

Indian Art: Materials, Techniques and Artistic Practices
Prof. Rajarshi Sengupta
Department of Humanities and Social Sciences
Indian Institute of Technology – Kanpur

Lecture – 5

Hello everyone, I am Rajarshi Sengupta and we will be continuing on the first module and the first week on clay, terracotta and terracuda. So, this is the last instalment of the lectures that we already have been continuing on. So today we will start our discussion on some of the metal objects as opposed to the clay and terracotta ones, but as we have already discussed this fantastic bronze casted image that is this dancing woman or a girl.

And one that had such high significance in terms of understanding the various aspects of Indian art in terms of its technique, in terms of its use of material and then of course this fantastic balance that this tiny image displays. So, taking those ideas further we will be talking slightly more on the use of metals. So, in terms of the use of metals, we find that this is the time the mature phase of the Harappan civilization which is 2600 BC to 1900 BC around this time.

This time is also considered to be the Bronze Age in this area. And by this time, we see that the people have already learned the ways in which to make this highly specialized alloy that is bronze which is made from copper, tin and in some cases, there are other materials which are also involved in it. So, the proportion of them and how to make them for the desired consistency as well as the quality of the material; all those things have been learned by this people in the second and third millennium BC in this Indus valley sites.

And then we also see that how those things were not really been only implemented in bronze casting, but also for making different kinds of objects.

(Refer Slide Time: 02:19)



Left: Bronze bangles from Mohenjodaro and Harappa; Right: Lugged copper vessel, Indus valley

So, here we have two different kinds of objects which are displayed on our slides and that is the first one on the left side we have bangles. So, if you can remember in those terracotta figurines and the seals, we have prominence of bangles and different kinds of ornaments. If you remember that we had fairly complicated ornaments such as those fans shaped headdress and then those elaborated choker and necklaces.

In some cases, we can find that I mean there are use of beads and for making beads also we have discussed that how there is a prominence of using iron tools and different kinds of metallic tools to shape those stones. And here, we also find that there are different kinds of metals which are used for making these ornaments. So, these ornaments can be worn by, we are not quite sure about the status of the people who wore these ornaments.

However, we can also think about that how some of the simplest of these ornaments are surviving till date alongside the bead ornaments and that says something about the material culture during this time period. So, if we see the bangles which are there on the left side of the screen, the bangles are fairly simple and they have perhaps been made from a long bronze wire or a cylindrical piece of bronze which was casted first.

And then it was heated and then after when it was lightly malleable and then it was hammered into this particular shape. And that is a reason we do not really find that this is perfectly circular in shape. However, there are marks of hammering, there are marks of like other tools which are used there that we can find and that says something about the different ways in which the metal was utilized.

So, in the first example in the last lecture, we have seen how bronze was used as part of this lost wax process where the model was made of wax and then how bronze was used in the mould that was created by this wax model. And here we find there is a different way in which bronze is utilized and that is for as this cylindrical or perhaps this long strip or this piece of bronze that was created.

And then it was moulded and then it was sort of hammered when it is warm. And then it was a heated and then made into the shape, this desired shape for the bangles. So, these are the kind of things we find to be incorporated in their practice. Then there are also some of the other things, for example, the utilitarian wares, the ones we have for example on the right side of the screen.

So, on the right side of the screen, we have a vessel which is perhaps something that is used for cooking or storing food or storing grain. And this is a metal vessel. And this is something we can also think about it that how there are pottery shreds which are found from the sites. There are burial portraits which are also found, similar kinds of shapes we have found in the pottery and now we see the same shape in metal.

It might signify different kinds of things; for example what kind of different purpose does pottery do, what kind of different purpose do the metals serve if there is a metalware. So, we can also think about the status of the users that pottery items can be utilized by people who are much more, we can think about the regular people who could use pottery.

