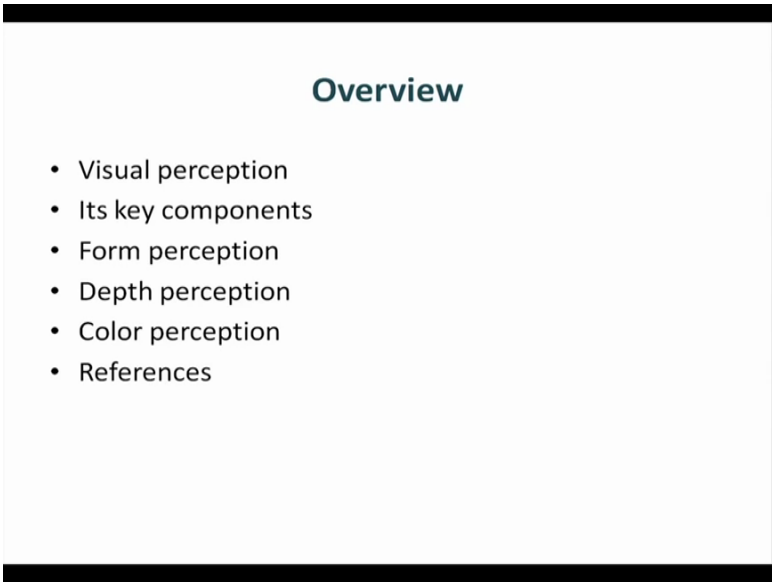
Soft Skills Development
Prof. P. Patnaik
Department of Humanities and Social Sciences
Indian Institute of Technology, Kharagpur

Lecture – 12
Visual Perception

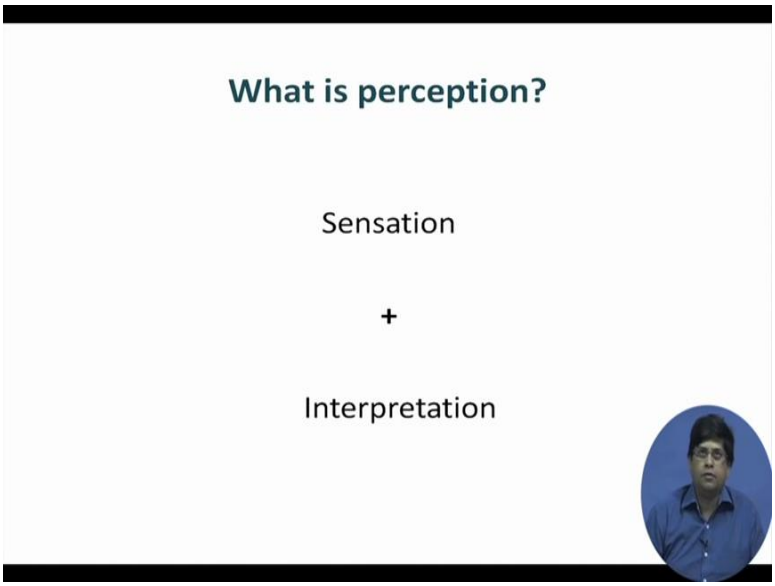
Hello friends. In the last session we talked about visual culture and as I promised, today we are going to talk about the theories, not talk about the theories, but about the application of visual culture, how it can be made interesting.

(Refer Slide Time: 00:37)



So, here we go. These are the various things we will be focusing on, visual perception, its key components, form perception, depth perception, colour perception and we will stop the interaction with that. So, what exactly do you mean by this.

(Refer Slide Time: 00:53)



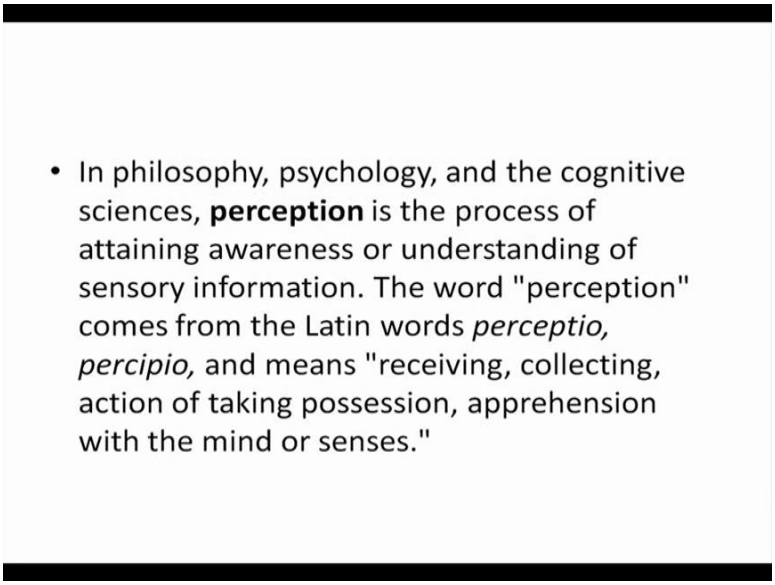
Now, the first question we will ask our self is what is perception? We talk about perceiving things, experiencing things, but what exactly does it mean? Well, we will not go into scientific theories about it, but what we are going to focus on, is a fact that at a very basic level we have sensations, we have 5 sense organs and they manage to send us various kinds of signals and then there is interpretation. Now let us get this clear, for instance, when I am looking in front of me, let us say I see you, but what I see basically are a series of colours or group of colours of various kinds, certain forms and I am able to locate them at a certain distance. What I am able to do is, I use my memory, I use with the help of the memory, interpretation, I say that OK, what I see in front of me is a human being.

So, perception involves, first the sensations, which are then within the brain process to process compared with existing knowledge memory and images of earlier human beings I have seen. So, that within the scheme of things, within schema, finalize that is what I am seeing, is a human being. So obviously, in the context of perception there is something that you see in visuals and some kind of interpretation judgment that you make of it. So, you combine the two and you have perception.

