

Indian Art: Materials, Techniques and Artistic Practices
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Lecture – 36
Printing

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Hello everyone. I am Rajarshi Sengupta and we are at the week 8 of course in Indian art. So, this week we will be talking about printing as one of the European interventions in the Indian subcontinent. So, when we talk about the European interventions, by that I mean the kind of technologies or the kind of aesthetics and image making, those processes which were imbibed by the Europeans in the Indian subcontinent.

So clearly, we can think about it how that also overlaps with the colonial period in the Indian subcontinent. However, we can also think about it that how some of these technologies that started being transported to the Indian subcontinent much earlier than officially the colonial period sort of began. So, in that way what we can find that with the European interventions, there were few different kinds of image making practices they arrived in the Indian subcontinent.

And among them perhaps the two most important media will be printmaking and painting. So, we already know that there are painting traditions in the Indian subcontinent, but in this case the European painting by that specific kind of British watercolour, at the same time the oil

painting technique which had already been popular, at the same time it had already had its prominence in various parts of Europe, at least since the 15th century.

So, in this week we will be talking specifically about printing and that is the reason we will leave the painting part mostly for the next week. So, when we think about the use of printing and then when it started some of the earliest records we find and at least some of the research on Indian printmaking that had been carried forward by Paula Sengupta and other scholars, so that suggests that around 1556 in the mid 16th century and later on.

During that time the Portuguese missionaries and the Jesuits, they have gotten printing press in the western coast of India, perhaps in Goa and so on. And then later on, we also find that how those printing presses they were not only just present in Goa but also part of Tamil Nadu and at the same time few of the other coastal cities in the Indian subcontinent.

Now slowly we find apart from the Portuguese missionaries and then later on, we find how the English and the Scottish people, the traders, the administrators and so on in late in the 18th century and 19th century, they will establish one after another printing presses in the coastal cities. So, we find that the establishment of the printing presses, at the same time the commitment towards making prints in India this new kind of prints in India that also ran parallel with establishment of some of the new cities in the 17th to 19th century.

So, for example we see that, how the colonial expansion that was the driving force for expanding the reach of printed material in the Indian subcontinent. So, how that also had its impact on making of some of the new cities, for example Bombay, Madras and Calcutta and as we can see that all of them were coastal cities. So, these are some of the ways in which we find during these European interventions.

We find that there are new kinds of material, new kind of media that made its presence in the Indian subcontinent, in the visual culture of the Indian subcontinent, but also at the same time they overlapped with the establishment and growth of some of these newly established cities. So, these are some of the things we find and then slowly we will find that there are more and more of these printing presses.

And by the end of 18th century or in the 1790s we find that in Serampore Kolkata or Calcutta, this press was established by the British East India Company, which published books and newspapers in English primarily, and then we find how this printing technology was also something that the indigenous people, the locals they have also taken up and then publishing in the vernacular languages, so for example in Bengali, in Tamil and so on that also spearheaded.

So, by the end of 18th century around this time as I have already mentioned that the printing press in Serampore was a very important one. So, similar kind of presses and printing activities we will find them to be all over South Asia. There are also like when we have the printing presses and then this particular kind of printed images. So, some of the images, for example this one as we can see that this is a 19th century image and that shows the fort at Agra.

And if we see this image, it is not necessarily that all those early images in the 18th and 19th century were made in the Indian subcontinent. A lot of times the drawings could be made in the Indian subcontinent and then they will be sent to England and other parts of the of the Europe for being made into the prints. So, for example this one, the one we have on screen, it was sketched by T. Bacon and then drawn by C. Stanfield and then engraved by H. H. Kernock.

So, this way, we can see that the early printing activities that were also something it was a large collaborative experience. So perhaps a person who would be traveling around the Indian subcontinent, for example this one, if the person who have sketched this was present in Agra, it is not necessary that the person who have been developed the final drawing from the sketch was actually traveling to Agra.

So, this kind of activities would be common in 17th and 18th century and in the 19th century as well. So, what we find here, this large collaborative kind of work which finally resulted into these printed images that started from the actual sites and then it went on to be developed in the printing presses in Western Europe. So, the time for developing these prints was also enormous.

That kind of the effort, the kind of technological knowledge that one would require to make them into these prints that is also something that was highly prized, and that is a reason the way we see prints today it is the way the prints were perceived in the 18th and 19th century were

very different. So, making images into prints and one of the major reasons for making them into prints was perhaps for the replication.

