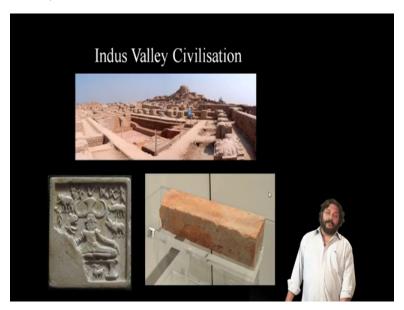
Introduction to History of Architecture in Indian Professor Dr.Pushkar Sohoni Department of Humanities and social Sciences Indian Institute of Science Education and Research, Pune Week-01 Riview

Hello, we will review what we have studied so far in the first week of this course. We have covered over 2000 years of architectural history.

(Refer Slide Time: 00:32)

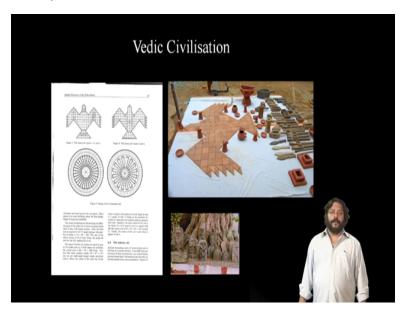


We started of with the Indus Valley Civilization notable for its rigid grid iron planning for its modular construction for its elaborate drainage systems and a number of scenes that would have found which might or might not represent writing but certainly contains some kind of pictograms. The Indus Valley Civilization does not have any successors in terms of its architecture atleast not directly when the decline of civilization sometime in the middle of the second millennium BC the people who build the civilization moved into the country side and this standardization of architecture on a massive scale that the Indus have disappear by standardization we mean that the Indus valley had bricks which were of a define size as you see here.

It had weight some measures that were used across its entire expanse of thousands of kilometers. People built houses according to certain plan and modules there was a very geometric understanding of how construction worked. The structures that were built were not just private dwellings but also civic and public. Indus valley seems to have operated as a republic but unfortunately we do not know enough about it, what do know is that there is an incredible sophistication both of engineering and architecture of building in brick and of laying out urban settlements.

There is no experimentation on this scale on the Indian subcontinent prior to the civilization and therefore it is suspected that this is more closely connected with central Asia with the Bactria-Margiana archaeological complex or BMAC or is connected with the bronze age civilization on the Iranian plateau and the Iranian connection with India for architecture will persist all the way into the 18th century.

(Refer Slide Time: 02:47)



The next big wave for architectural innovation comes with the movement in migration of Sanskrit speaking peoples popularly called the Indo-Europeans or Indo-Arians who come in from the west and bring with them cultures and technologies that have not been seen on the Indian subcontinent before.

They come with chariots, they are pastoralists they have the spoke wheel and their mode of worship involves praying to deities in the sky in the heaven and this mode of prayer is enacted through rituals sacrifices and for this sacrifices what they need are Altars that they build and the Altars are not simple square Altar but depending on kind of sacrifice and the kinds of favors that

are sort from different guards they a have Altars in shape of birds, in perfect circles as you can see in this picture here and also in a variety of other shapes that mimic other animals a tortoise the kurma.

In the slide above you can see replication recreation of all the implements that were used for one of the sacrifices all this tools and the Altars are described in great detail in a body of texts called the Shulba Sutars were the sizes of brick are given how you arrange them is laid out and it is the Shulba Sutars which formed the basis of what will latter get called Vedic mathematic because this are geometrically precise arrangements in fact it is believed that if your prayers are imperfect or if your measurements and proportions are imperfect the sacrifices you make on this Altars do not reach the heavens do not reach the gods and are rendered ineffective.

Why this Vedic civilization is spreading across in India? There exists as you see right here a number of (())(5:05) skulls that worshiped serpent deities the Magas and also forest deities the Yaksha's and this (cul) will eventually be observed into what will get called Hinduism, Buddhism and Jainism because as this three major Indic religions evolve all this autochthonous deities (())(5:30) are absorbed within them.

(Refer Slide Time: 05:34)



You also do have in the second and first millennium BCA particularly in the India peninsula a number of societies that are building or putting together Megaliths. Megaliths are nothing more than architectural forms created by putting together enormous boulders why we do not

completely understand the technology is used to move boulders weighing you know several tons into place, what we do know is that this are largely stone age societies the elements that make up this buildings or this shelters are not finely tooled or carved but it is yet an achievement to move this into place given their massive size and weight.

You find this spread across Karnataka, Kerala, Tamilnad, Andhra Pradesh, Maharashtra and into Madhya Pradesh and then at several stray locations across the country. Again with the Megaliths we know very little about the society that builds them and we do not have any other expressions of this societies other than ash mounts.

