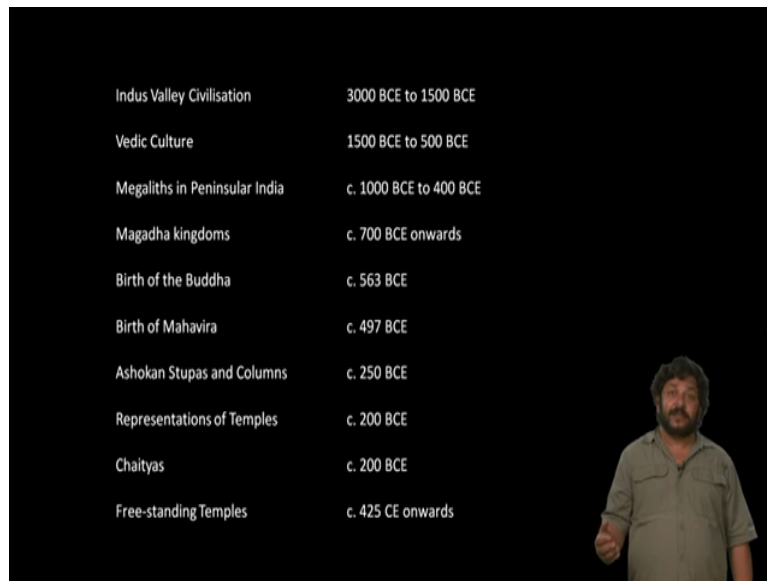


Introduction to History of Architecture in India
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National Programme on Technology Enhanced Learning
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Early Architecture

Today we will look at early architecture in India starting with the bronze age going right up to the decline of Buddhism in India.

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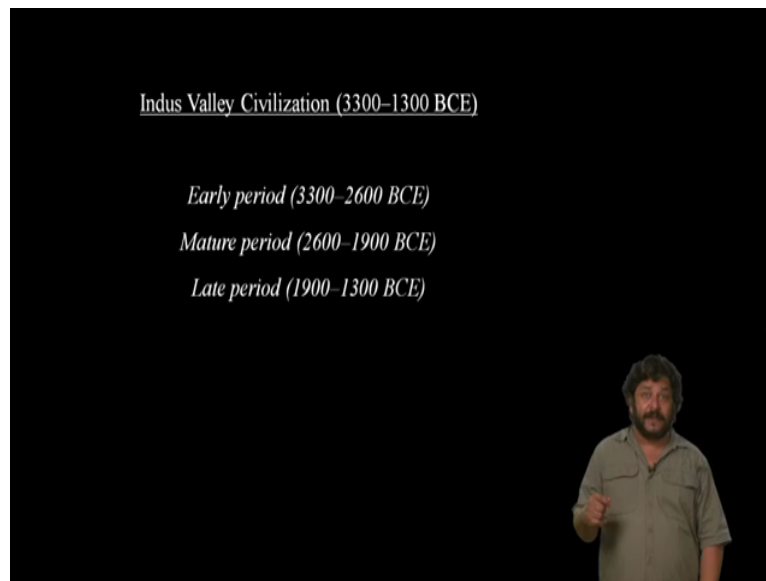


Indus Valley Civilisation	3000 BCE to 1500 BCE
Vedic Culture	1500 BCE to 500 BCE
Megaliths in Peninsular India	c. 1000 BCE to 400 BCE
Magadha kingdoms	c. 700 BCE onwards
Birth of the Buddha	c. 563 BCE
Birth of Mahavira	c. 497 BCE
Ashokan Stupas and Columns	c. 250 BCE
Representations of Temples	c. 200 BCE
Chaityas	c. 200 BCE
Free-standing Temples	c. 425 CE onwards

The Indus valley civilization which is considered to be in the middle of the bronze age in the north west corner of an undivided India was followed by a vedic culture because of people who moved in from the cockus mountains in Europe. In south india simultaneously we have megaliths all of these developments will be followed by kingdoms in central and North India the birth of the Buddha.

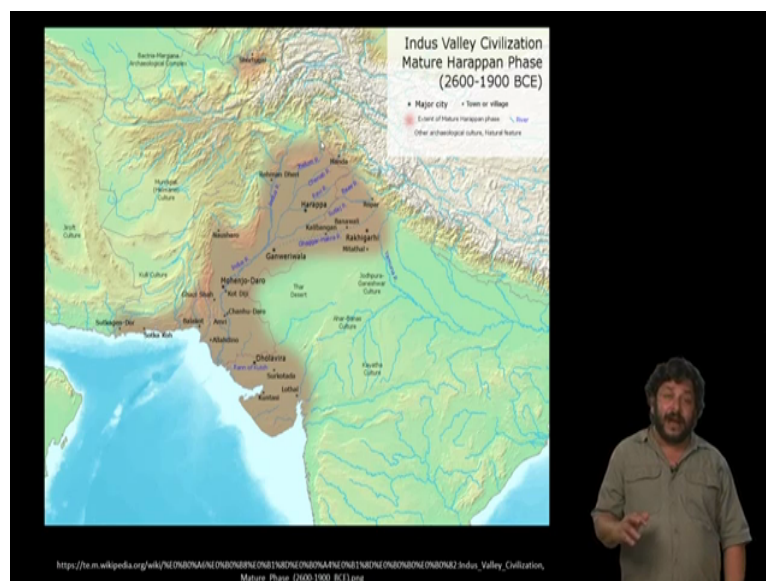
And of mahaveera the rise of the mauryas with emperor Ashok expanding the mauryan kingdom and then the beginning of temple Hinduism in the mean time Buddhist cave sides will have chaityas and also Viharas and we start getting somewhere around the second third fourth century CE free standing temples the first one being temple 17 at sanchi.

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But to begin with we have to start with the Indus valley a civilization which is divided into 3 even phases early mature and late the Indus valley is characterised.

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By a uniformity of majors and standards that you find across a very large area they construct big urban centers in bricks the bricks are of uniform measurements most of the layouts are grid ion which use to say streets early at right angles to each other and you have very sophisticated systems of drainage and sewage in all the cities of demanders.

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The Indus valley sites such as the one at Mohenjo Daro and Harappa and also Rakhi Gadi in India and poor site of lothal which is in Gujarat have all been excavated extensively yielding a rich corporate of artifacts and small finds but it is the architecture that is of significance to us and the architecture is absolutely unique not just for its modularity but also for its massive scale.

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The bricks are of standard size there seems to be some kind of centralize control over the whole civilization by which people confirm to a standard set of weights and measurements.

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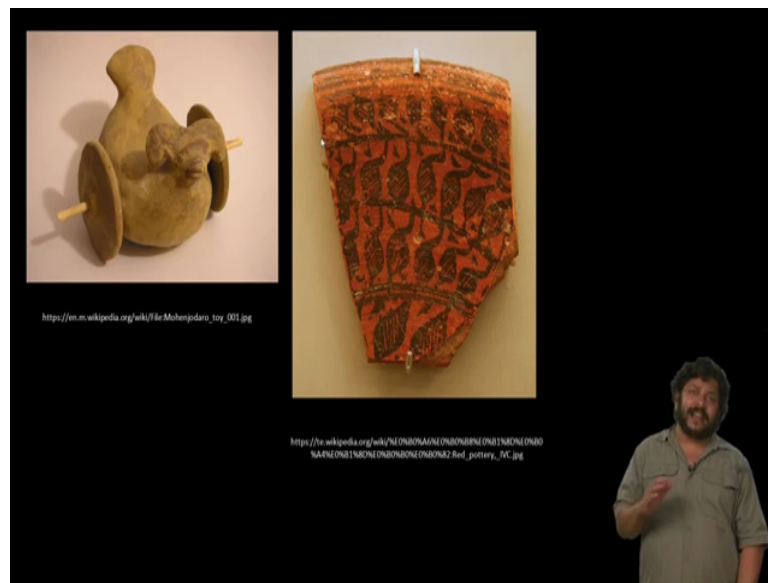
The drainage systems in the Indus Valley have been the subject of lot of discussion because it is the only bronze age site where we see neatly laid out drain and sewage systems these are lined with bricks and a lot of times you have done completely concealed and covered with places from where you can inspect them manholes of an ancient kind.