That if this one image is available to only one person in form of sketch, then we can think about how the printed image can enable a larger dissemination of the same image. So, that way we find that how printed images that also developed a new kind of experience or viewership and also it impacted largely upon the existing visual culture. So, considering all these issues we can think that how this new mode of making print which I have already mentioned was a much skilful.

At the same time a time consuming affair was worthwhile and that is the reason the colonizers, the Britishers, they have made use of this print for disseminating knowledge about the Indian subcontinent, at the same time how to make use of this kind of the printed material for the administrative purpose and also for documentation and studies. So, when we talk about printing technology, then we I must also make it very clear that it is not like that in the Indian subcontinent we never had any kind of printing.

So, there are printing those have already been evident in the Indian subcontinent and some of the very well-known examples would perhaps be the block printed textiles.

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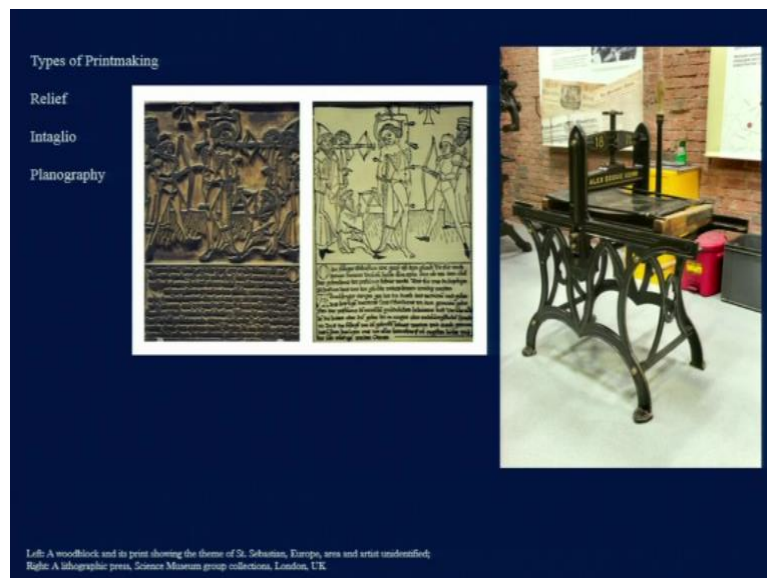
So for example, here on screen we have the woodblocks which will be carved from the wooden planks and then the cross section of the wood. And then like all different kinds of either ornamental, figurative or textual motifs will be carved onto them. And then water-based dyes

were used for printing them on to fabric. So here on the right side of the screen we have an image of a printed fabric and that is printed with natural water-soluble dyes.

So, this is a kind of practice we know that had been there in the Indian subcontinent for the last 2000 years or so. So, these kinds of activities were there, and perhaps some of the other printing activities we can think about is to have things like the Namavali or where the names of the gods, mostly in the Vaishnavite context and particular kinds of symbols which are associated with Vaishnavism those were printed onto fabric, which would be wrapped by the devotees on their bodies.

So that kind of printing activities we certainly see them to be prevalent in the Indian subcontinent, but when we talk about printing in the European context that also makes a difference if technically, at the same time aesthetically that also goes much in a different direction from what we see in the printing activity in the Indian subcontinent like the block printed textiles and so on.

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So, when we talk about the European printmaking, at least from the 13th and 14th century, we see that there are different kinds of printmaking which were practiced and in Europe, we find mostly oil-based ink is used for printing. So, that is a major difference between when we think about the indigenous printmaking or the printing in the Indian subcontinent with what was happening in Europe.

So, the indigenous printmaking in the Indian subcontinent would make use of water-based dyes and then there are different ways in which the dyes were developed and printed onto the fabric surface. Whereas in terms of Europe, we find that from very early on, at least from the printing of Gutenberg's Bible we find that this letterpress ink and this oil based ink is used for printing on to paper and vellum that is of course on fabric.

So, these are the different kinds of the printing techniques that we encounter in these cases. So, when we talk about the printmaking techniques mostly in the European context, then what are the basic kinds of the surface one needs to develop for different kinds of printing. So, the major printing techniques those were prevalent in the Western Europe would be relief printmaking, then intaglio printmaking and then planography.