If we quickly go back to some of our very early classes, where we talked about the concept of interpretation, you see a glass of water and you say that. What do I see? I see a glass of water; somebody says that what I see is a symbolic of hope. So, what is

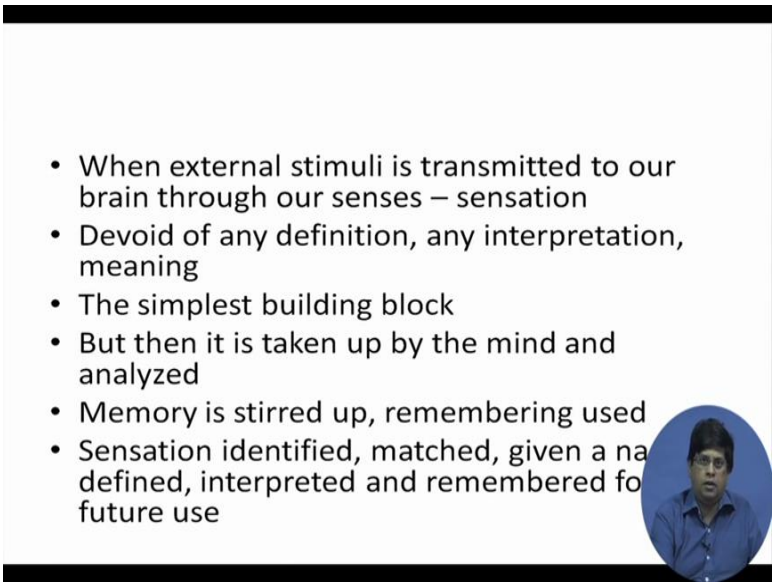
happening is that, the moment these things happen, the experience of seeing is been processed in different ways or somebody says that I see a particular kind of a glass, which is, which is different from the other kinds of glasses I have seen so far and somebody says that water is clean. So, you are looking at the same thing, the sensation is being perceived are the same, but the way you interpret it may vary person to person.

(Refer Slide Time: 03:24)



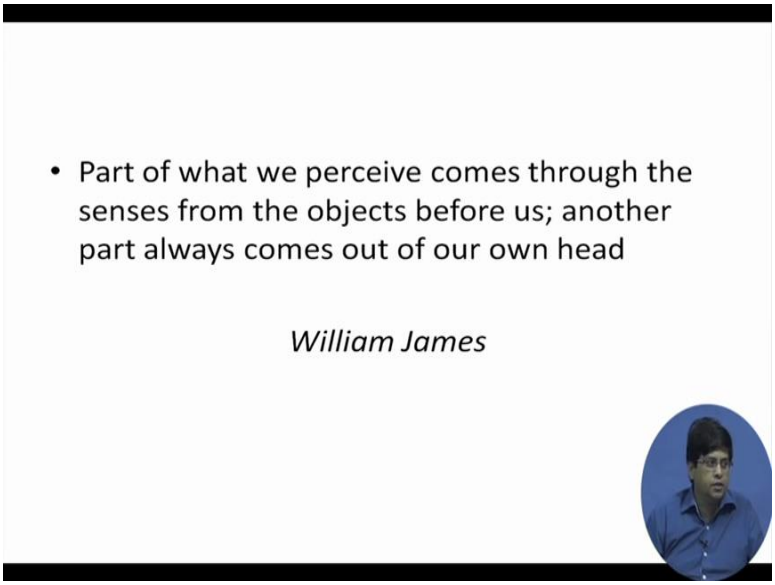
Without going into the details of the things, in philosophy, psychology and cognitive sciences, perception is the process of attaining awareness or understanding of sensory information. So, whatever you experience through the senses. Receiving, collecting, the action of possession of apprehension with the mind is the other senses.

(Refer Slide Time: 03:48)



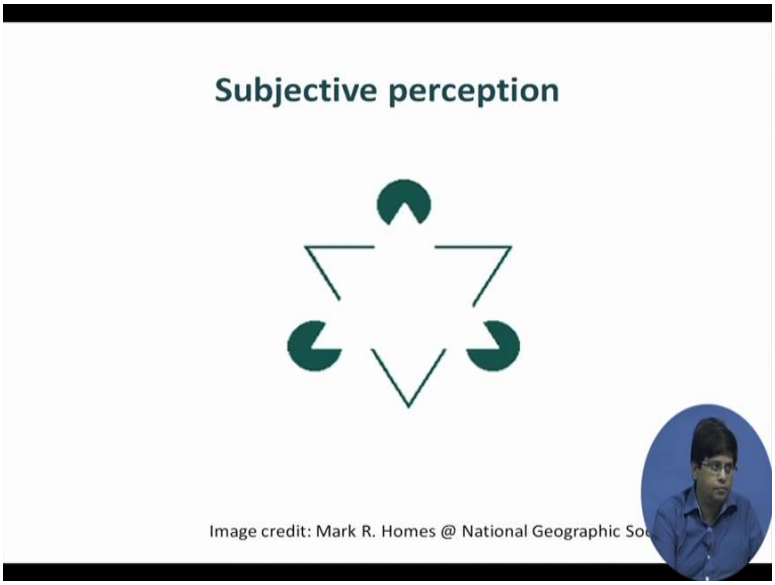
So, grasping, that in a very broad way, can be what is can be defined as perception. We will not go into these, but very quickly you see that stimuli, is transmitted in our brain, sensation, then at that point of time it is devoid of any meaning or interpretation. These are the simplest building blocks, but then they are taken up by the mind, they are analyzed with the help of memory of various other things that are stored in our mind and then they are given a name a definition, interpreted and remembered for future use and then we have what is known as perception.

(Refer Slide Time: 04:20)



Now, interestingly one of the very significant thinkers about perception, philosopher, psychologist William James tells us that, part of what we perceive comes from outside, but the major part of it comes from within the mind. That is how, when you talk about illusions and various interesting other things of that kind, you select his saying makes sense within that particular kind of context.

