

History of Architecture and Culture – II

Unit 2

Buddhist Architecture

Lecture 2

Ashokan School of Architecture

Ashoka was one of the major reasons behind the development of Buddhist Architecture. So, during his reign, the various buildings that evolved could actually be tagged below, 'The Ashoka School of Architecture'. So let us see what his contributions were; so during his reign, it was a period during which building art was indistinctly visible as in there was not much that had been developed with regard to architecture. But once Ashoka, the Mauryan emperor ascended the throne, to spread the teachings of Buddha, thus, he contributed to the development of the art and architecture of the country. So what he did was wherever he went and wherever he propagated the teaching of Buddha he built various Buddhist monasteries like; stupas, certain monolithic accessories to shrines, the remains of a vast palace, a group of rock cut chambers. During his reign, you can see various Stupas of structural significance being erected, they were monolithic pillars with artistic qualities and rock cut chambers were used as a technique. By looking at the size itself, one can perceive its importance and what Ashoka was trying to imply through his architectural techniques. Palace for its architectural association. As you can see in the image, the Stupa is being erected during his reign. So there were monolithic structures and by looking at the sheer size of the building, it signifies power and importance of what Asoka was trying to imply through these architectural monuments. As you see in the image, this is how stupas have evolved over various times and also he constructed rock cut Viharas which were very polished on the interior side. So, this was a

period during which Rock cut architecture was evolving very rapidly. So, apart from these free standing monolithic structures, rock cut architecture also started developing rapidly. So basically as we saw earlier, The Vedic period saw the usage of bamboo, but during Asoka's reign, the usage of stone came into existence. It was believed that this was brought in through the European influence, as we saw in the previous lecture the use of stone was introduced by Asoka which was the Greco - Persian culture. Initially the artisans here in India, tried to imitate whatever, they learnt in wooden construction into stone exactly. The usage of stone as an architectural material was a new thing to them. So, it was because of him that stone architecture initiated in India.

So first let us see about the Sanchi stone in Bhopal. If you see this image there are mainly three main stupas of Sanchi. Stupa 2 and Stupa 3 are the smaller ones. Stupa one is called the main stupa, the Sanchi stupa. This shows an axonometric view of the entire complex. You can see various smaller stupas. You can see various Chaitya halls. So a typical Buddhist religious complex might have looked like this. This is Sanchi Stupa 3, the smaller one. This is Sanchi stupa 2 and this is Sanchi stupa 1, the Great stupa. You can see the scale of these structures. They are very huge and the dome like structures symbolize power. These monolithic structures were built in such a huge scale so that it shows the monumentality of these structures.

This is a basic plan of a Sanchi stupa. It is a simple rectangular plan. This Buddhist principle has the custom of circulating around the stupa and that is what was incorporated even in design.

In the elevation, this is how a typical stupa looked. You have the dome like structure, the circulatory passage is where people go around the

stupa. This is the circumambulatory passage. This is the top of the dome is flattened and it has a structure on it called, Harmika. However, this can be seen only in earlier stupas, later it was converted to a towering structure, like a towering pyramidal structure. On top of the Harmika, there was an umbrella like structure known as Chaitra. Below, you can see the entry to the stupa has a gateway like structure, known as, Torana and all around the passage you have railing. If you see the size of the stupa, it was almost 120 ft in diameter, you can imagine the scale of the stupa. The height was almost around 50 feet. Why do we need to know these dimensions? It is to understand the scale of this structure as related to the human scale.

This is how a Thorana looked, they were very intricately carved with various stone figures. They were also some inscriptions. This was the first time the masons were working with stone, they tried to imitate whatever they did in wood, directly to stone. The dome like structure was made of unburnt bricks which were plastered the unburnt bricks and they also left a certain niches or recessions, so that during rituals, they would light lamps inside those niches.

TORANA: This is a typical Torana, Toranas, the entrance to the ambulatory were accepted as the traditional type of ceremonial potals and excel the array of architectural embellishment.

Flattened crest of the dome was surmounted by a superstructure of a particular design consisting of a square railing enclosing of a pedestal (Harmika). Toranas, the entrance to the ambulatory were accepted as the traditional type of ceremonial potals and excel the array of architectural embellishment.

Torana consists of two square upright columns with capital of lion or elephant heads denoting strength. It was also believed that the inscriptions were multi lingual i.e. some were Greek.

These columns support three separate horizontal panels between each of which is a row of ornamental balusters. These panels are supported by Atlantean figures, a group of dwarfs, lions and elephant. The total height of this erection is somewhat 10.36m with a width of 3m.