So, let us start with the relief printmaking. So, what is a relief printmaking? So, for example, what we see here on this image on the left side, so here there is a carved wooden block and in this one what we see that there are the images which are in a raised surface and then there are also text that we see here. So, all these things which are the image areas, so image area is always considered to be the positive area.

So, this raised surface would be the positive area and then the area which is sunken is considered the negative area. So, these are the kind of different areas which we can see in this one wood block. And then how that makes an impact on the printing that we can see is when this particular wood block is tinted, so the tinting process would require a roller and then roller is used because that way the oil based printing ink can be rolled on the top of this wood block.

And that way what happens only the raised areas, the areas which are raised from the negative areas would only receive ink from the roller and that is how the entire wooden block will be tinted and it will be ready for printing. So, for printing then what happens on the top of this woodblock one needs to press a piece of paper and then it is rubbed, either it is hand rubbed with paperweight and something that that has a smooth surface or it is also run through a press like the one that we have on the right side of the screen.

So even though the press we have on screen here is a lithographic press, and I will come into the detail of it, but similar kind of press for woodcut is also there. So, this is what we find that in this the relief printmaking. So, the image area will be raised, the negative area is sunken and

the image area receives ink from the roller, the oil based ink, and that is how it can be printed on the paper.

So, the woodblock is kept horizontally, on top of that the paper is kept and then it is either hand rubbed or run through a press for taking the impression of this woodblock onto the paper. And here we have the impression what comes from this woodblock. So, this is how we see that how the relief printmaking works. And if someone wants multicolour printing, then usually for relief printing in the conventional method, what we find that different blocks for different colours are used.

So, if there are colours in the body of these figures that we see here, then there needs to be the same, the shape of the body needs to be traced on different block and then that particular block will be used for one particular colour. And then that after printing the outline of this first print, then the same paper needs to be pressed onto the other block for printing the other colours onto them. So, this is how the relief printmaking usually works.

There is also use of stencil, but we will come to that later on. Then if we think about the relief printmaking, then the other printmaking technique will be intaglio. And in terms of intaglio what we have is that it is exactly the opposite of relief printmaking. So, in case of relief printmaking if we think about a surface, this is the raised surface, so that means this is the positive surface and this is the place where it holds the ink for printing onto paper.

If this is what happens in the relief printmaking process, then for intaglio it happens the opposite. So, for intaglio what we have is that if there are sunken surface, so the sunken surface is actually the place which is for the image area. So, these are the areas the sunken surface that is the image area and for intaglio this is the positive area, this is the negative area and this is the place where the ink will be there and that will be printed onto paper.

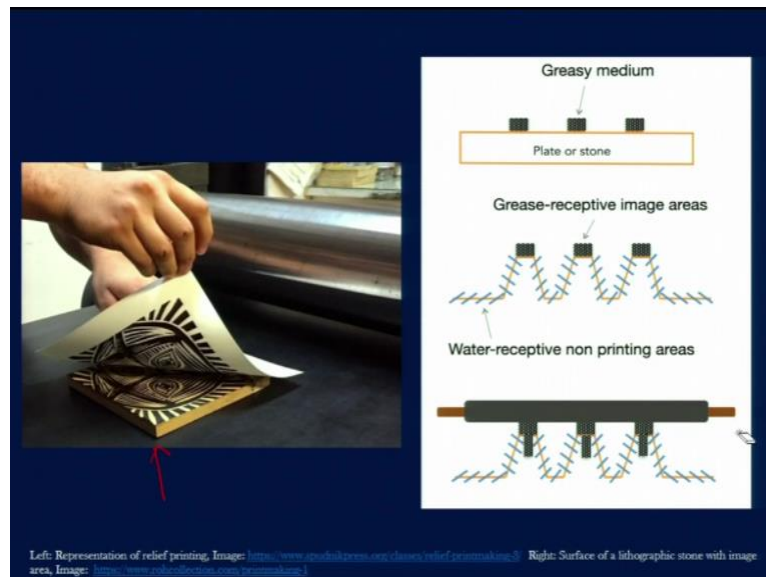
So that is how we see that these different ways in which these different printmaking processes work. So, for woodblock, for woodcut if we see that technique that requires a kind of the engraving tools or wood cut tools for carving the woodblock for making those relief blocks for printing, then for intaglio what happens is that we need to have metal blocks and for metal blocks what happens that in metal block usually there are engraving tools.