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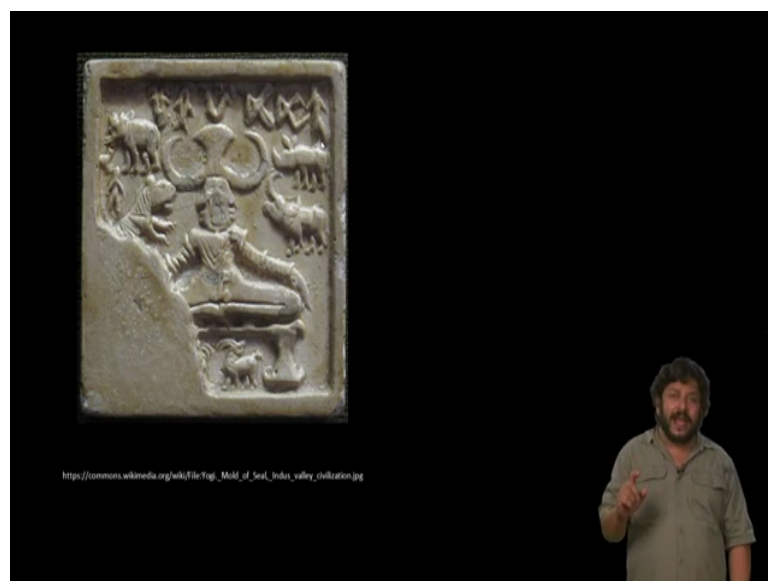
Though we not understand the lot about the hierarchy of this society what their modes of worshipped, what their religion was and what they are governance structure were? There have been lot of theories that suggest it was some form of perhaps a republic where more people had say and governance than just one monarch.

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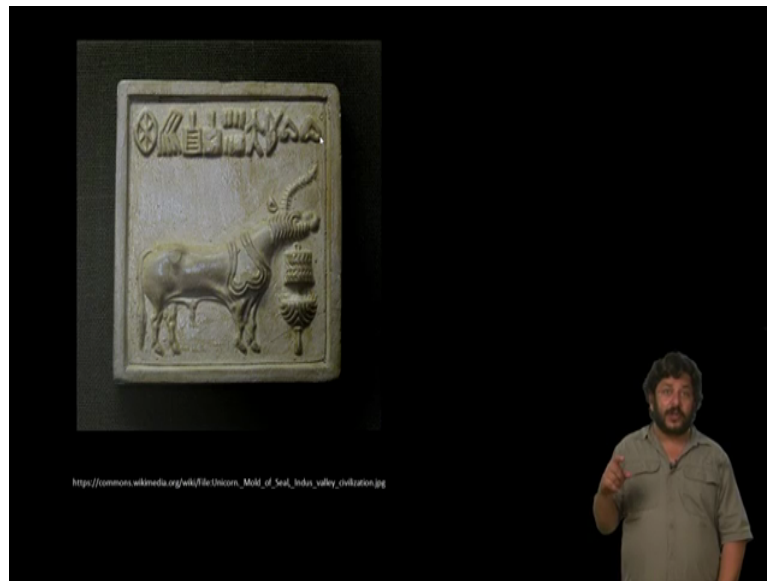
In Indus is characterized by a number of objects such as toys with wheels as the one you see on your left and what is called red where with these black slip.

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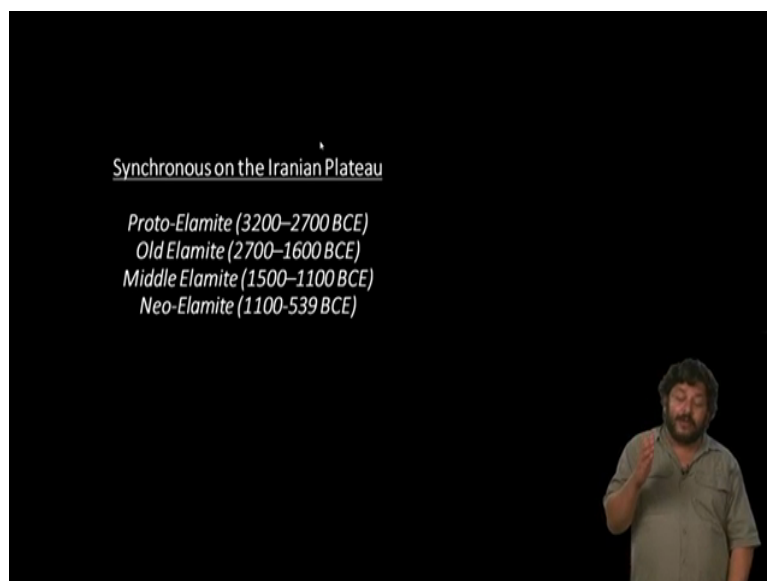
You also have a number of characteristic seals found in the Indus with what a peer to be letter on top but nobody has been able to successfully or satisfactorily decide for the script yet you do see the representation of lot of local founder such as Rhinos, elephants and buffalos.

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And you also have what seem to be some form of sacrificial post with a bull tied to it these will all the idea that will carry over into later Hinduism.

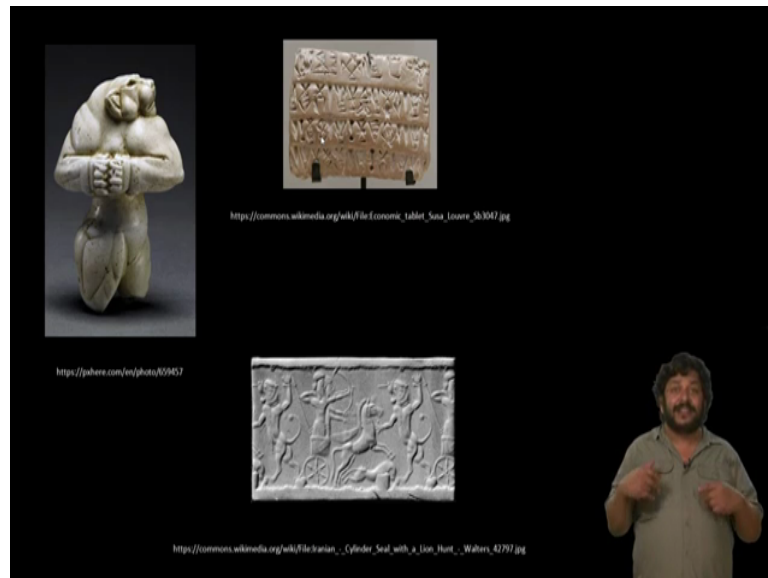
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Now for the history of north India in particular developments on the Iranian Plateau are very important and the big reason is that the Indus valley civilization itself seems to have enormous connections with 2 areas one is the Iranian Plateau where you have the elamites in the bronze age and also with the archaeological set of sites called Bmack the backtria margiana archaeological complex which is in Afghanistan.

And central Asia but what is happening in Iran at the same time as the Indus valley civilization.

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Is the creation of other kind of artefacts but most notably writing that tablet you see on the top actually contains writing that has been deciphered what you see at the bottom is the seal but not the object of the seal but the sealing instead of a seal which has been used to impress clay?

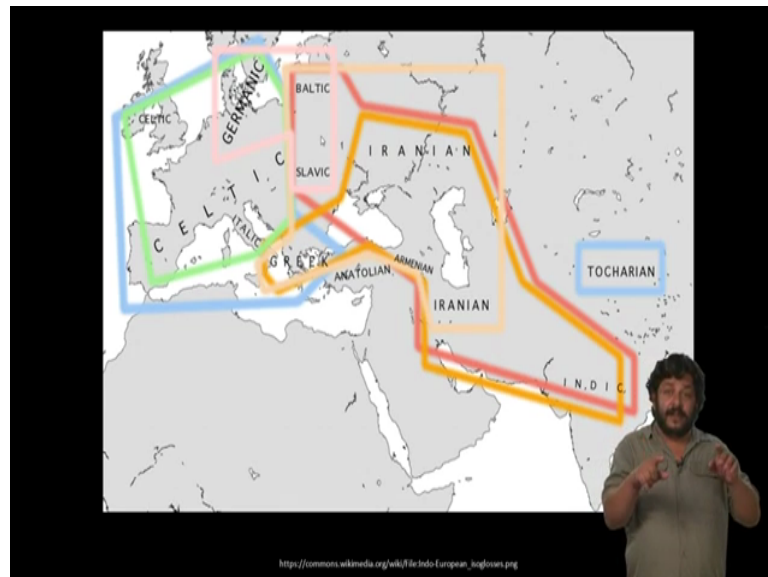
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The Indus valley civilization goes into decline sometime around 17 to 1500 BCE largely as a result of changes in the environment there are big floods we have a whole geological record

