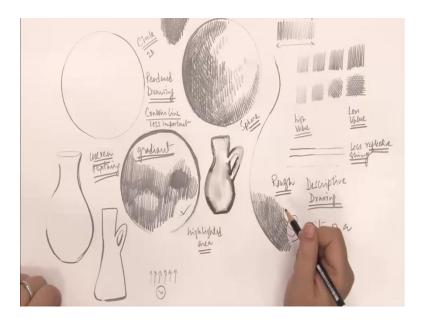
## Elements of Visual Representation Prof. Shatarupa Thakurta Roy Department of Humanities and Social Sciences Indian Institute of Technology, Kanpur

## Lecture - 29

Let us concentrate on another very important aspect of line, how we can use line that we draw on paper or any other surface in terms of it is value. So, when we have a line, which is even thrown out in terms of the lighten shade, we can call it an even value; that is distributed. And the even value will also produce a two dimensional shape into it, but when we see a line with different values that has to be also continues to get the shape right. Now, we will try and see how the value changes, what is value and what is high value for a particular object and what is the low value thing and how the high value and low value can also create a contrast. We will see that by making it as we have been doing so far.

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So, by changing the pressures of our pencil, we can get the sense of a value difference. When, we say something in terms of value like this; that we placed the pencil very hard, we release the pressure, make it lighter and we get a range of value difference. So, the darker it is, the low is the value and the lighter parts are high in value. So, when we consider things in terms of achromatic grey, which is there is no chroma present, achroma is no croma, there is no croma present, there is no color present there.

So, we think in terms of your value and pure value is nothing but, white and black. White is the highest value color and black is the lowest value color and all colors, each and every color falls under the range. So, if we make a color darker and more darker, that means we are increasing the color, but we are decreasing the value of that color. So, with the value decrease, it gives more and more darker.

So, at certain point the color will turn totally darker and that is black. In the same way, if we increase the light into it, we keep on increasing it is value. So, it becomes lighter and lighter and at the end, it converts into white. So, that is how we change the value, each color stands somewhere in between. So, the extremes are the black and white; that means the high value and the low value stretch and the color comes in between.

And if you remove the color and we try to see the range of grey there, then we think in terms of your value and that is just the grey and white and black; that is an orange. So, let us see how the achromatic grey can be applied in a single line drawing and also to create the surface, how can we use a line as the single unit. We multiply it and we converted into a surface texture that also tells us, whether the surface is shiny or whether it is mats or it is core or smooth or that way line has it is function to also indicate us the quality of surface, which is connected to another consideration, another element that is the texturing.

Now, these are some shapes which are circular, so these are circles. Now, the circle can be converted into a sphere, when we draw a line here with some modulation. So, here maybe this is order, they are a flat and two dimensional, but then we may increase the pressure. So, we start from this point, make it darker, leave it, that is provide us with some volume, we can keep it lighter, increase the volume again. So, that will creates some modulation and the surface will not remain flat anymore.

Similarly, in this particular shape, we can increase certain part in terms of it is value. So, this is the highest value area, where the line is not at all visible. So, we may guess that there is a light source here. So, we get a light from here and this part is lighted, because of that. So, other part has to be darker. So, we increase the depth by lowering it is value, but that this is too certain, so we need to create the graduality here.

So, in this line drawing, this is the part where no light is falling and this is part, where we have shiny highlighted area. Previously, we talked about cyclic line formation, but here

the formation is taking a different turn that, when we see that some part is creating a gap; that can also be taken in terms of a shiny surface. So, the surface, where the light is more reflective, that can create a high value contrast in it.

So, how we see it on the diagram now, that this part is dark and this is very light in color, this is almost reflective. So, this is one area that we can call as a highlighted area and this is the dark zone. Now, through a line drawing itself that is sufficient to tell us, how the surface texture is, let us take an another complex surface, maybe a vase. So, this is thinner, this is thicker, again it goes thinner and it becomes thick. So, that is how we get some idea, how the line should work.

Now, when we work on the surface, this is just a line drawing, this is also just the line drawing, but it is suggested. Let us make another line drawing, some part with a low value, the other part with a higher value. In order to make it spherical, it is no longer a circle, but it looks like, it has a volume in it. So, by applying strokes, then with the help of a few lines, this will create the surface, they are the parallel units.