But when it comes in terms of these complicated technologies like making bronze and making bell metals and copper, and so in those cases we can think that how all those minerals were extracted and then made into the alloy and then those were casted and then of course hammered into making this object. So, it goes through a much more longer time consuming as well as an expensive procedure for making these objects.

So, when these objects are done with more care, more investment and so on, we can also think about the economic value and social value and of course the cultural value will also be different from the pottery items, something we can also imagine for the vessel that we have

on screen. So, this vessel which is made from copper, even though the colour looks much more bronze like, this is a copper vessel.

And this copper vessel apparently it was actually made from beating the copper sheets into rectangular flat sheets and then they are sort of joined together for making this copper vessel. And of course, beating, hammering and these techniques were much more implemented in this one than the one we have seen for the bangles and of course also for the wax resist process. So, in this one as we can see that since there are various sheets of the copper that was joined together for making this vessel.

And that is the reason there are some of the marks where we can find the joineries are there. So that is how the historians, the archaeologists and art historians have come to conclusion that this is something that perhaps has been made from beating the copper sheets, putting them together and joining them instead of any other method that might have been involved in making these kinds of vessels.

So, these are the different ways in which we find that how metal is utilized. And even though there are very few examples we are left with from the Indus valley sites as compared to the pottery shreds and the brick structures, but these are some of the sophisticated uses of the metal that also shows something about their material culture. Then talking about the metal, we must also remember that the exploration of this metal also starts from the earth.

So, we have already been speaking about the clay and soils close interrelationship with the earth and the idea of the mother earth, right. So, in this case as well understanding the landscape, understanding the demographic, understanding the geographical location and all those things that must have also played a huge role in thinking about where to find the minerals for extracting copper, where to find minerals for extracting iron and where to find minerals for making tin and things like that.

And then all those things were put together, joined and of course that it goes through a much more lengthier procedure than what we can explain in a lecture. So, this is also something I want to sort of stress that even though we are looking at metal objects, but the idea of how they are related to ground, how they are related to earth and how they are related to landscape

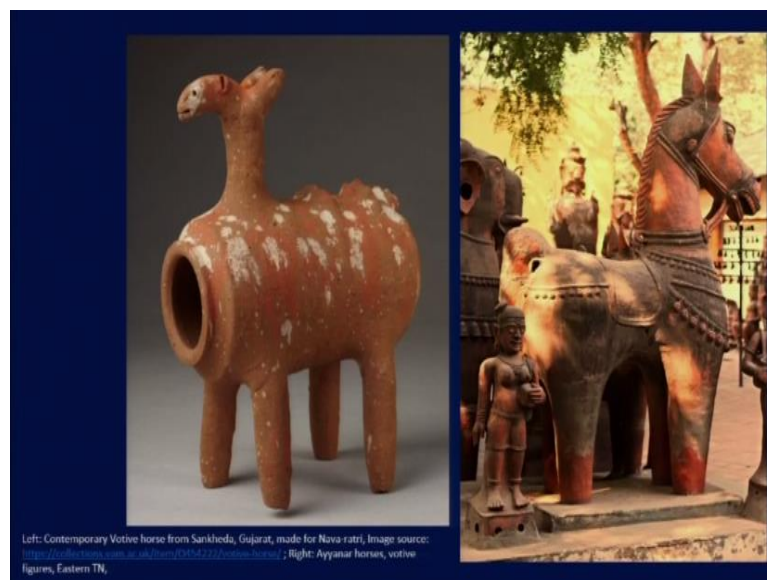
perhaps these ideas are not discrete from how we see those ideas have played out in terms of the use of clay for making terracotta.

So that is how in another way I would say that the idea of the landscape, the idea of localized material as well as the material which have been brought there from other regions. So those things have always played a very important role whether those are terracotta, whether those are bronze or any different kinds of metals and so on. From there, I would like to draw your attention to some of the interrelationship between these objects and their long-term influence on the material culture and belief system in the Indian subcontinent.