Very fine needle like things which are used for engraving on to the metal surface or there are other techniques, for example the etching technique in which the entire intaglio block is covered with an acid resistant material and then only the areas, the lines which need to be carved, so in those places this acid resistant material is removed with the help of a needle and then the entire plate it is covered, the backside of the plate is covered and then this is kept in an acid bath.

So, usually soft metals are used, for example zinc and copper and then what happens when this is immersed in an acid bath, then the areas which are not covered by this acid resistant material, then those areas that acid makes the etch, so that is how the etch surfaces are made into an etching block. So, when ink is pressed on to these blocks and then only the areas which are the sunken areas, they receive the ink.

And then the rest of the ink is removed from the plate and then the similar way paper is kept on the top of this plate and it is run through a press for taking the print. So, for intaglio printing you definitely need a press as opposed to what happens in the relief printmaking.

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So, these are also some of the other diagrams that we can find here and some representational images here to show how this different kind of printing technologies work. So, in the one that we have on the left side is an example of the relief printmaking in which we find that how the image area is raised and then a paper is put on the top of it, and when it is rubbed on the top of the paper, when it is rubbed with either a paperweight or some kind of a smooth heavy material then we have the impression from the block.

That is the mirror image of the block that is then being impressed on the paper surface. So, if this is the way it works for relief rainmaking, then the other rainmaking that we had here that is after relief, intaglio, we have the planography and in planography this is a diagram for how the planography material works. So, what happens for planography for relief and intaglio we have both the sunken surface and the raised surface.

So, for relief we have the raised surface which is the positive area, for intaglio the sunken surface is the positive area, now for the planography or in lithography what happens the sunken surface the negative area and the positive area both of them they stay on the same plane, there is not really a kind of like a sunken and raised surface as such. So, lithographic stones are a very specific kind of limestones which were first found in Bavaria in Germany.

And before lithography, we do not really have the halftone that is the imprinting. So, there were cross hatchings, but there cannot be an effect like a crayon, when we rub a crayon a kind of tonality that happens for the drawing that could not be achieved in printmaking until the invention of lithography. So, what happens in lithography that we see that on this particular kind of this limestones greased based drawing material is used for making drawings.

And so, here in the diagram that is above, so here we find that if this is the stone surface and then if these are the areas which are the grease-based medium is used for drawing, then those are the places which stays on the stone surface and then the rest of the area, then there water is used for covering the rest of the area. And when the oil-based printing roller is rolled on the top of it, then only the areas which has the grease, because grease is also oil based, so these two oil-based things they sort of respond to each other.

So, the areas where water is present, so the oil-based roller, the oil-based printing ink would not penetrate into those areas where there is only water. So, the areas which already has this grease-based substance, those are the areas which will receive the ink and that is how the entire lithographic stone will be inked and then a paper will be pressed onto the top of it and the print will be taken from it.

So, these are some of the ways in which we find that how this printmaking technologies in Europe they work and why it is important for all of us to know about the details of this

printmaking technologies is because these are the technological factors which make a huge deal of difference in the final product that come out of these processes. So, for example, when we see an image like this, in this one we know how this image has been made.

So, for example when we see this image, there is no halftone that is used like the lithograph that I have already mentioned. So, halftone like if you rub a crayon or rub a charcoal on the top of a paper or on wall or something, then like I mean the smudgy effect, the smoothening effect that we find there that is not present here. So, for its distance, we cannot see all the details, but all these lines that we see here, those are actually individual lines which are drawn here for making the clouds.

And then there are those hatched lines for making the depth and giving the volume to this fort area. So, this is how we find that how in engraving technique all one can use is different kinds of lines for creating depth, creating a surface which is more prominent than the other and then also the distance, the scale, proportion and everything. So, as I have already mentioned, how these different kinds of printing technologies they make a huge deal of difference in terms of how these images are produced.

So this can be taken as one of the examples, if this same image is produced in woodcut it will have a very different kind of visual outcome. And if the same image is produced in lithography, then the modulation and then the tonality and everything else will also be different. So, we will continue on these issues now that we have covered the technical side of printmaking, then we will get into more of the images and the aesthetics in the subsequent lectures. Thank you.