(Refer Slide Time: 04:51)

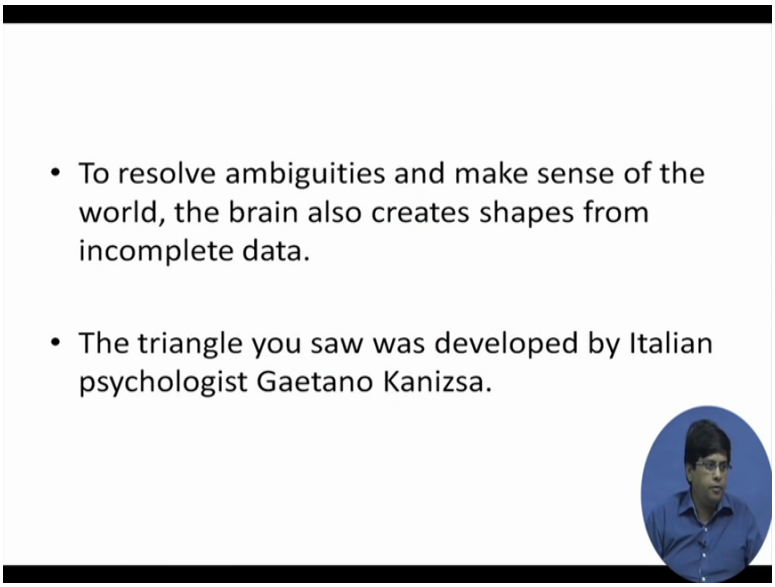


Now, I will be showing you a few images and we will be talking about them. If you look deeply into this particular image, right at the center of the image, then you see a triangle, the triangle apparently does not exist, but if I ask you the question, why do you see this triangle? What is basically happening? Why is it that you are seeing this triangle, this white triangle and not anything else? Is not it possible to say that actually this is a pattern, this is a pattern? These are not circles?

These are only circle almost incomplete circles, like cake, half eaten, cannot you consider that these are three angles which have been placed there, why after everything is said and done; you again look at the center and perceive a triangle? Because you see that a process of interpretation is going on, you are assuming, you are framing, you are kind of conceiving that, if an invisible or a white handkerchief folded and is, is placed on three circles and a triangle, at the center of it, then probably this is the pattern which will emerge. Why is it that we perceive things in this particular way? These are integrating question, people still struggle with answers and we have interesting answers for why this

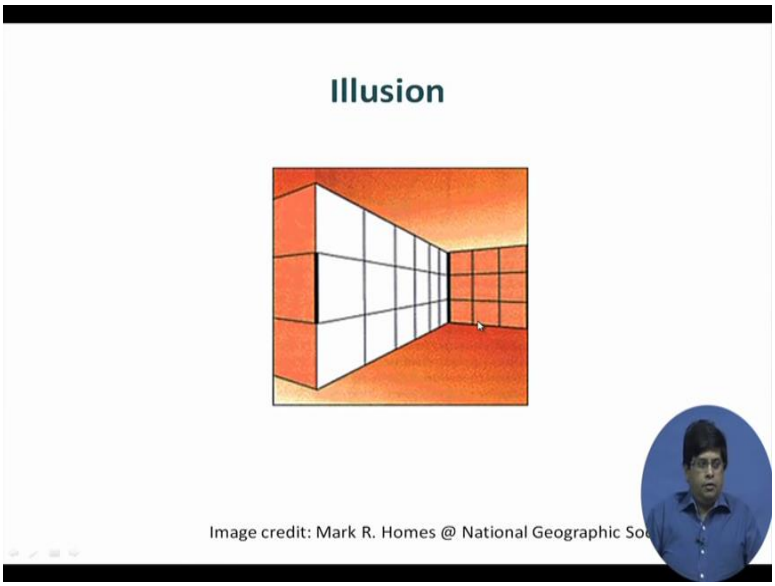
happens. In this case, when we have completed certain things, probably learnt about the basics of form perception and depth perception probably will get little bit of idea why this happens.

(Refer Slide Time: 06:26)



Now, to resolve ambiguities and make sense of the world, the brain also creates shapes from incomplete data. So, the data you saw right now was incomplete and we have a tendency to try to complete what is incomplete. So, this is incomplete and we try to complete it and in the process of trying to complete this, if we have pattern like this, then we say wow, this completes the pattern. So, this tendency of the brain to complete that, which is incomplete, is probably at the basis, of why we have subjective perceptions of this kind.

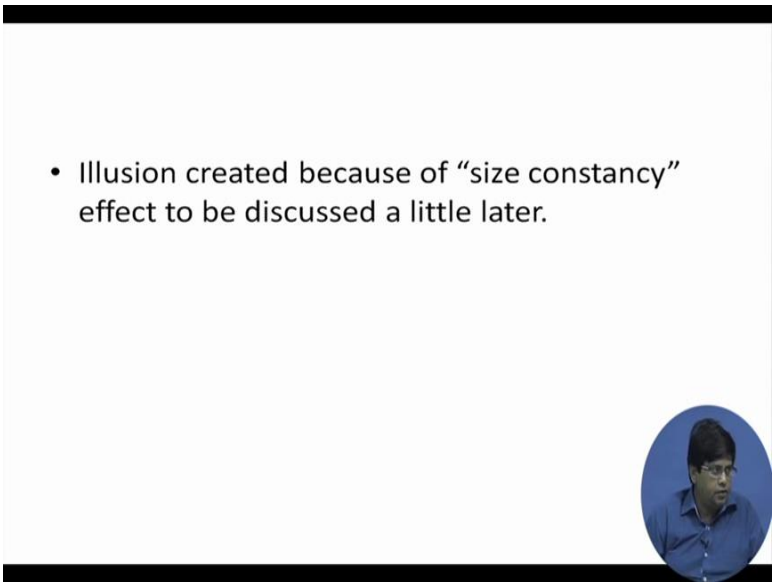
(Refer Slide Time: 07:04)



So, illusions, earlier also I said with you another illusion and here is another example of illusion, where you see that this line looks much larger, than much smaller than, this line, this line looks much larger than, this line, this line looks much larger than this line, why does it happen? Obviously, if you will measure, then you will find that both the lines are of the same length, but you see that, you are seeing the thing in two different ways, at one point of time you are seeing a two dimensional image as a three dimensional space, where you have a building block, you can see this as a wall moving over here and there is another wall which is connected to this, this is one kind of seeing that you are doing.