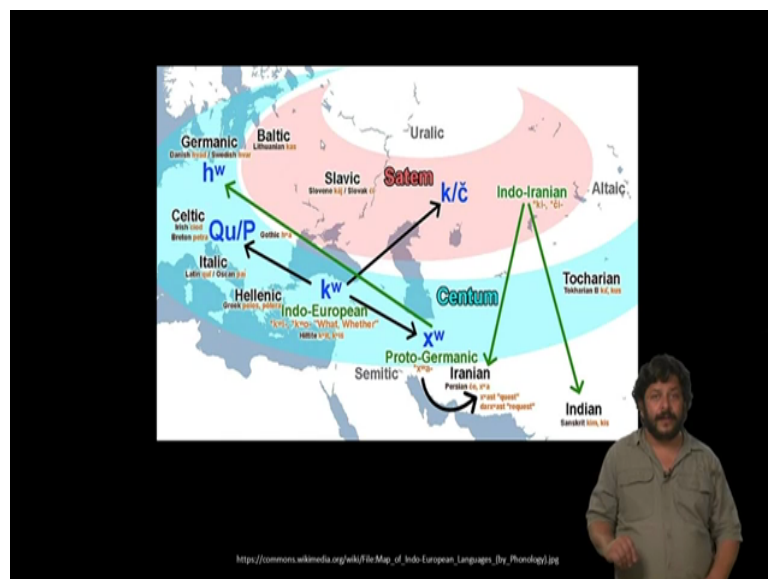
of how the climate must have changed and how the landscape change and this whole civilization went into decline the group of Nomadic peoples call the Indo-europeans moved in in multiple waves over the next several hundred years to occupy what would be the gangetic plain eventually to be called North India these people.

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Moved in many ways some pocket stayed on in Iran and their history is largely reconstructed on the basis of linguistic not of architecture because they have very little architecture.

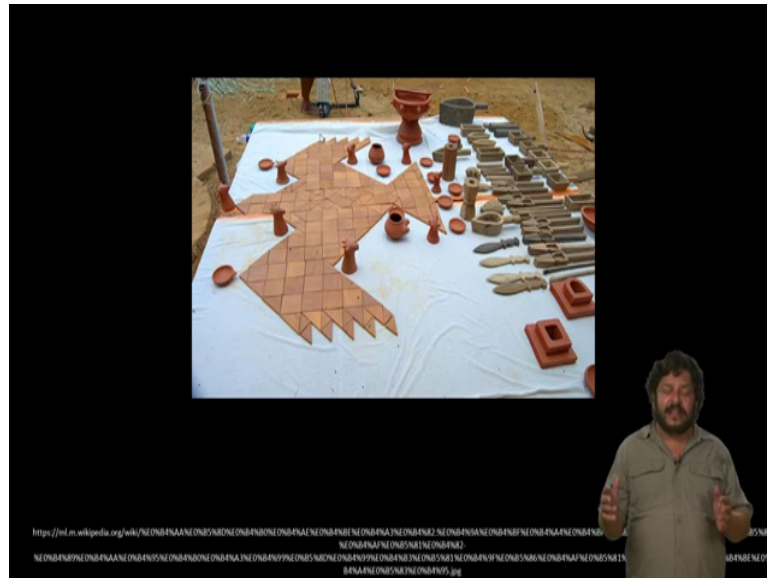
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The linguistic movements of these people have been well map through a body of knowledge called Indo European linguistic and you have similar kinds of words occurring in languages

all the way from Europe to India so these people though they are called Indo Europeans are not necessarily an ethnic group so much as linguistic group.

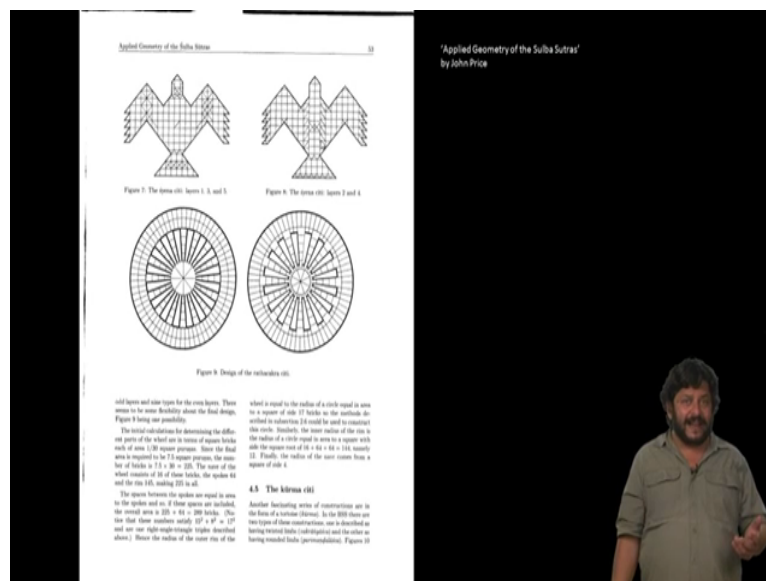
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They do not leave behind a big record of architecture because they were itinerant they were Nomadic they were pastoralist they breed cows and their wealth was measured in terms of cattle they worshipped Gods who lived in Heavens above and these gods have to be appeased periodically by giving them offerings in the form of sacrifices.

And there is a very elaborate set of text called the shulma shastras for the shulba sutras which was written by these people in which how to construct alters of various kind hear you see a model of an alter thats in the shape of a bird but alters of various kinds with various kinds of ritual implements and you make offerings to please the Gods which maintains a certain kind of world order.

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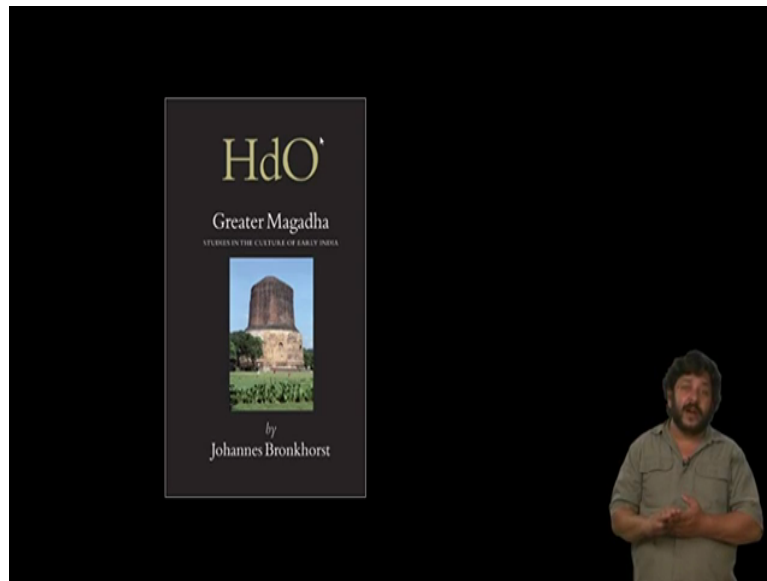
The shulba sutras have been translated and they are the beginning of what is later called vedic geometry because you have a lot of geometrical principles that get used in the construction of these elaborate alters.

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In parts of India before the movement of the vedic peoples there have been a number of toxants cult most notably those worshipping sarpan DAT and forest DAT called nagas and yakshas and we do have traces of ideals and imaginary of these venerated DAT.

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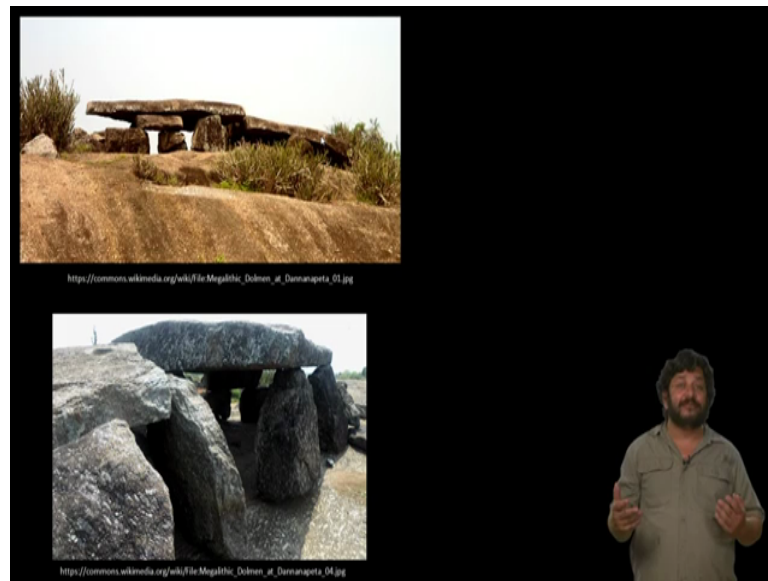
In fact its colour (())(8:52) wrote a book called Greater Magadha in which the interaction of previous religions in India with the movement of Vedic culture is demonstrated quite nicely.