(Refer Slide Time: 06:54)

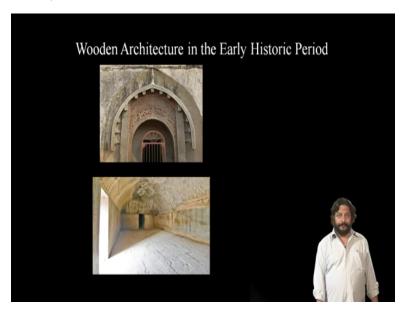


Where we start having early historic architecture in India is that the advent of the Mauryas across the eastern gangetic plain in places in modern day Bihar were you have Chandra Gupta Mourya the great Mauryan emperor make contact with the Indo-Greek kingdoms that have arraisen on the western side. Now while you have a lot of Indo Greeks in the wake of Alexander's conquest of Asia settling down in what is present day Pakistan and Afghanistan the Mauryan empire is also expanding in that direction and you have several diplomatic military and cultural contacts.

The great achievements of the Achaemenid empire of Persia which was made big by Emperor such as Cyrus and Darius this find their way into the Indian plain the three big achievements which we have seen with the Achaemenid's are the construction of large palaces, monumental inscriptional writing and also setting up royal edict in various places.

We also see that the achaemenid's build with your new tools enormous cave size carved into the living rock. All of this will be borrowed by the Mauryas and you will have all across India with Chandra Gupta's grandson this Mauryan columns which resemble the ruined columns at Persepolis all them will have monumental writing that display royal edict and many forms of Persian kingship will find their way in India, this columns will mark authority, territory and religious benevolence, this are erected across India various places as Ashoka embraced Buddhism and thought the message of the Buddha could be spread with this columns there is even one Lumbini in Nepal which is the birth place of Gautama Buddha.

(Refer Slide Time: 09:14)

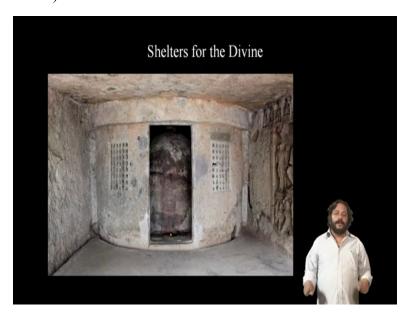


What you also do find in this period from Ashoka onwards are monumental inscriptions that tell you when a building was built, who built it and for whom it was built and the early inscription you find are the Barabar caves in Bihar where you have again emulating the achaemenid's cave architecture in living rock for the first time in which you see the replication of architectural forms that are made of timber originally such as in (())(9:47) Rishi cave where the curvilinear roof depicted on entrance is a translation of what a wooden heart would have looked like.

Inside this cave you have one longitudinal hall at the end of which is placed the replica of a cave. This cave was built for a set called (())(10:11) in the monsoons they were itinerant and in the monsoons they required respite from the rains and they would come and stay here in the rains

and their teacher probably lived inside that hut and what you have on the outside is a gathering space for all the (())(10:33).

(Refer Slide Time: 10:36)



This idea that a teacher or a holy man who embodied some kind of connection with the Devine would live inside a hut which provided him shelter would also be picked up by Buddhism at the same time.

Infact at the cave at (())(10:53) which you see here what you have is similar to the Lomas Rishi cave at Barabar you have inside the cave representation of a timber hut. Look at the windows with the lattices as though they were built in timber of course this being Buddhism cave has inside not a living holy man but a Stupa which could come to the present the Buddha in a later period.

(Refer Slide Time: 11:24)

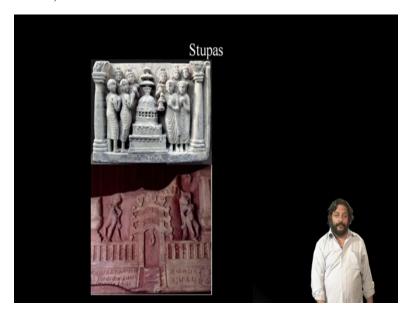


This idea is best expressed on one of the Tornas or gateways at the Sanctuary Stupa where you see an embodiment of the Devine in the shape of a an Altars so look at the carving on the other side there is an Altar which is sheltered with a small timber hut there is a railing on top that signifies that it is marked off its bounded because it is holy, there is a crown kept on the square Altar who the Altars grows a tree and the tree has an umbrella on top a number of this attributes such as the crown and the umbrella were royal (())(12:07) and because the Buddha came from royal birth even after enlightenment references to him were royal references the crown and the umbrella for example became to symbolize the presence of the Buddha.