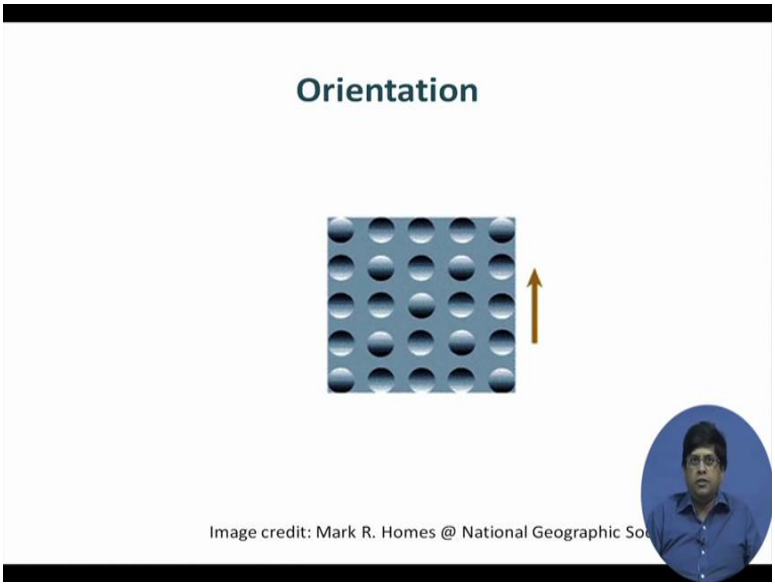
At another point of time you are trying to see, something as a flat surface and you are trying making comparison between two lines which may or may not be of equal length. So, you see that two kinds of seeing are conflict with one another. So, again this is about perception, which tells us that perception is not very easy, not very simple there are complexities involved, that can be conflicts which can give a two certain kinds of a understanding, which lead to what is known as illusions. So, the earlier example was where there is tendency to complete things which are incomplete, in this example, we find that two different ways of seeing, can exist at the same time and create a conflict, thus giving raise to what are known as illusions.

(Refer Slide Time: 08:31)



So, in this case it is, because of something which is known as size constancy, the further away, a thing is away from us, the smaller it looks. Now this is something which we use very significantly, when we experience the concept of distance. We will talk about it in a little while from now.

(Refer Slide Time: 08:54)

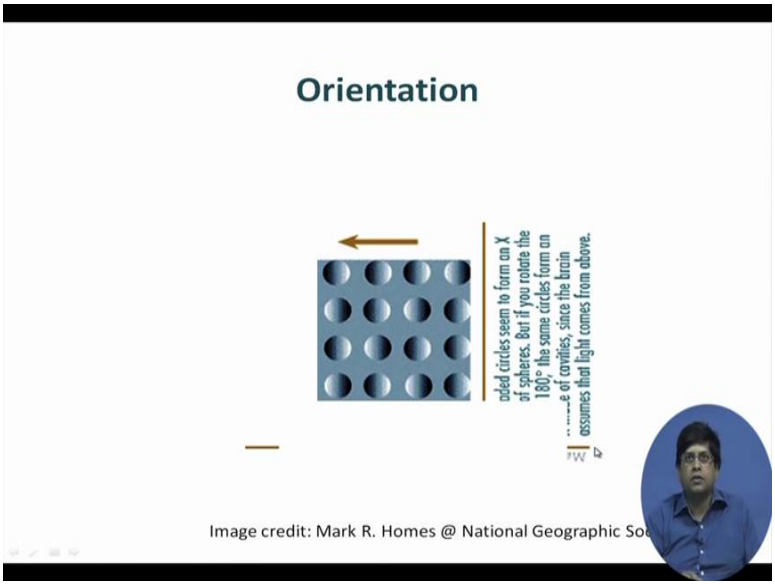


Orientation is something which, we took away little earlier if you remember. Now let us talk about it in a more detail way. We are oriented to see things in specific ways and hence, you see that this is interpreted as convex and this is interpreted as concave. Let us

take this exploration a little bit further, why is it that this happens, because we assume that, this area is in shadow and in this case this area in shadow, these are our assumptions. Why are we making such assumptions? Because in our day today life, generally light comes from the top and if light comes from the top and if an object is convex, then the shadow will be on the lower part of the convex surface and if it is concave, then the light will be, light will be in the lower part and the shadow will be in the upper part and on a convex surface, the light will be on the upper part and the shadow will be on the lower part. So, you see that preconditioning orientation, that we have had towards seeing lights all most all most all, all points of time, from the top, makes it very easy for us to make this kinds of interpretations, but these are nothing more than perceptions of specific kinds.

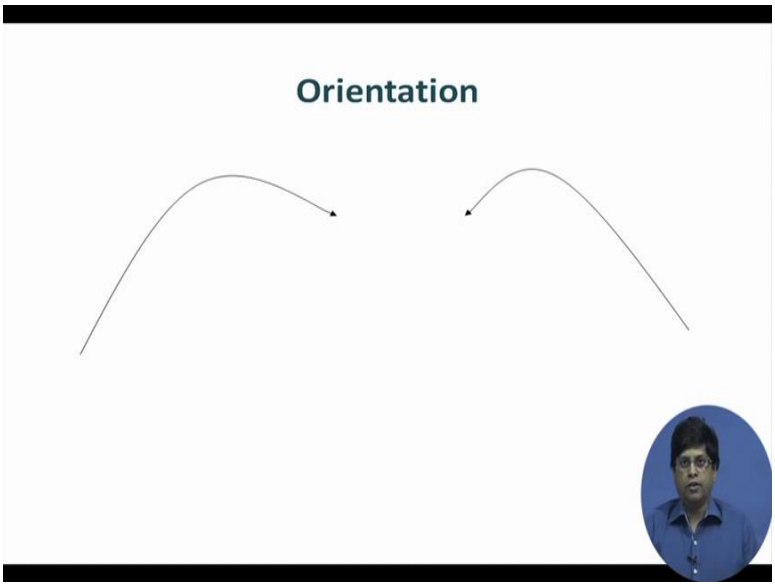
Now, let me take a moment to twist this and change the orientation, you will find that you will find a certain kind of difficulty.