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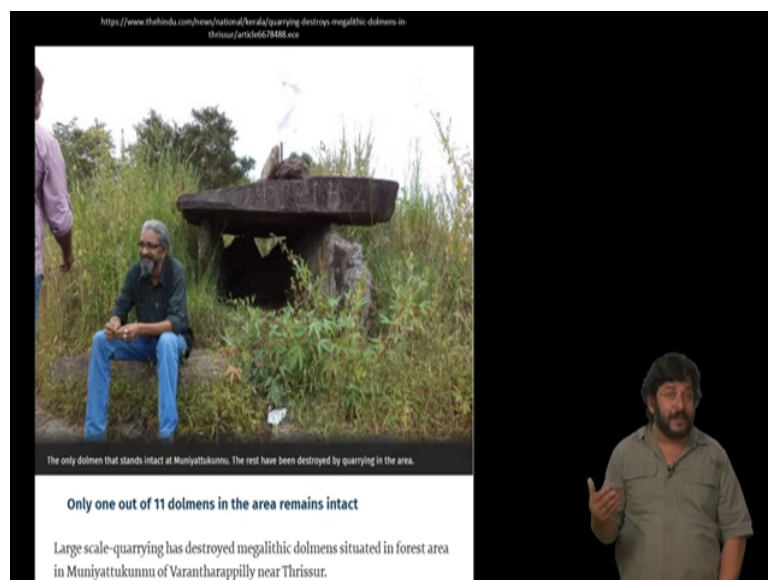
Simultaneously in south India particularly in Andhra, Karnataka, Tamil Nadu and Kerala you had a number of megaliths dated to somewhere between 150 BC to 300 BC.

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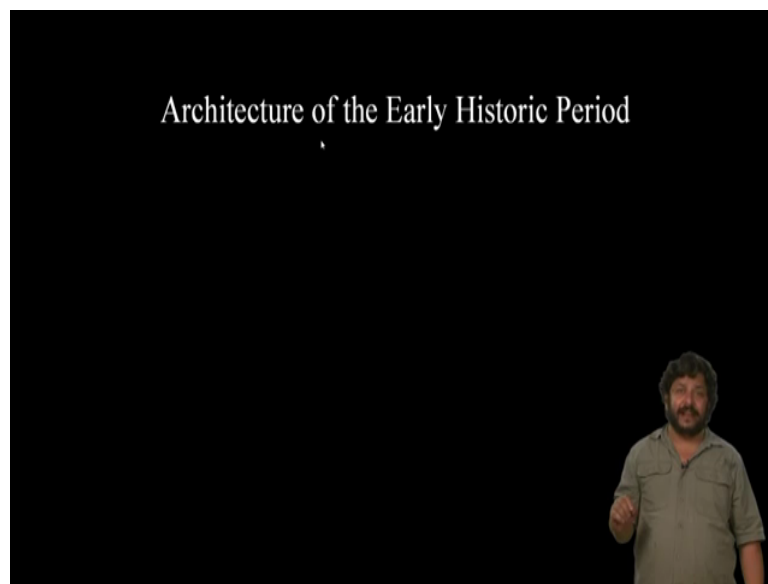
These are in the forms of man hills, dolmans and other kinds of structures associated with megaliths or megalithic society the world over man hill is a free standing big rock columns dolmans are these structures in which a number of uprights will support a flat slab on top reason been recorded for over a hundred and fifty years of this point but unfortunately all of them are under great threat.

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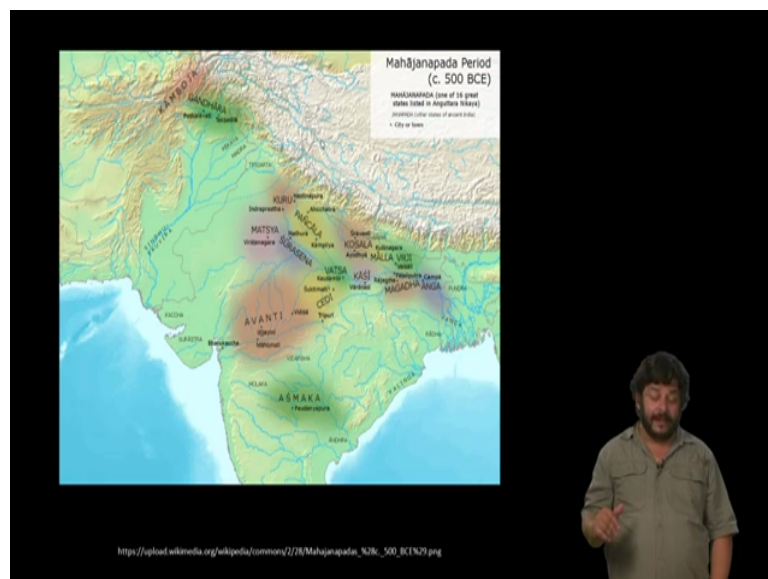
As they are been encroached upon and disappearing rather fast shree Kumar menon has done extensive research on this megalathis sites.

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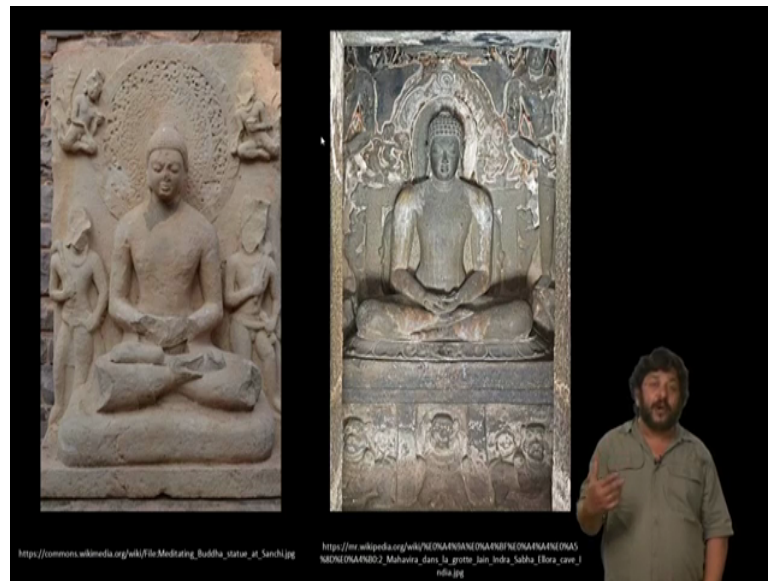
The architecture of the early historic period in India is tied up with the history of the Iranian plateau in ways that we shall see around the sixth century.

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Fifth century BC lot of the Indian sub continent was divided into what are called janapadas or maha janapadas which were con which are thought of small republics all independently ruled by some kind of olygarticle system it is in this period that you have the rise of 2 great thinkers in eastern India both of whom.

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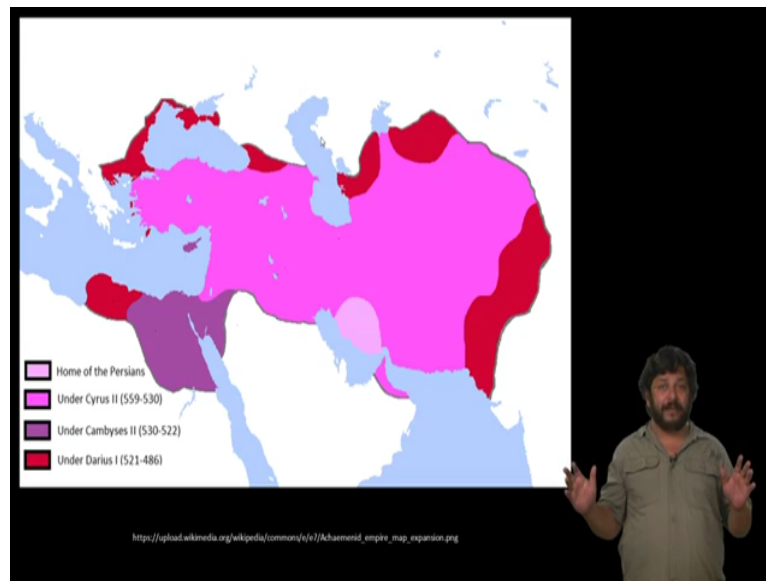
Are born within the same century Gautama Buddha and Mahaveera both of them were depicted only 700 years after their death and therefore the depictions the standard depictions of both Buddha and Mahaveera derive from a source that is common and much later these are both sculptures from the first century CE.