So, we have already spoken about how there are those figurines that connected terracotta figurines that we have seen, some of the figurines which have been made from joining two vertical clay strips putting together and making them and which is so unusual for which the archaeologist and historians and art historians they have thought that perhaps this is also part of some of their rituals, their belief system and so on.

And a lot of those images perhaps has been made for ritualistic purpose. And why we say that that is because the use of terracotta for making ritualistic images is something that we still see in the Indian subcontinent. And here are some of the examples I have on screen.

(Refer Slide Time: 11:32)



And these are from different locations of the Indian subcontinent. And they are also something that we can think about how in the contemporary times this kind of ritualistic practices have been continuing. So, in one way we can also think that whether it has this

tendency towards generalization that something that had happened in the 2600 BC or 1900 BC, can we draw a simplistic relationship between those times and something that we are evidencing right now.

But there have been some of the archaeological expeditions and some of the archaeological ground breaking work, for example Jonathan Mark Kenoyer and Uzma Rizvi and so on who have brought together some of these kinds of methodological approaches where we find that the historical objects, historical practices are brought in conversation with the contemporary ones and that is how we find that the possibilities and challenges of doing this kind of cross disciplinary work.

And also breaking the strict idea of chronology to understand something that had been there in the historical past. So, if we see the images that we have on screen, so the image on the left side we have that is from Sankheda and that it is a horse. And it is horse as we can see that this horse is very simplistic and there is the degree of simplicity in this that actually draws our attention to some of the images that we have already studied in the Harappan context in the Indus valley context.

So, this is an image that is from Sankheda and it was made in the 1970s in Gujarat and this was a votive item which was used during the Navratri festival. And so, we can imagine that such kind of ritualistic use of these images that we have seen in the earlier times in the third and second millennium BC is something that is still relevant for the Indian population and the Indian societies.

So, this is another way in which we can imagine that some of the practices, for example in terms of the Harappan civilization or the Indus valley civilization, if we think that how those belief systems, we cannot really pin them down to a particular religion. Now, if we see them being part of more in the mainstream Hindu belief as well as in the tribal belief and in the Islamic belief and so on, we can imagine that how some of those belief systems which were existing there in the second and third millennium BC.

They have made their influence on the people in this Indian subcontinent across religious backgrounds. So that is something for us to think about the larger implication of the Harappan material culture. So, coming back to this horse what we see here, the body of the

horse that has actually perhaps been made from the cylindrical drinking cup. So, the drinking cup is something that we can find to be this hollowed, this pottery item and then at the bottom of it legs are added and the legs are simplistic and they also give stability to this form.

And so that is also something we can relate it to some of the terracotta horse and the other figurines that we have studied in the Indus valley context. And then on the top of it, we also have this very simplistic projection and this projected area that signifies the neck and the face of the horse and then two additional ears are joined to this section. And this additive process that is something that we have studied in the Harappan in the Indus valley context.

We can still find their resonance in making this kind of votive items as well as many other terracotta items in the Indian subcontinent. And then there are very simple marks which are created on this horse, for example very simple these horizontal marks for creating the eyes and the mouth and then just a hole for signifying the nostril. So, these are some of those visual characteristic features.

And of course, like the characteristics of this horse that we find here, they can also relate us, they can also relate this kind of practices to something that had happened in the third and second millennium BC. Now, from there we can imagine that how of Gujarat's geographical location is something that is very significant and because some of the Indus valley sites that we have looked at.

And of course, we have not gone in detail about them, but some of the Indus valley sites, the important sites for example Dholavira and Lothal they are situated in the present day state of Gujarat. And so the kind of these practices of making these votive items in terracotta that we see in this state today it should not come as a surprise that similar kind of practices had been existing in this region for centuries and for millennia perhaps.