(Refer Slide Time: 10:22)



So, what we have here right now, which I quickly share with you, is that now it is probably much more difficult to find out, which is the convex surface and which is the concave surface and this happens, because you see that, when it comes to light from sides, light can come from any sides and windows you find can be on located on either side of the room and the light naturally has an issue coming in a particular way.

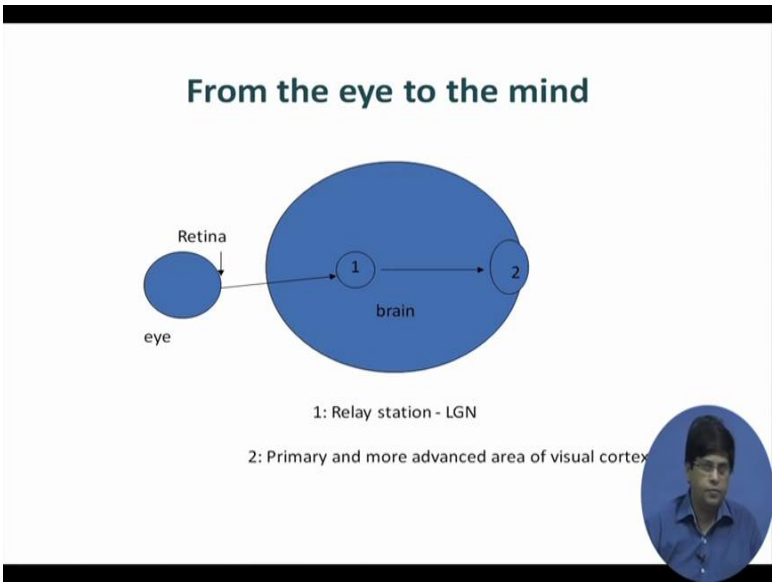
(Refer Slide Time: 10:54)



So orientation is very, very important for us, what we see over here is, a little earlier we talked about the fact that, the Chinese read from the top to the bottom. We also talked about the fact that the people who read, let us say Arabic or Urdu script read from left to, the from right from to left; that means, that this is, this is way they are oriented. Let us do a small experiment, look at both the lines that you are seeing over on your screen. Which one it seem more easy to draw, this one or this one? Which one seems more easy to look at, this one or this one? The generic answer for most Indians would be that this object o this side is easier to look at from left to right and very often from the bottom to the top so it is slanting up.

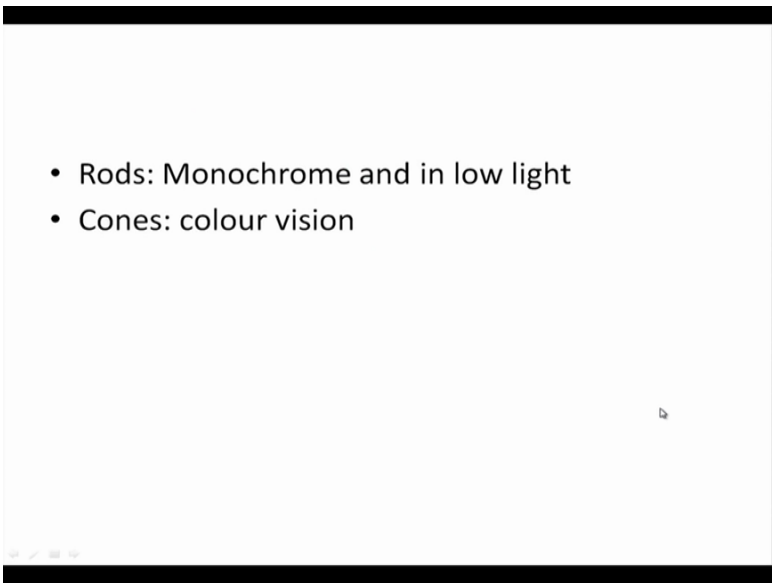
That is very often the way we scan things and this is important to remember, because whether where there its advertising or how hoarding or presentation, which we were making, if you realize this, then you will realize that, based on that you can design it in such a way that the image can be either placed on the left hand side or right hand side depending on what exactly you want the person your audience to look at first. This can be a very interesting strategy for the future.

(Refer Slide Time: 12:21)



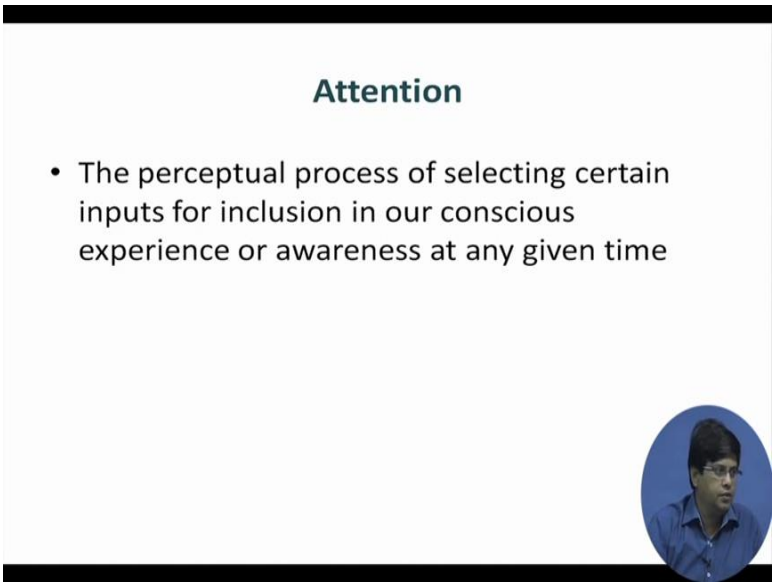
Now, we will not going to do this detail of this. The eyes is there, from the eye, information goes to the brain and then to the more advanced part of the visual cortex where processing takes place.