So did the tree which not only represented a vertical axis to the Devine but it also represented the tree under which the Buddha was enlighten. The square Altar and the railing were something that marked the tree lot of times and all of this symbols together came to represent the presence of the Buddha but notice all of them are housed in a timber hut. What you have on the closer side of the column is actually two kinds of Devine or semi Devine figures housed inside huts one is the autochthonous (())(13:03) that I was talking of.

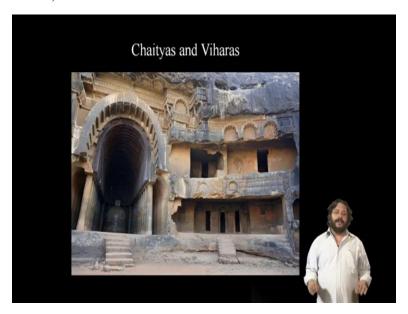
So you have a multi headed serpent a naag-devta whose housed inside a hut because the Devine needs to be housed and similarly very closed by here you have a living master a holy man a preceptor whose also housed inside a hut and people paying obeisance to him and praying. Notice that the whole column is bounded by architectural elements such as railings and columns.

(Refer Slide Time: 13:36)



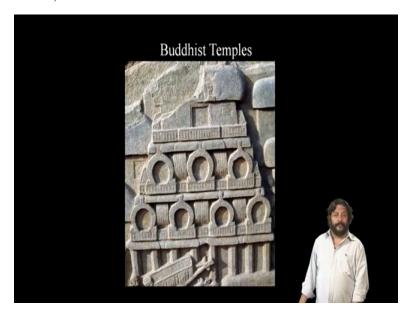
Over time particularly around the second century BC and onwards the Stupa comes to signify the holy presence of Buddha and later on it is picked up for a brief phase by other religion. So for example what you have at the bottom is from Mathura the depiction of a Jain's Stupa with a torna and the railing and so on. On top you have a Indo-Greek influenced Stupa in north west India but notice that the vocabulary used by Buddhism and Jainism is exactly the same the architectural vocabulary and we shall see this environment of different religions using the same architectural language time and again.

(Refer Slide Time: 14:31)



As the stupa becomes central the Buddhist forms of worship and as the Buddhist Monastic establishment evolves and becomes more elaborate what you find across India most notably in the western Deccan are these enormous sights which have caves carved into the living rock the caves being of two major types called the Chaityas and Viharas, Chaityas are this apsidal halls which replicate wooden architecture inside the rock and have a stupa and one end where Monks would pray, meditate and carry out exercises and what you have other than the Chaityas are what are called the Viharas which are the small rectangular cells in which Monks would reside.

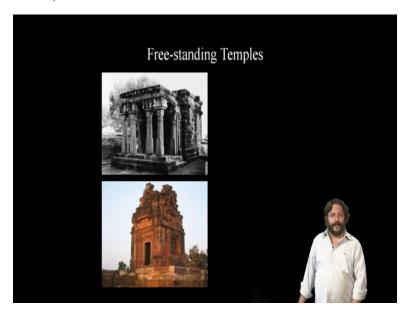
And it was just not Monks who build this caves were professionals hired by monks and lot of them were paid for by travelling groups which used to halt at this caves sight and therefore what you have are caves sights in networks not just in isolated ways. (Refer Slide Time: 15:43)



Buddhism very quickly evolves into a form of temple worship in which the simple hut that houses the Buddha that houses the stupa becomes a multi-storied mansion afterall royal (()) (15:59) of a religion would ensure that huts are transformed into palaces. This is the famous Jataka set in the Jetavana garden where coins are used to pave over the grounds of the garden but the Buddha is in a Gangakuti or a sweet fragrant hut that is in the garden and this hut is represented as a hut on the terrace of a multi-storied wooden mansion.

This idea that a hut is not adequate but you need a multi-storied mansion for housing the Devine becomes important both in Buddhism, Hinduism and Jainism this relief is from Kanaganahalli recently discovered stupa site in northern Karnataka.

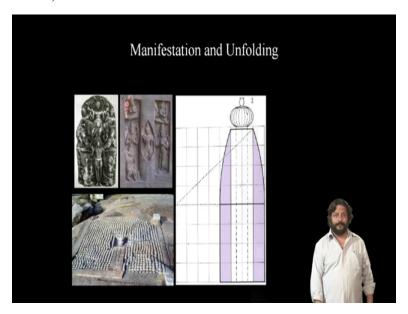
(Refer Slide Time: 16:55)



The next logical step is instead of carving replicas of multi-storied mansions inside of living rock it is easy to carve huts inside living rocks but not multi-storied mansions you start having free standing temples very early. The temple of on top which is temple 17 at Sanchi we do not know exactly what deity or Divinity was housed in there we do know that it is built in the first half of the 5th century CE at what it replicates is a cave with a porche in front an example of which we will see shortly after and at the bottom within 50 years is the temple of Devgad in modern day Madhya Pradesh where you have the same idea of a (())(17:48) a sanctum being a cubicle cave completely manmade which has a multi-storied tower on top that represents a multi-storied palace.