RAILING OR VEDICA: This is a typical railing or Vedita. If you see this image, you will be reminded of the Vedic architecture that we saw previously after the Indus Valley Civilization. You can see the amount of influence that Vedic Civilization has had on the architecture, even during these later stages. In the Vedic civilization we saw that a typical village had a cluster of houses around the courtyard, they were very organic in nature and kin shaped, kin based. What happened was, they had these kind of fencing around cluster housing, so in this stupa they literally transferred the wooden railing to stone. It is a wooden railing but that is the kind of finish that they have achieved in stone. These horizontal members are called Suchi and these vertical members are called the Thaba and on the top, the railing is finished with the coping, so that when rain water gets falls, it falls down instead.

You can see how, the Thorana is intricately carved. Now we will see about some other examples of 'Rock cut' Viharas; So we saw in our earlier lecture about what a Vihara is, now let us see some examples of it. As you see in this plan, this is a typical plan of any Vihara. Any Buddhist Vihara will have all these components. There will be an entry porch. Some Viharas will have even multiple entries. They enter a pillared verandah, they then pass through doors to reach the main

pillared hall. Why these Viharas were built? It was built for congregation purposes. People go to the pillared hall, to perform rituals or to worship. Finally, from this pillared hall, there are small niches that lead to these cells. These cells are basically niches carved out inside the rock that are meant for meditation purposes, for the monks. This pillared hall then leads to the main Stupa or where the shrine was placed. This is the typical plan of a Vihara. These Viharas were built at several places, for example;

This is a Vihara at Nasik, which is a single storey Vihara. Whereas if you see the Viharas in Ajanta and Ellora, there were even three storeyed Viharas. The typical plan later evolved into these various type of structures.

Ajanta and Ellora

This is one of our typical Vihara in Ajanta and Ellora. This is actually located Aurangabad in Maharashtra. In Ajanta and Ellora there are not only Viharas but Chaitya halls as well. One interesting fact is that, in Ajanta and Ellora, they were also Hinduism and Jainism religious activities were taking place alongside Buddhism. So, we can assume that not only Buddhist related activities were taking place there but also, Hindu and Jainism religious activities were taking place. This explains the religious kind of harmony that was taking place even during those activities.

You can see in this image the interior of a typical Vihara. This is an overall plan of various kind of rock cut architecture in Ajanta and Ellora. As you can see in the plan, these ones with the apsidal ends are the Chaitya halls and the squarish plans are the ones with the Viharas. So you can see, there are a lot Chaitya halls and different types of Viharas,

how they have evolved from a basic squarish plan to an elaborate plan. All these are carved out, into the rock.

In this image you can see how it looks today. You can see the various entries to the Chaitya halls and the Viharas. You can see the various entries to the Chaitya halls and Viharas. This is another view of the same place, this is actually located on a mountain which is almost 80 ft high and this is about 300 ft. in length. This is a view from the other side.

These Viharas are of different sizes and there are a lot of Chaitya halls and Chaitya number 19 is the most famous of all the Chaitya halls because of its elaborate designs, carvings and sculptures. In this image, you can see how the interior of a Chaitya hall looks in Ajanta and Ellora. This is a typical entry (on the left) to a Chaitya hall. You can see how the entry is highlighted with an arched doorway. Also, you have various sculptures of Buddha in different postures like standing, sitting, etc. and inside you will have the main Buddha statue which is very large in scale. Ajanta caves are also very famous for their Fresco paintings that are available. They depict the real life tales and even today these paintings are very fresh.

This is an example of a Chaitya hall, located in Karli. The image on the bottom is a typical plan of a Chaitya hall. Basically, it is a very elongated plan with an apsidal end. What is an apsidal end? The terminating point which is curvy in nature is known as an apsidal end. The hall is approached through three entrances. As you can see the central A and then you have a way with pillars on either sides and in the centre you have the Stupa. So basically, people approach here and use this place for congregation and worship. This is the main stupa. You can see how it looks in the section and also outside as you can see here, there

is a monolithic free standing pillar which resembles the Ashoka pillar in Sarnath.

Chaitya hall in Karli is one of the very famous Chaitya halls and it is considered to be an Architectural Gem. As I told earlier, this is the plan of it, all the columns in the interior are Octagonal in nature, in a typical Buddhist column, you have a bell shaped Capital and above it, and you have sculptures of either lions or elephants. This is the interior of Chaitya hall in Karli. You can see the waltered roofing with wooden ribs, this image shows the wooden archway that is created and these are the octagonal columns with the bell shaped capital.

This is a perspective section of the Chaitya Hall. Here you can have a clear image of how the stupa is located, the ribbed roofing, and the free standing pillar on the outside. You can see the human figure here and understand the scale of the building. This is one of the finest example of Rock cut Buddhist architecture. So, these are the three entrances that lead to the hall. The altered roofing. This is another detailed look of the pillars, you can see.