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But what is happening on the Iranian plateau at this point is of particular interest because it will shape the first empire that we know which rules over North India and it is that is this Empire that will leave us with the first architectural vestiges but to begin with in Iran.

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What you do have is the large economic Empire ruled by people like Cyrus and Darius and jurksees these are the famous Persians who are constantly at war with the ancient Greeks they have an expensive empire and they will themselves a grand capital at a site called Persepolis.

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Not far away from modern day sheraz it is at persapulist that they build massive palaces and holes of which only sporty remains are to be found now but the centre place of this whole complex is a large hole called the upper dana in which people would have been received from different parts of the Empire on the day of norus which was celebrated in great style well what happened to this palace in why does it survive in this form.

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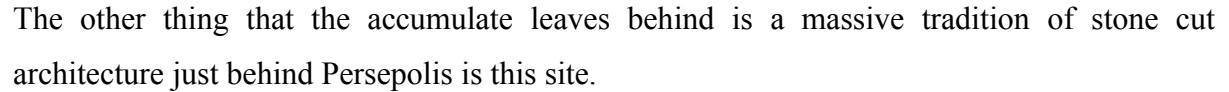
These are pictures of processions of people who would have coming from different part of the Empire process through the palace and made offerings to the King.

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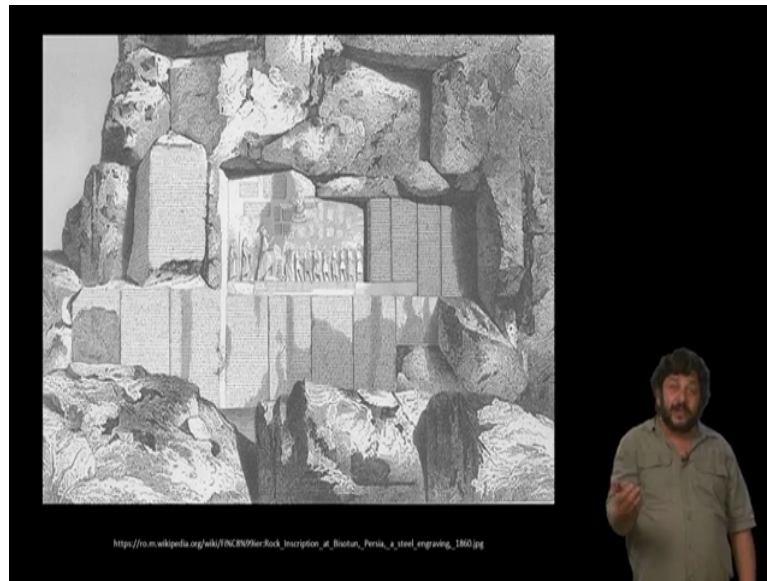
All that remains are these columns now and the reason is that in 327 BC young man from Macedonia called Alexander stepped through with his armies across the Iranian plateau completely destroyed the Achaemenid Kingdom that is to say the kingdom of the ancient Persian and burnt down their palaces of which we have description from contemporary Greek sources.

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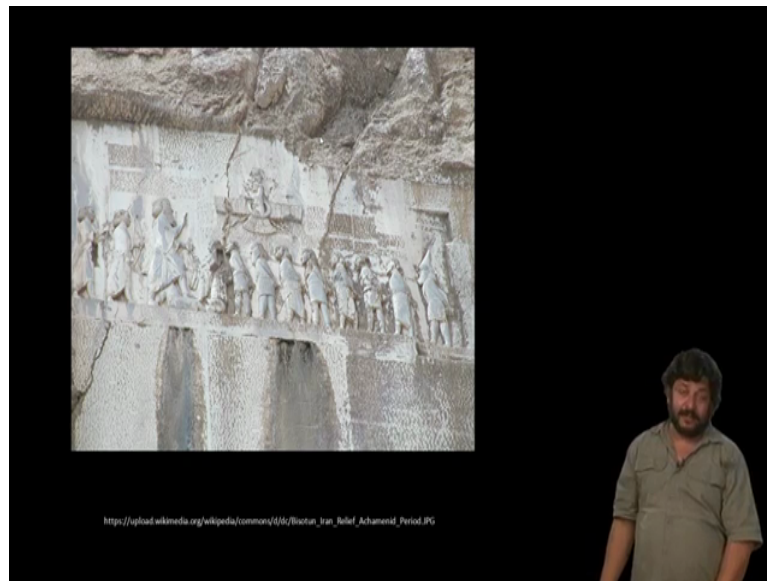
Which is a set of Rock cut funerary monuments to the accumulate emperors.

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The third thing we have from the acuminate which will make it swear to India is monumental writing Royal index put up on stone in prominent places where Travellers would see them it is unlikely that anybody actually read what was written but the idea was that the Royal word would be displayed prominently and people would know what it meant.

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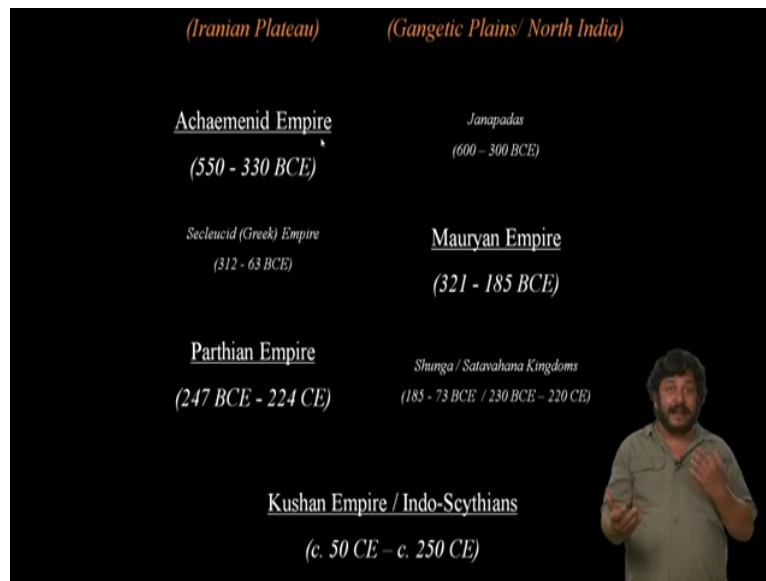
And this is what this inscription the be sutun inscription looks like in real life when all three things make their way over to India.

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After this destruction of the acuminate by Alexander Alexander managers to control and conquer all of the accumulated lands then he dies before going back and his whole Empire that he is building up crumbles and is replaced by a lot of small regional kingdoms well the reason why.

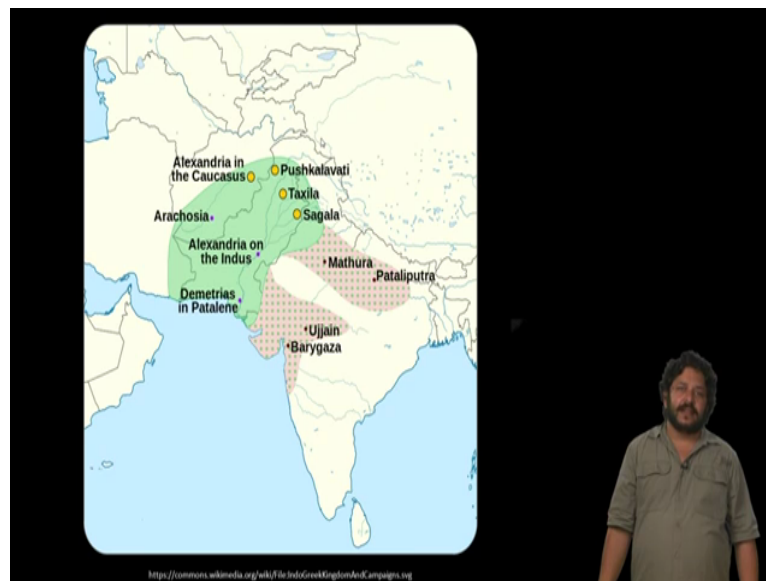
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The history of India is tied up with the history of Iran is because as the acuminated empire disappears a new empire appears in India around the same time that of Chandragupta Maurya who then has sustain contacts not only with the resemblance of the acuminates but also the new colonizers of the whole area who are all Greek what you are what you see the Indo Greeks the Seleucid the Bactrian's a number of kingdoms grow up between Afghanistan Iran.