Also what happens in the temple at Devgad is that the Divinity house inside stats finding manifestation in physical form on the walls on the outside of the temple. These kinds of temples were thought of as shelters for the guards that were placed on an Altar.

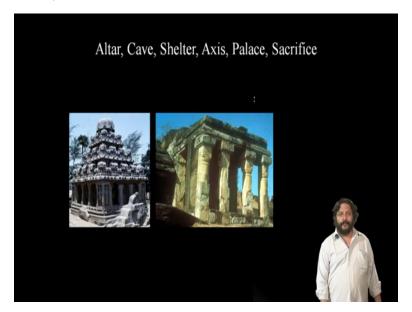
(Refer Slide Time: 18:27)



This idea that the temple now has to now manifest itself from an un-manifest state is something that goes hand in hand with the thinking of this time where not only an architecture but also in sculpture in all forms of thinking there is an explosion of reality from the contemplative (()) (18:50) you have the Puranas, the great epics you have a complete manifestation of the Devine spinning over into the human world, this is done by expanding horizontally as you see at the bottom with one shivling or manifesting itself in many directions but also vertically where you see similar kinds of ideas expressed with statues such as the (())(19:17) where you have in a vertical axis the deity Shiva whose expanding to fill up the universe in all directions and also rocl relieve from Ellora where what used to be a Linga.

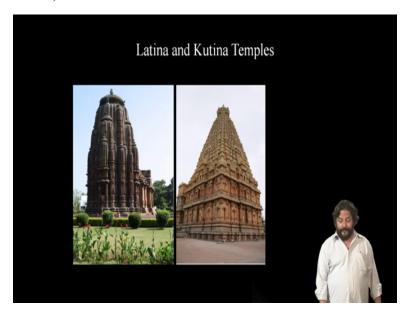
Devine in un-manifest (())(19:35) shape now in becoming manifest where Shiva himself is appearing, this ideas that you enclose horizontal sacrificial Altar but also a vertical axis is what causes the shape of the Hindu temple to evolve in ways that it will.

(Refer Slide Time: 20:11)



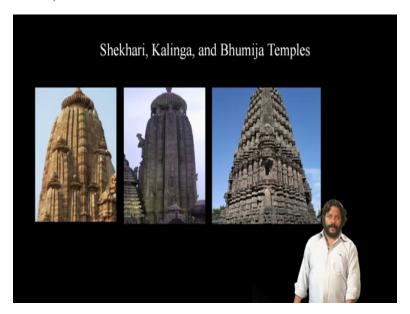
This idea of manifesting, unfolding, exploding in every direction yet containing within it a marked off area that is a homology of the entire (())(20:09) and therefore all this ideas of a sacrificial Altar of a cave of a shelter of a vertical axis of a multi-storied palace and of performing sacrifices is embodied it comes together in the Hindu temple. You have on your right a cave at Udaygiri build sometime in the 1st century BCE which actually is a cave with a portico in front not unlike the temple that will come a few hundred years later the Free standing temple 17 at Sanchi. What you have on your left is from the 6th century CE at Mahabalipuram a multi-storied mansion built as a shelter for Divinity

(Refer Slide Time: 20:56)



The two major types of temples we have looked at have been what are popularly called the north Indian and the south Indian temple but correctly and technically known as the Latina temple on the further side and the Kutina temple on this side. The Latina temple is marked by vertical bands that connected whereas the Kutina temple is marked by horizontal bands both of them embody the idea of a multi-storied palace but there are significant differences most notably in the Kutina temple you can still see the Kutas or edicules that make up the horizontal bands of the palace. Whereas in the Latina temple they have been compressed to such a degree that all you see are strong verticals.

(Refer Slide Time: 21:51)



The three major forms of the Latina temple of the north Indian temple are the Shkhari which has cascading spires the Kalinga which has a very curious curvilinear shape and the Bhumija where you have strong bands along the four cardinal sides connected by small edicules laid out in horizontal to yours. What is important is to note that it takes almost four to five hundred years for this regional idioms this regional styles to evolve and this is the great age of temple building were the biggest temple in India are built between the 8th and the 12th century.

(Refer Slide Time: 22:44)



Now for an exercise let us look up examples of all the topics we have covered in the learning sessions so far and fine examples of relevant sights and buildings that have not been covered by us in class. Following this we shall also have a list of terms that have been learned the meanings for which you will have to write as an exercise.