Similar to the caves at Ajanta and Ellora, there are different rock cut architecture elsewhere as well, for example, this is one of the caves in Barabar. Actually Barabar is a hill with four caves and nearby there is another hill called Nagarjuni which has three caves. These rock-cut caves are made with granite and the interior of it is a with polished internal surface and exciting echo effect. Mostly what they do is, the exterior of the entrance doorway and the porch are very highly decorated and sculpted whereas the interior is mostly left unadorned. There are not many sculptures on the interior. However, the exterior only is mostly decorated. Usually in this case, Barabar has only two chambers. The first chamber which is meant for worshippers to congregate into large

rectangular hall and the second, a small circular, domed chamber for worshipping purposes this inner chamber probably had a small stupa like structure at some point, though they are now empty. This worshipping structure is the one with the stupa structure.

Barabar Hill Caves

The Lomas Rishi Cave, Sudama Cave, Karan Chaupar (Karna Chaupar) and Visva Zopri Caves.

Lomas Rishi Cave and Sudama Caves are the most important since they are the ones that greatly influence the rock-cut architecture in later stages, in the image you can see, the lomas Rishi cave; as you can see how the entrance archway is intricately carved. Again, they are trying to imitate timber architecture directly into stone, the kind of projections that are made in the entrance archway. Everything is directly replicated from timber construction.

This is the plan for the Lomas Rishi cave, you enter and there is this large hall, this is the main chamber that is meant for congregation. This is the smaller chamber which is meant for worshipping. So, this is almost 55 by 25 feet in length and width. This cave is considered as one of the fine examples of timber construction style is translated into stone construction. In this you can see the interiors of the Lomas Rishi Cave.

Next we will about another cave, which is located in Bhubaneswar upon two hills - Udayagiri and Khandagiri. So Udayagiri has 18 caves and Khandagiri has 15 caves. In this image you can see how the caves are formed. Basically, it is a huge rocky hill in which these temple like structures are carved. This is another view, you can see the Viharas being carved here. This is another different types of caves because these are well known for their artistic sculptures and here we even see

sculptures of women and there also sculptures representing people playing music, arts etc. This is the image of Ganesh Gumpha, this is one cave in Udayagiri. HathiGumpha is another cave. You can see slowly how rock-cut architecture is evolving into temple architecture that we see these days. Slowly, they are trying to build something new with stone. (cave 10) are especially well known due to the art treasures of their sculptures and reliefs as well as due to their historical importance.

The image above depicts, an interesting monastery in Udayagiri. This cave is called The Rani Gumpha (Cave 1, Rani ka Naur, Queen's cave, Queen's palace Cave). As you can see in this image, this is a double storeyed monastery. Frontal face of lower floor has 7 entrance doors, while upper floor - 9 column entrances. Interesting fact about this is that, it is known for its acoustical properties. Probably during construction, they have taken into account the acoustical factors. So maybe this was not only meant for congregation and worship but also a place where you perform, dance or even plays, dramas, etc. So, this was probably meant for that.

Next we will see one more example of a monastery, this is known as Takht Bhai, which is now located in present day Pakistan. What is the meaning of Takht Bhai is that, Takht means 'throne' and Bhai means 'water'. The Takht Bhai was a Buddhist place in ancient time. It was earlier known as Takht bhai because Buddhist monastery was on top of the mountain and on the mountain there was a stream. That is why the name. Now there is a small spring at the place of the stream, which can be found at the bottom of the mountain.

You would notice in the plan of the image, there were two courts; Monastery and the Court of stupa. You can see the plan of the image.

Intermediate there were various chapel like structures that were surrounding the courtyard. You can see the small structures all around the courtyard and the stupa itself was placed on a very raised pedestal. If you notice the roof of these chapels, they were alternating between a cupola and a dome like structure and a waltered roof like structure. So, it kind of alternated all around. As I said the buildings are contained within a 200ft complex, the stupa court was located on the southern side and the Monastery court on the northern side. These are images of the present day ruins which can now be seen, again as I mentioned earlier, even here the interior walls were not decorated, they were left very plain. You can see the remains of the chapels and here they were stone beds that were means for relaxing and niches that acted like shelves.

Enclosing the court on three sides was a range of small chapels, each containing a cell or niche, not as in Hinayana face. The roof of the chapels were so designed that a cupola alternated with a trefoil vault, each an architecturally decorative motif and depicting a separate constructional tradition, for the former was derived from the anchorite's beehive hut and later from the conventional shape of the Chaitya hall.