble inner cores faced with either marble or sandstone locked together with iron dowels and clamps. Twenty-eight types of precious and semi-precious stones such as jasper, jade, crystal, turquoise, lapis lazuli, sapphire and carnelian were inlaid into the white marble.

Colonial Architecture

With the advent of the colonial era, Indian architecture saw the arrival of diverse European styles, whether of churches (especially in Kerala, Goa and Kolkata) or of secular

buildings, in particular those that symbolized colonial authority: government buildings, courts, central secretariat and headquarters of the colonial government.



Victoria terminal, Mumbai

Among those are heritage buildings such as Mumbai's GPO, Chhatrapati Shivaji Terminus, Municipal Corporation of Greater Mumbai, and Gateway of India, Kolkata's Victoria Memorial, Chennai's Government Museum and Ripon Building, Amritsar's Khalsa College, Indore's Daly College, and many more. Interestingly, such buildings were often influenced by earlier Indian architectural styles, for instance in their generous use of domes and arches.

Comprehension

1. Which ancient text defines an ideal fortified city?
2. Define *durg* and mention the types of *durg* as referred to in Indian texts.
3. 'Rajasthan is the land of forts and palaces.' Name five forts of Rajasthan stating the time when they were built and their builder(s).

4. Name the oldest fort in India.
5. Name some of the forts built by Islamic rulers having perfect symmetry. Also mention their architectural styles.
6. What do you understand by Indo-Islamic architecture? Give examples.
7. Outline the salient features of a mosque.
8. Name some heritage buildings of colonial India.

Activity

- Complete the table with the required information.

| Name of the Fort | Place | Ruler/Dynasty | Unique features |
|------------------|-------|---------------|-----------------|
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Activities

- If you were to be a guide accompanying students to a heritage site in your city, what are the instructions you would like them to follow when you conduct the trip to make it a memorable and meaningful experience.
- Hold a debate on the topic: ‘Development should not be at the cost of losing our tangible heritage.’

- ‘We are noble citizens.’ Prepare a list of do’s and don’ts which indicate that we are sensitive and concerned for our cultural heritage.

Projects

- The United Nations Educational, Scientific and Cultural Organization (UNESCO) seeks to encourage the identification, protection and preservation of cultural and natural heritage around the world considered to be of outstanding value to humanity. Collect information about UNESCO-designated World Heritage sites in India, place them on India’s map and conduct a quiz competition based upon the information collected by you.
- Study the forts of India and evaluate them against the salient features explained in Kautilya’s *Arthaśāstra*. You may explore the following points:
 - Water system (rainwater harvesting and storage)
 - Measures taken to make the fort impregnable
 - Area used for habitations and specifications regarding the number of inhabitants.
- ‘Every monument has a story to unfold.’ How exciting it would be when you discover the Red Fort narrating tales of the Great Rebellion of 1857. Work in pairs to select a few forts, temples, tombs and mosques and collect information about the period, dynasty, reason behind the construction of those monuments, materials used, design, chief architect, number of builders and artisans, and the time and money spent to build them. Now present the history of those monuments through role play or as story narrators.
- Delhi – India’s capital – is impregnated with the historical remains of seven cities. Research and make a presentation of your findings.

Extended Activities

- Plan an exhibition of hand-painted picture postcards on India’s ancient architecture. You may hold a three-day workshop for the event and advertise it creatively. You may refer to the following steps for drafting:
 - Bring the best images of various monuments and distribute them among the participants.
 - Paint or sketch a bird’s eye view of each monument on a picture postcard. Provide information about the monument on the reverse side of the postcard. (You may buy blank postcards from the post-office.)
 - Put up your creations on display.

Note: You may also refer to the following URL for ideas on postcards:
www.thedelhiwalla.com/2011/09/05/city-monuments-%E2%80%93-h-a-mirza-sons-postcards-muslim-delhi/

- Organize a heritage walk to a nearby monument and either document it with pictures or make a documentary on behalf of the school. Make a diary entry of this visit.
- To appreciate India’s magnificent architectural heritage and unique traditions, many dance and music festivals are organized every year at various heritage sites. Make a list of such events held in the recent years.

Further Reading

1. Baig, Amita, and Joginder Singh. 2010. *Forts & Palaces of India*. Noida: Om Books International.
2. Manchanda, Bindu. 2006. *Forts & Palaces of India: Sentinels of History*. New Delhi: Roli Books.
3. Nath, R. 2003–05. *History of Mughal Architecture*. New Delhi: Abhinav Publications.

Internet Resources (all URLs accessed in May 2013)

- Colonial Architecture in India:
www.indianmonumentsportal.com/indian-architecture/colonial-architecture.html
- Indian Forts: www.culturalindia.net/indian-forts/
- Forts and Palaces of India: www.incredibleindiatourism.in/forts.htm
- Mosques in India: www.archinomy.com/case-studies/2076/mosques-in-india
- Mughal architecture: http://indiapicks.com/annapurna/S_Mughal.htm
- An introduction to Mughal architecture (PowerPoint presentation):
www.slideshare.net/aziz_khan/mughal-architecture



(A poem by a ninth-class student)

इमारतें कुछ कहना चाहती हैं

इमारतें कुछ कहना चाहती हैं
बीती बातें हमें सुनाना चाहती हैं
लोग कहते हैं उनके होते हैं कान
मैं कहता हूँ उनकी होती है जुबान
जिससे वे कुछ बताना चाहती हैं
इमारतें कुछ कहना चाहती हैं
पास उनके खड़े हो जाओ तो आवाज़ें आती हैं
वह जीती हैं जागती हैं और साँसे भी लेती हैं
यदि सुनना चाहते हो इमारतों की बात
तो एक बार अकेले बैठो उनके साथ
क्योंकि इमारतें
बिसरी यादों से धूल हटाना चाहती हैं
इमारतें कुछ कहना चाहती हैं
कहती इमारत
तुम्हें सुनाती हूँ वीरों की गाथा
और कहानियाँ राजाओं की
फिर भी
तुमने क्षति पहुँचाई और मूझपे चोट की
तुम्हारे बड़े बूढ़ों जैसी हूँ कुछ मेरा सम्मान करो
मेरा अस्तित्व है खतरे में कुछ तो मेरा ध्यान करो
इमारतें यही बात हमें समझाना चाहती हैं
इमारतें कुछ कहना चाहती हैं

गौरव भट्ट, कक्षा नवम, (२००४)

राजकीय प्रतिभा विकास विद्यालय, वसन्त कुञ्ज, नई दिल्ली

Buildings want to tell something

*Buildings want to tell something
Want to narrate things past
People say they have ears
I say they have a tongue
With which they want to say something
Buildings want to tell something
Stand near them and voices come
They live are awake and also breathe
If you want to hear what they say
Once just sit alone with them
Because buildings
Seek to wipe the dust off memories
Buildings want to say something
The building says
 Let me narrate the tales of the brave
 And the stories of kings
 Yet
 You damaged me, and hurt me
 Am like the old of your family
 My being is endangered – do attend to me
*Buildings want to make us understand just this
Buildings want to tell something.**

Gaurav Bhat, 9th Standard (2004)
National Talent Development School, Vasant Kunj, New Delhi