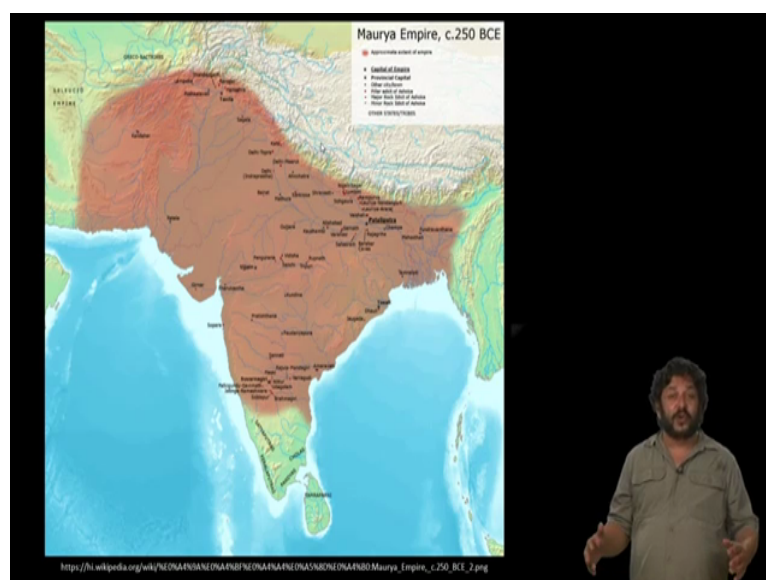
And India these are all Greek speaking ethnic Greek populations that build large cities and rule a lot of them have served in Alexander's army and this commanders and generals are only to happy to set up their own little kingdom eventually when the Mauryan Empire goes into decline you have the Parthian Empire Rise in Iran and the Kushans who come out of Central Asia will eventually unite the Iranian plateau. And north India into one state formation but of interest now is what happens to the Mauryas in the immediate aftermath of the acuminated.

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The Mauryas have sustain contact with the great kingdoms that Aries on the Northwest of India we know of people like Menander called Milinda in sanskratik sources but we also know of Greek sources that describe people like Chandragupta Maurya calling him Sandrocottus the third generation that is to say the grandson of Chandragupta Maurya embraces Buddhism.

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But it is under him that the Mauryan Empire has grown to its largest he embraces Buddhism because he is very disturbed by the battlefield that he sees after the war of Kalinga his

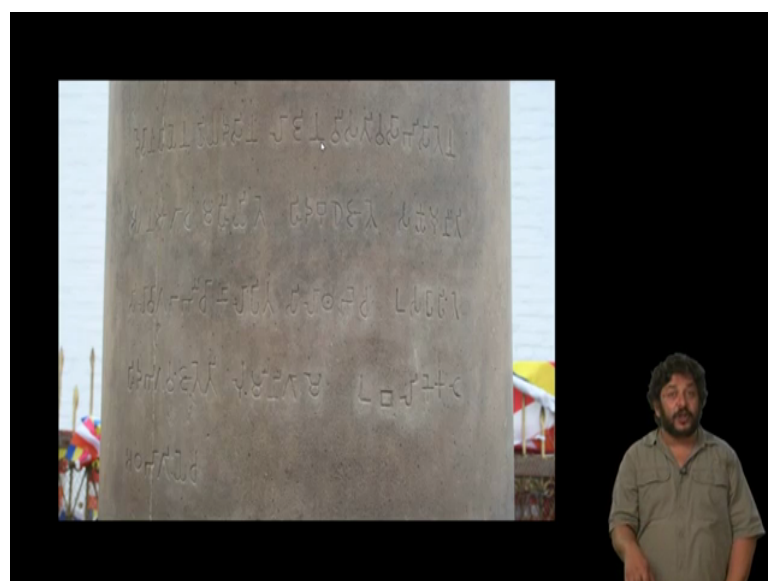
embraced Buddhism mean he was not fight wars anymore but setup Index and columns all across India.

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Like this one which is a loudy nandan Gad in Bihar the famous capital which is used as the Emblem of the republic of India is also an Ashokian capital the four lions where is the inspiration for these kind of monuments come from it clearly comes from the columns that you see at Persepolis which was the rise of the palace is only columns kept by a capital in the form of an animal.

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The other thing Ashoka borrows from the acuminate is monumental writing this is an Ashokan pillar at Lumbini the birthplace of the Buddha on which you have a standard edict that you find on Ashokan pillars so already who of the three things that we seen in an acuminate imperial architecture has been borrowed by the Mauryas as soon as Ashoka embraces Buddhism.

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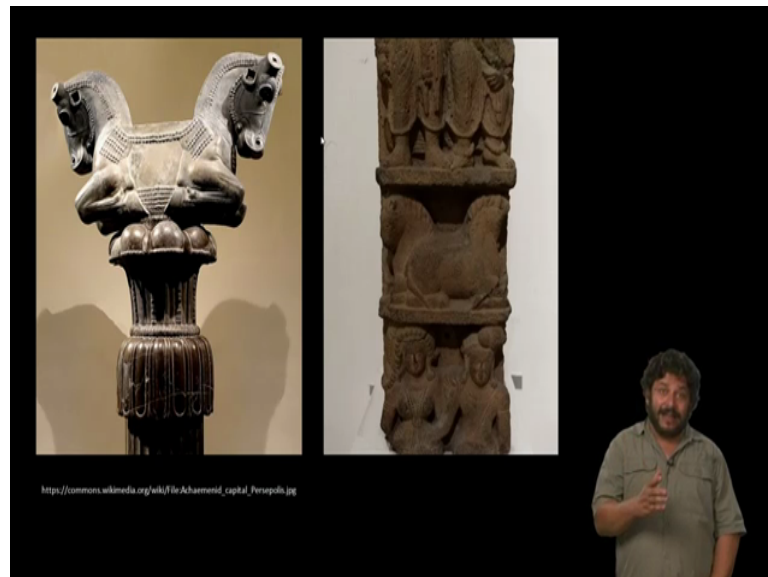
Here is a comparison between what you say as capital on an acuminate column at Persepolis and Ashokan column on the right hand side.

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When you look at freestanding columns such as the 18 Vaishali from the right hand side and compare it with what you see at Persepolis it is not a stretch of imagination to see how the acuminate columns would inspire the Mauryans columns as markers of Imperial grand here of imperial might and providing an Imperial message in the form of an inscription.

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Again on the left you have a column capital from Persepolis on the right hand side you have a pillar from the national museum in Delhi. Notice the exactly the same shapes that have been borrowed by Indian artisans.

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The acuminates will at the western edge of the Empire in modern day Turkey at a place called lisiya.

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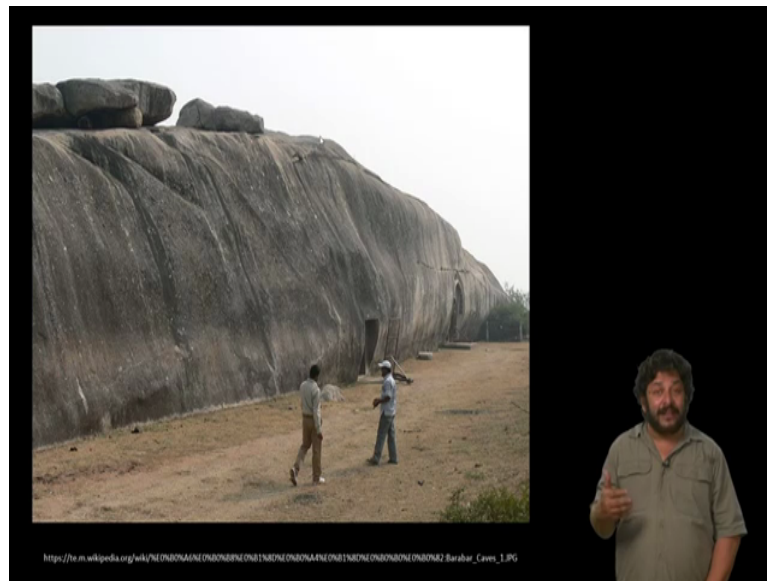
Have a tradition of rooms that are built in living rock already in the fifth century BC these are being constructed on the Western end of the acuminanat Empire. The acuminant kings will built two tombs for themselves like this behind Persepolis.