(Refer Slide Time: 12:35)



But you see that when we are talking about the eye, we have rods which are monochrome and in activated, even in low lights, we have cones which give us colour vision, but as I told you they are all about sensations.

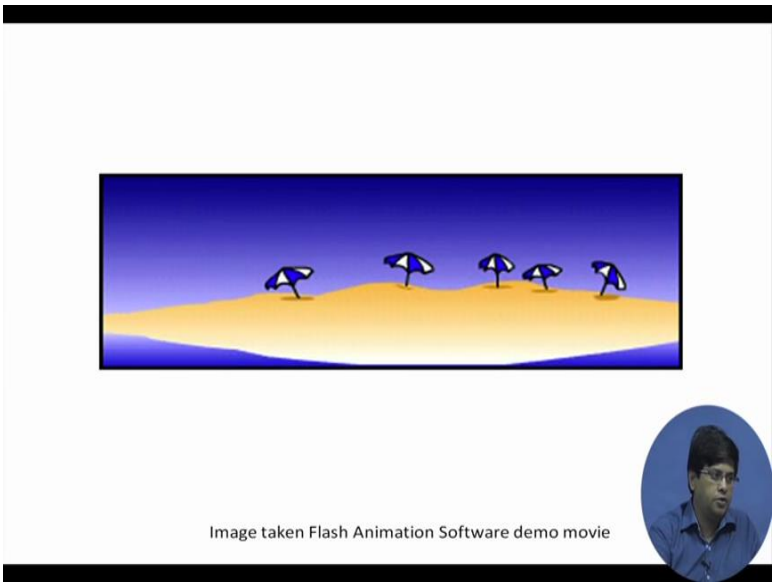
(Refer Slide Time: 12:50)



But at the end of the day, what we have, what we experience is perception and I have kind of quickly shared with you how it takes place. Now let us look at something else which is attention, because perception is something which is intermediated by or mediated by what is known as attention. Now let me share with you very quickly, something, which, many of you may or may not realize.

Let us take a moment off and look at this particular slide, if I ask you quickly, if you cannot see me that is, if you if I ask you quickly, what is the, what is it that I am wearing, which is an artificial device? And probably you will think about it, some of you now that you can see me may remember, the specs, but the majority of you may miss out the fact that I am wearing left microphone, over here, which sometimes you can see, so you might have missed it out. So, what is basically happening over here? What is happening is that you have not been attending to me. If I ask you a series of question about what is a colour of my hair or what is the colour of this thing or what is the colour of that thing, we mostly miss these things.

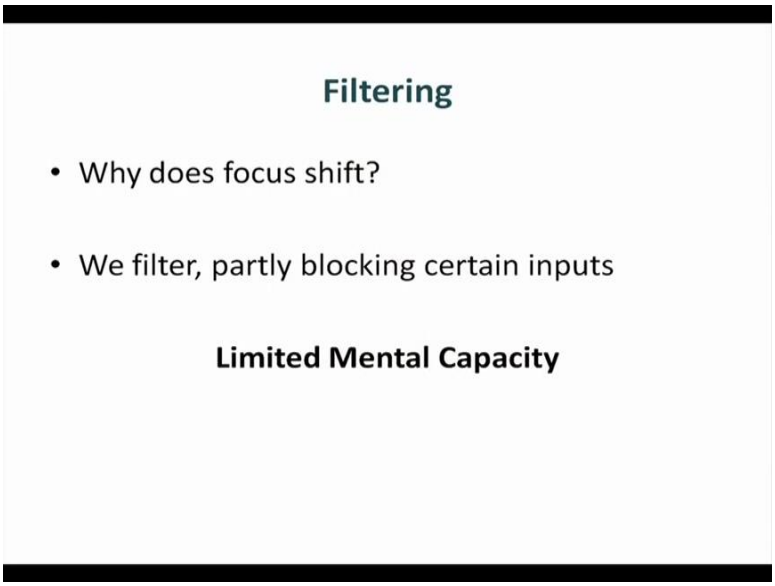
(Refer Slide Time: 14:17)



Here is an example of what I want trying to share with you. Have a quick look at it and then let us go back to the earlier slide. Now you tell me how many umbrellas were there? Which was the tallest umbrella when we are looking from left to the right? What was the colour of the skies behind the umbrellas? Did we have anything below the umbrellas? Was this the same colour? What was the colour of thing, which was beneath the umbrella? Is, was there a gradient of texture? Was there anything else there, other than the umbrellas? To many of these questions, you may not have an answer, not only because you saw it for a short while, but because you see that if you see it for a long time, you would be attending to it.

So, see that you would be attending to it and you will be looking at so many different things that you might have missed out. So, what basically happens is that, attention is a process intense process of filtration, of focusing as well. So, perception is not good enough, perception where we are experiencing around us, but focusing is where we are attending to one aspect of things, just one at a time and please remember, even those who are multitaskers, there is the possibility, which research tells us, that only less than 10 percent of the people can actually do attend to do two things at the same point of time or they are actually genuine multitaskers, the majority of us are only capable of doing one thing at time, attending to one thing at a time. Driving and not being able to focus on what we have telling on the mobile. So, that is why you see that, driving on mobile, I mean talking on the mobile can be very dangerous.