So, if this is one of the instances, we find that how these practices have progressed further, and then the other example comes from the southern state of Tamil Nadu. In Tamil Nadu, we have this gigantic Ayyanar horses, which are made in the eastern part of Tamil Nadu close to the Coromandel Coast. And then what we find there are those gigantic horses, which are much more sophisticated in their making as well as their ornamentation and then they are also given to this village God and doing this one annual festival.

So, these gigantic horses are dedicated to this village God for the well-being of the people in this region and something that we can find its resonance with how we have seen that the small terracotta figurines and so on, those were used in different parts of the Indian subcontinent as well as their history rooted in the Indus valley sites. So for the Ayyanar horses, what we find in terms of the making of these terracotta horses that the horses are actually made from different.

The horses are not really made in a simplistic way as we find the horse from Sankheda or from the ones that we have studied from the Harappan context. And here the horse making is much more complicated in terms of how the body parts are made separately, they are then fired and then perhaps they are joined. In some cases, we can also find that they were made separately as parts and then they are joined and put in the kiln.

So, these are the ways in which we find that how does horses are made in a much more sophisticated way. But some of the other characteristic features for example the additive process, in terms of adding all the details in these horses, for example the hair, the ears, the eyes and of course the other ornamentation that we find in the body of the horses they are all done in the same additive process that we find in the Indus valley sites.

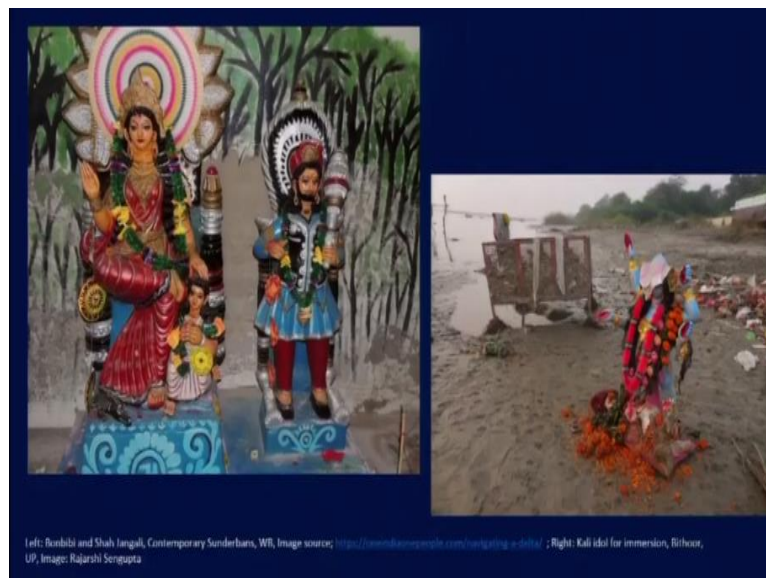
That how these additional ornaments and everything those are pasted on the top of this fingers for embellishment for giving much more these individualistic touches to the them for us to recognize them as horse and not as elephant or not as rhinoceros. So, those kinds of tendencies we find to be present on different degrees in the various votive items made of terracotta across the Indian subcontinent.

So, talking about these votive items and then the other uses of clay, we have not been addressing this one aspect of the clay sculptures and the clay images and that is the terracruda. And terracruda is something that is made from unbaked clay and we have already discussed in the first lecture on the dangers of having terracruda images and that is because since these are not baked, they are not durable, they are much more malleable than the terracotta images.

And that is the reason what happens is that the images which are made from terracuda or unbaked clay, they can be dismantled very easily, they can erode very easily. So, those are the kinds of things that also affects the ritualistic use of this images. So, the historians and archaeologists have found the some of the fragments and the use of mud in the walls and some of the fragmentary images made from mud or from unbaked clay from the Indus valley sites.

Which made them believe that there were some other rituals which were associated with making unbaked clay items and some of the rituals that we still see in the Indian subcontinent are not necessarily all Hindu rituals, but there we find that the use of unbaked clay is also something very significant.