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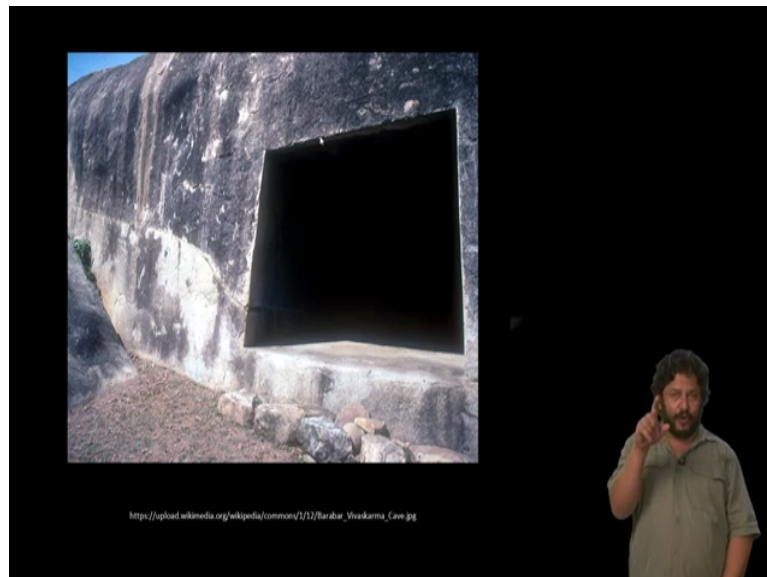
And within a couple of hundred years in the middle of the third century BCA at a place called the Bara bar hills in Bihar you have a similar setup excavated caves in this case not to house the mortal remains of a dead person.

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But these are caves which actually are meant to house a set of tics and we know this from an inscription on the site which says that they were made for a set of wandering ascetics called the ajivikas by somebody from the Maurya dynasty.

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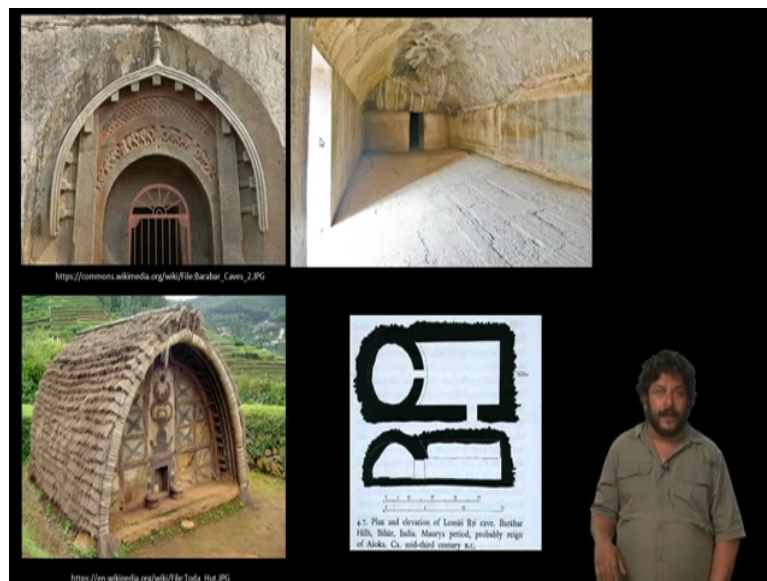
There are multiple caves with different kinds of openings this clearly is a phase of date experimentation people have not seen rock cut architecture of this kind before its an idea that seems to come in from the western end of Asia through the acuminate empire into India in Bihar.

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And you see attempts at creating different shapes in fact the openings to different caves are also different at the site.

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The most celebrated of this cave is the one called the lomas rushi cave celebrated because the entrance of the cave resemble a thatch cut in fact if you look at the image on the top left you will see that the curvilinear roof line over the entrance has what look like wooden dent or wooden joints projecting out words a clear case of building in stone what originally would be built in wood like a much later toda hut you see at the bottom.

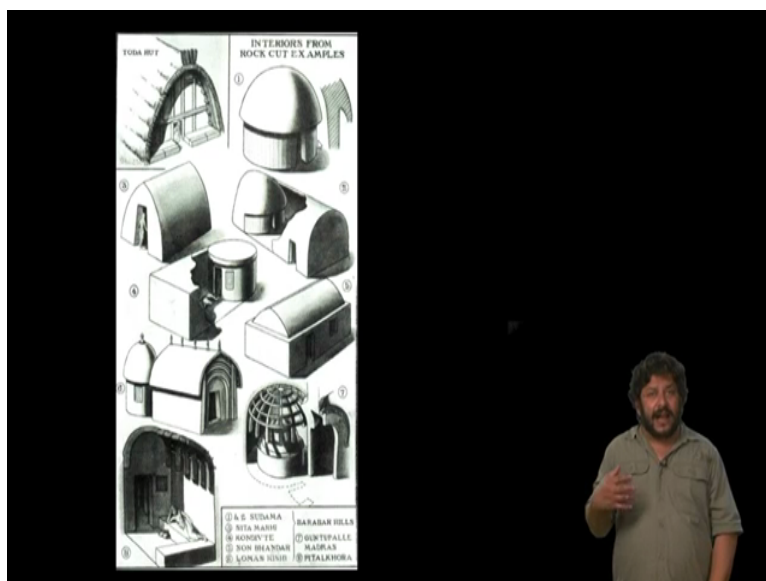
This cave is also interesting because once you get inside you realise that the surfaces are completely polished till they have a kind of glaze and at the end of this long rectal in your hall which you see in plan is a small round hut built inside the living rock. This clearly is a replication of a hut that would house a holy man perhaps the guru of the ajivika who would all assemble in the monsoon in this big hall while their leader was in the hut a hut being the hut built in stone inside a cave.

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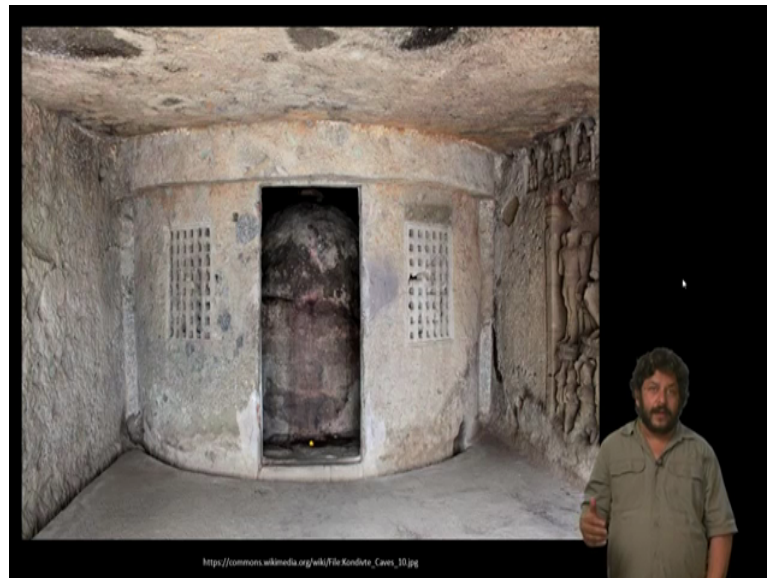
This is what the interior looks like.

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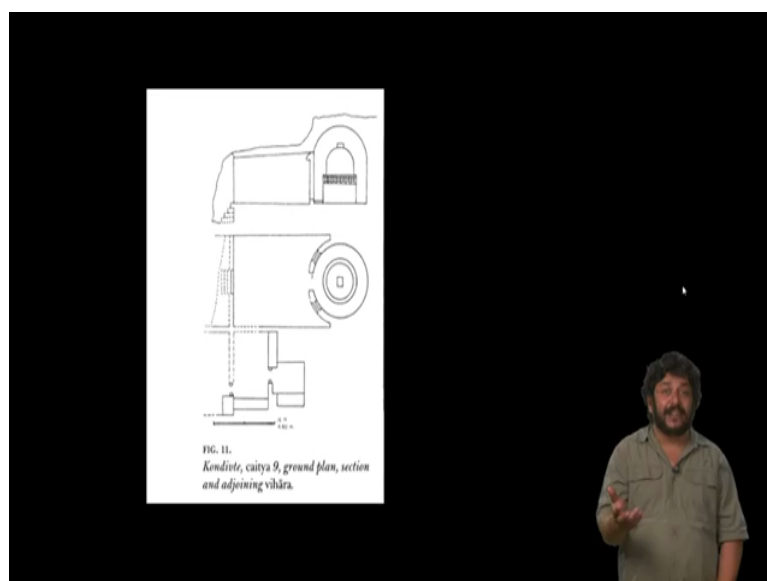
Now this idea that a hut houses a holy man or a holy presence is an idea that never goes away it will survive through various Buddhist monuments through Jain monuments and through Hindu monuments and we will see various iterations of the same through the course of several hundred years this is an image taken from a famous book on Indian Architecture by an author of scholar called Percy Brown.