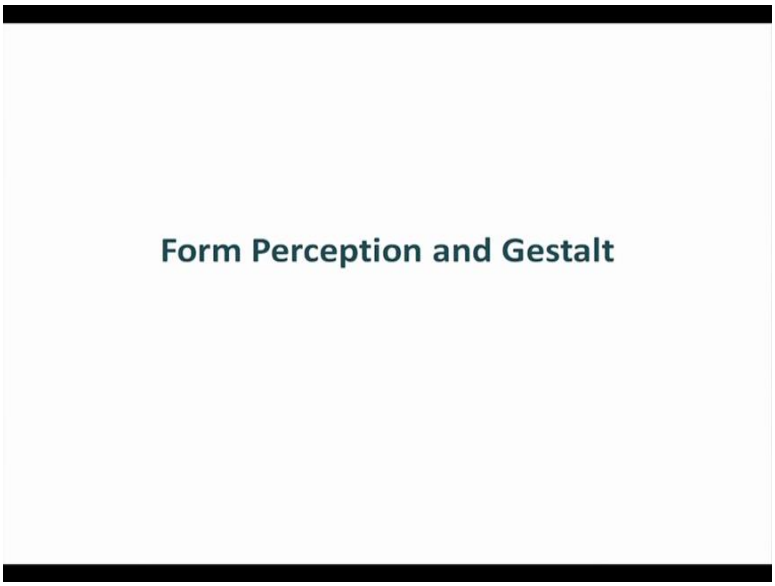
(Refer Slide Time: 16:09)



So, what basically happens is that, there is a process of filtering. It could be for limited mental capacity, but for whatever reason the end result is that, we are able to attend only one thing at a time.

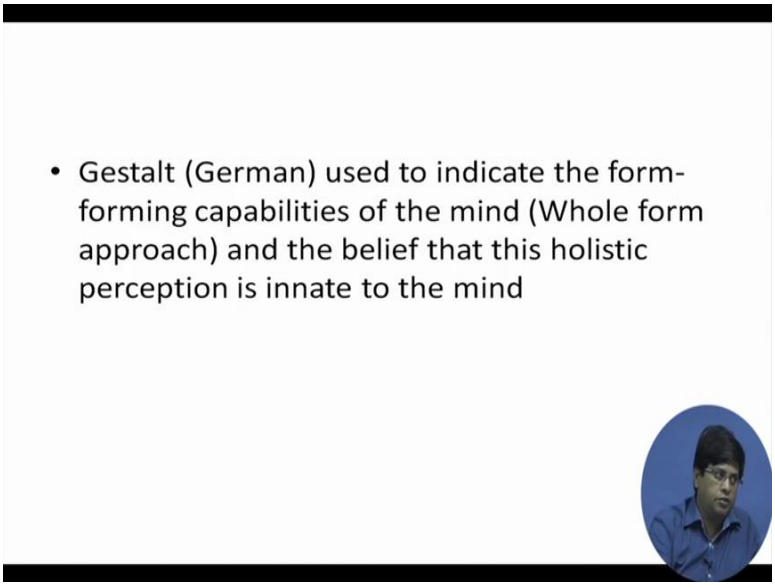
Now, this is very interesting implications in the context of visuals, why? Because you see that if you are able attend one thing at a time and then an artist can manipulate your attention. Here is he can decide is that, if I use this particular colour or if I use this particular shape, then it will be more exciting, more interesting, the person will look at this thing first, then ears will move and start look at something else next. Now we do a lot eye tracker studies, even I and some of my team of scholars to a little bit of eye tracking studies and we will show, share some of the slides with you, as you look down and look at the material, which tell us that the eyes move in specific pattern depending on which particular object is there. So, this is a very interesting thing, as you can see from the eye tracker studies that we will be sharing with you or we have already shared, we will have to check it out.

(Refer Slide Time: 17:15)



So, now that I have talked about the basics of perception, let us get down to the business of using a tool kit which consists of form perception, colour perception and depth perception, because these are the things which are going to help us understand, how they can be used more effectively for communication, when you are using the visual medium.

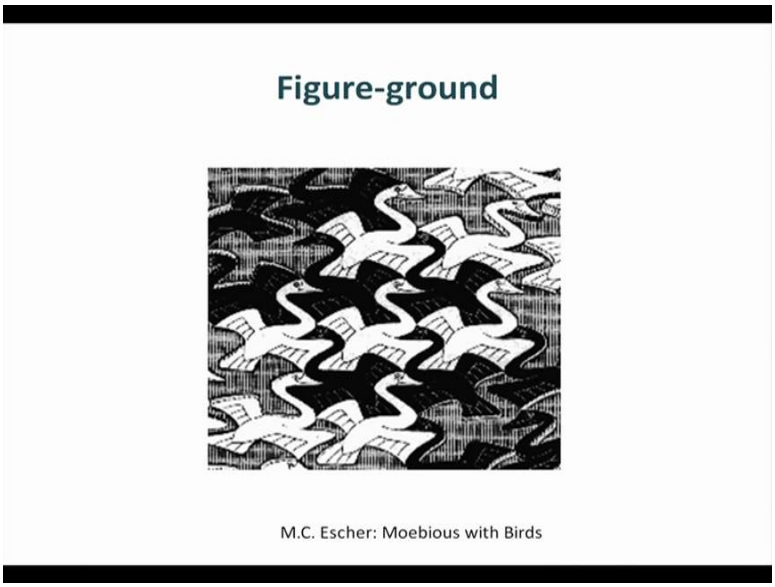
(Refer Slide Time: 17:41)



Now, you see that the term Gestalt German. We used to indicate the form forming capability of mind, the holistic capability of the mind and if you remember right at the beginning, we talked about the ability of our mind in the last lecture, of trying to