(Refer Slide Time: 21:54)



And we have here on screen two contemporary images and one is from the state of West Bengal from the mangrove region of Sunderbans. And here what we find in the image on the left is that there are two deities who are represented that is Banbibi and Shah Jangali and these two deities are actually revered by the official men and other forest dwellers in the mangrove region of the southern West Bengal and here both Muslims and Hindus worship these deities.

So, making of this idol what we find that the idols are made from unbaked clay because baking the clay and with this particular kind of rituals that does not really have this idea of life because for making these images first, bamboo structures are made on the top of that

there are rice husk or rice hay that is used for supporting the bamboo structure and on top of that layers of clay is added for making these images.

And this particular way of making the images that follows also a kind of lifespan of the human beings, the way we have our bone structures on the top of that we have muscles and other veins and things like that, and then on the top of that we have our skin. So, this is a similar kind of process, we find that is followed for making this unbaked clay structures and the reason for making them unbaked because the body is malleable.

Our bodies are not really going to exist if we put ourselves into the high temperature or like a fire or a kiln. So, that is a similar kind of a treatment that is given to this unbaked clay images. That the clay images are considered to be living images and that is the reason they are not really put inside a kiln. So, they are worshipped or they are used for the ritualistic purposes. And after the ritual ends, they are immersed in water or they are left by the water.

So for the weather conditions and also for how the unbaked clay dissolves in water that is how the clay and other materials which are used in these images they eventually dissolve and they disappear leaving only the structure of the images the bamboo structure and hay structure. So, this is also a symbolism that is very much important we can think about in terms of understanding life that how life is also like that.

There is this cyclical process in which something starts, it continues, it transforms and after a point it also disappears and then the new life starts. So, this idea of recycle, it is something this rebirth, the cycle of birth and rebirth. These are some of the ideas that we find to be associated with the use of unbaked clay. And when we map this kind of observations and experiences on to something that we have studied in the Indus valley context.

We can think that how life, death and all these ideas might have also played out an important role for them to make clay made images as well. And there are reasons for us to believe that they also had this much more complicated and complex ideas about life and death and that is because that they had already been thinking in terms of how the terracotta images are made and the particular use of that bone pigment that we have already discussed.

So, those are the kinds of things that also make us think that it will probably not be unusual for them to also know about the use of unbaked clay for this kind of purposes.

(Refer Slide Time: 25:56)



So, from there I just like to wrap up this session and remind us about some of the aspects of this Indus valley civilization. So, we have looked into a number of objects and number of sites. For example, we have in the further left side of the screen, the city, the ruins of the city and the stupa like structure which we have discussed that it is perhaps a site of any kind of demonstration or public assembly and so on.

We have also looked into some of those structures like the public bath, and then the remains of the well, remains of furnace and things like that tell us about this highly sophisticated and complicated cities which have developed across this Indus valley. And then that also tells us about this very highly sophisticated drainage system, the roads, and then like the protection of the cities, irrigation which will be used for agriculture and so on.

And then we also have some of the other things, for example the ritualistic images. And I think we have spoken a lot about the ritualistic images, so I would not be repeating that. But that also relates us to some of the other things, for example the seals which are very much part of the trade systems and the trade networks which was integral to the development and prosperity of this Indus valley sites.

And here we have a seal where there are those three animal heads related to this one body, where we have discussed that this kind of features in these animals is something that we will

also find in the later times in Indian art, how two bodies are connected to one head or like one body is connected to three heads and this ingenious technique of representing the animal bodies and so on.

And from there, we have also looked into some of the other use of clay and where the bronze casting is concerned, because how we have looked into the lost wax process in which the wax models were made and then those were made into the moulds of mud and then the mud was fired so that the terracotta moulds were made onto which the bronze was casted and images like this dancing woman and so on were created.

So, these are different ways in which we can find how the material clay was utilized. And not only just for making different kinds of objects, but how those were also very much part of their belief system, their livelihood as well as their trade networks and culture in general. Thank you.