Now, will change the order of this stroke that will become darker, we can change the order by changing the direction and it can become very dark through overlapping. The only thing that will have to keep in mind that it has to be gradual. So, let us practice, how to make an even. So, now in these points, let us give our self sufficient practice to see, how we can have total control over how dark or how light the lines can be.

So, if we have a bunch line of this range; that means, we have just have one time rendering here, we make it a slightly darker. We change the pressure, it becomes darker, we increase the pressure, it becomes even more darker, we increase the pressure more, it comes very dark. And also, it becomes thick, we can take another round by not changing the pressure, but a by overlapping that is another device. So, here, we controlling the pressure, we are controlling the thickness, but we can also take this way.

So, what we are getting is a range, where we are going from high value, a high value grey to a low value grey in the range of the achromatic grey. So, the line that we create, they are nothing but some guidelines, when we create the surface. We can complete a drawing as we discusses earlier also; that a line drawing can be complete enough, when we have this volume and the volumes are also to integrated.

So, this much of a drawing can also give us a sense of volume, we can also take up some irregular shape to demonstrate that. We can use other material and create the shape very conveniently. If you want the depth to be increased by lowering the value, we can make this part darker, we can again make this part darker, the lower part can be very dark, if there is no light source at the other side, the caves can also be dark. So, this is how we can get a volume.

So, the lines are the guiding factor, when we have a surface like this, if we do not want to keep it like a line drawing, we can take the line as the guidelines for our of completion surface. So, the line that we will produce in this area should plane with the contour line. So, when this part is bending with the contour line, the important of the contour line will decrease.

So, in a proper render drawing contour line is less important, let see how we decrease the importance of a contour line and rather to put it this way; that we include the contour line into the surface. So, by changing the direction of the line, when we use the line as unit, we can maintain the graduality. So, this is just a step, this is just one step towards converting a circle into a sphere, but drawing can be much more descriptive that this.

So, to have much more descriptive drawing, we should also concentrate on the quality of the surface that includes which material it is made out of. Now, here if we partially consider this line as one part of a vase, we do not get a clear indication of the material quality, even for this sphere, we do not know what it is made out of. Now, for this one, if w see that some surfaces very shiny that gives us a sense of a surface; that is metallic, but in this case, the lines are also soft and thick.

So, soft and thick line will create a surface, even in a changing value conditions, it will give us a sense of a surface; that is less shiny, unless reflective, where as a sharp contour will shine. So, let us see how we can address to this pictorial problem by using the cross hatches over difference surfaces, this strokes are very prominent hears. So, that we also gives us a sense of surface, which is rough and not smooth at all.

Now, the same things we will see, how it works or a spherical surface, were we are applying some strokes or some texture; the most important consideration here is the gradient. If the treatment is not gradual and there is a sudden labs in that graduality, then

the surface will get a distorted. We would not get an evenness and we can just say that, there are some diperation that is occur there.

So, if you want a certain dent somewhere, then only we can change the order of applying strokes that we have been doing earlier. So, suddenly if we feel that some parts are whitish; that means, the part is solon. We can also create a path with a dent by increasing the value, by decreasing the value and increasing the number of strokes. So, surface with an uneven texturing will look dainty and we must avoid it, unless we wanted this way.

Now, the use of line has to be very meticulous as per as the surface quality is concerned, it is not a very easy to make a surface look like a surface; that is made out of cloth. Or, even, if it is a cloth, then we can also make different between the different materials like the silk will have different texture than the cotton or a thick material with look different than a thinner or a finer materials. Or we can also create transparency, we can make surface, which is translucent, where the light will pass through.

So, by changing the different value conditions, we can address too many different possibilities. We will slowly see the quality of line that also leads us to another factor; that is texture, that we will also study in the following lectures are in a separate term. But, right now we are considering the surface quality and how line can give us the sense of a surface; that is otherwise found in nature.

So, through the line and the quality of line, we can produce the sensation that may resemble another particular material; that is there in reality. So, this is possible and when we do that, we are again using line as the basic unit and by changing the value, we are rendering a surface. So, it is all about, how we operate the value difference in the acromatic condition, how we operate our grey and even, when we apply color, we use the same principles of application of color. And we think in terms of the value difference and that way, we operate with a value and hence the volume.