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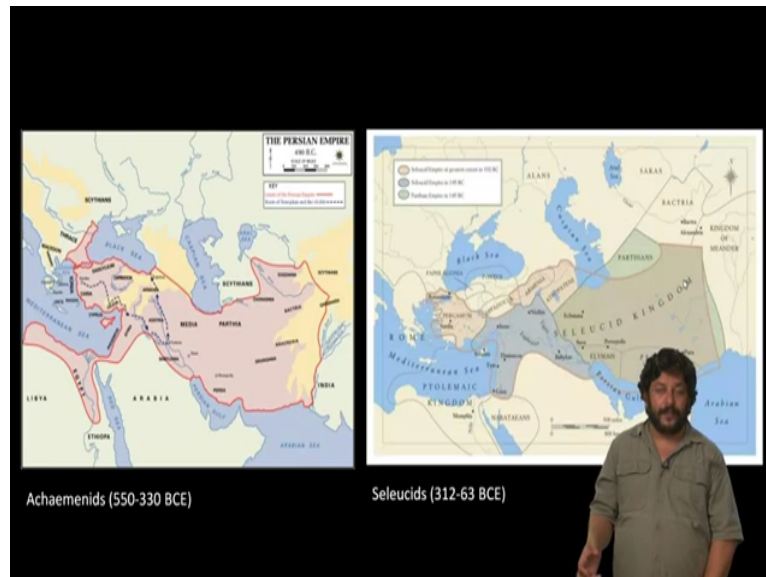
You later find similar kinds of arrangements where a hut housing a holy presence in this case the presence is signified by Buddha Stupa at a cave site called condive cave in Maharashtra.

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This is what the site at Kondaveedu looks like, so again you have a long assembly hall inside which a hut building stone and inside the hut is a stupa which is meant to symbolise the presence of the Buddha. In the case of the Ajivika cave at Barabar hills instead of a stupa you actually had a living master who lived there for part of the year.

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The acuminates are replaced by the Seleucids and the Indo Greeks and they too embrace Buddhism partially because of Ashoka's missionary efforts.

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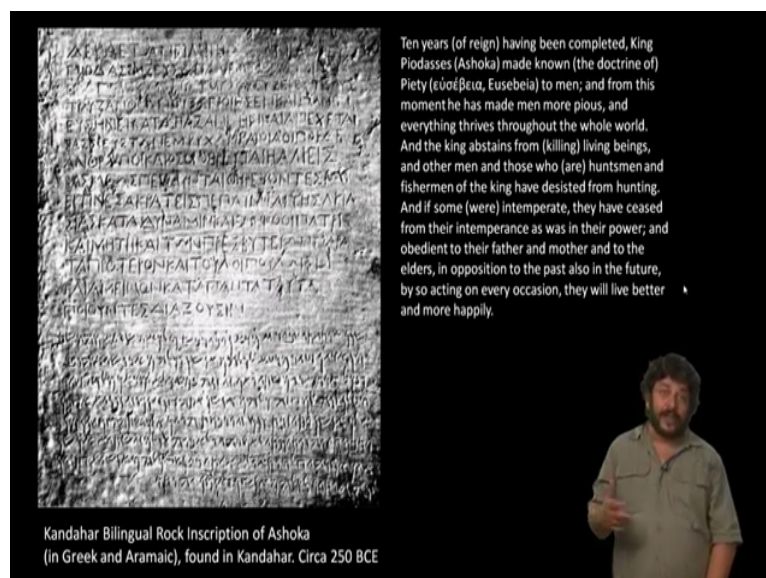
And while they come with a lot of things like Greek coin age and Greek deities and so on you start seeing elements of the locals slowly seep into their culture such as this chariot which is drawn by elephants on one of the coins.

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You also have a set of kingdoms call the Graeco Bactrian Kingdom which slowly embrace Buddhism and it is in these kingdoms that you start seeing stupas.

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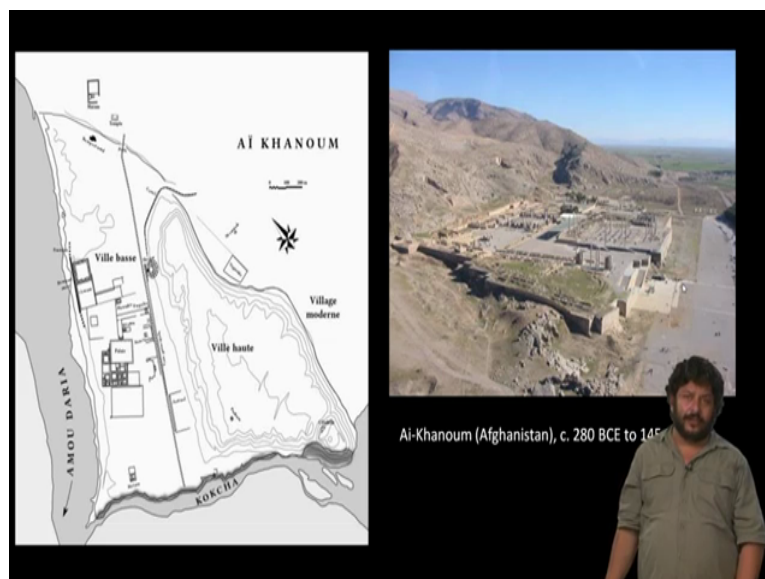
And also bilingual inscription of Ashoka in both Greek and Arabic sometimes in Kharoshti, the languages vary the scripts vary.

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Then it is from here in this period that you start seeing reliefs which show you the constructive stupas and how they are doing worship by populations in the area, not the closed, not the postures of all these figures who are worshipping the stupas and you will say that they have the folds of the garments are like classical Greek sculpture these are Hellenistic cultures in Asia. Note the columns which are an important marker of Greek architecture particularly when they have those kinds of Ornate Vegetal capitals on top.

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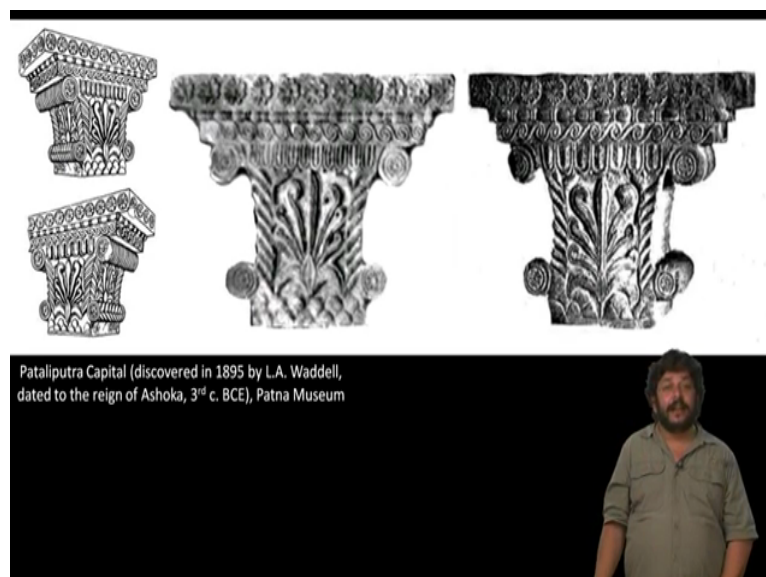
At a site called Ai Khanoum in Afghanistan which is one of these bactrian sites one of these Hellenistic sites a Greek settlement that is built you find.

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Columns capitals like the one you have in the right hand side the plate on the left shows you what later would be the standard orders of architecture in Greece and Rome. The Doric the ionic and the Corinthian and sometimes the tuskan but at Ai khanoum there is a local inventiveness and they have hybrid kinds of capitals and columns and the same kinds of capitals.

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Were excavated at Patliputra in a palace that probably was a Mauryan palace these have been well published and reside in the Patna museum now.