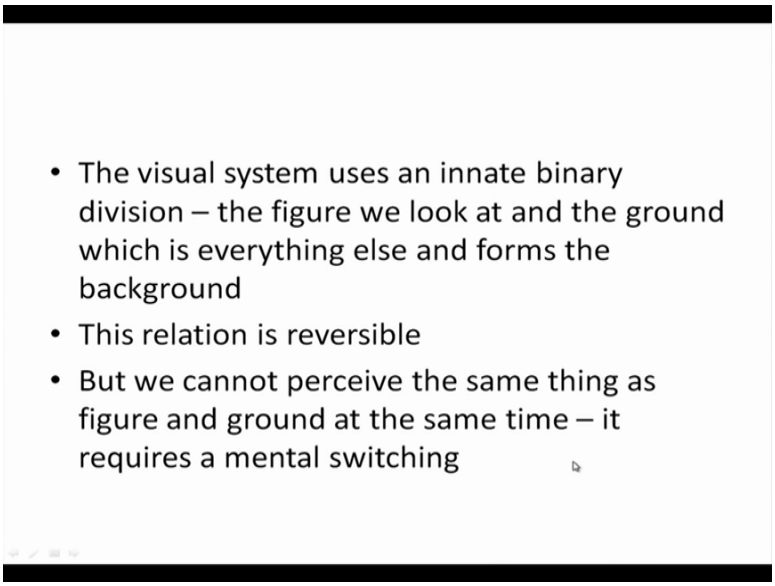
complete that which is incomplete, that we talked about it little earlier in the case of the subjective perception of triangle also. So, this tendency is something, which has been explored by certain people in their early 20 century in 1940s and 50s and these people were able to evolve a set of theories, as to what happened. Unfortunately at that point of time they were not able to tell why it happened, why is it that we tend to see the whole rather than the part and things like that. Today lot of research on, in field of cognitive sciences has explored these issues and if you are interested you can see some of Google and find out some of things relevant to this.

(Refer Slide Time: 18:48)



But getting down to business, these are very formative tools which can help us, become more effective communicators. First point I would quickly like to make is, there is something which is known as foreground and background. When we talked about listening, we talked about foreground and background. Today here also we are again talking about foreground and background. If you look at this image with birds, you find that, if you are able to identify the black bird, then somehow you tend to ignore the white bird, when you are focusing on the white bird, you tend to ignore the black bird, that is because you see that this becomes the foreground, this becomes the background and when this becomes the back foreground, this becomes the background.

(Refer Slide Time: 19:30)

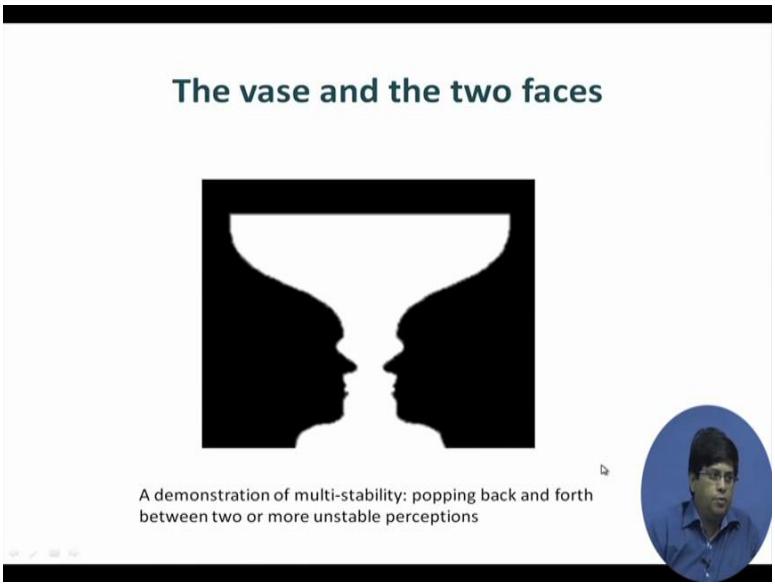


So, there is a reversible process taking place, where switching between two different kinds of perception, but more important, we are switching between looking at something as foreground and looking at something as background. This net tendency which exists of seeing something against something else is very, very important for us to realize. If you remember right at the beginning I talked about frames, you are able to see my face within the frame, you are able to power point within the frame, you are able to see the a computer within the frame of your whatever, building or whatever, the window, whatever. So, we keep on having frames within frames and in the context of perception or focusing on something, framing or using frames is a very interesting device that we use.

(Refer Slide Time: 20:21)

So, these are the theories, although we are not look at the theories in detail, who talk about different kinds of form perception.

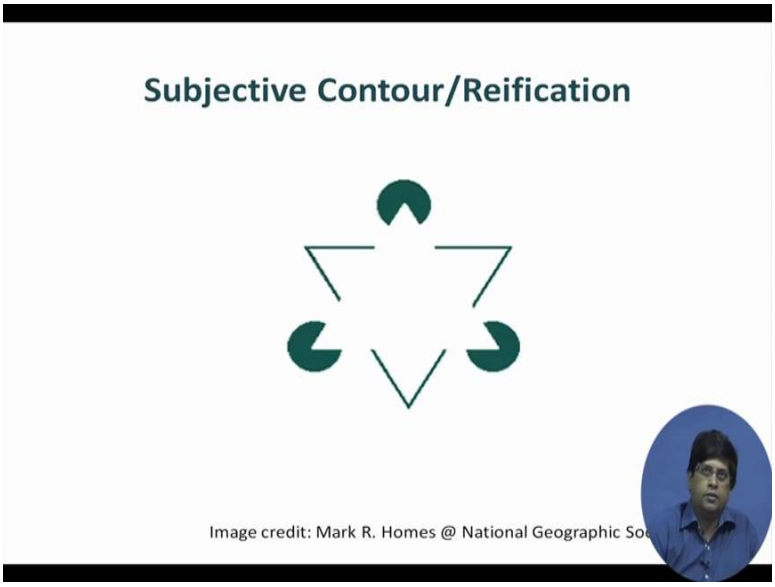
(Refer Slide Time: 20:29)



That is what we will look at, again, about figure ground relationship, very, very common description, where you can switch between, either looking at a vast right at the center or looking at two faces, but you cannot see both the things at the same point of time, because you switching between two different ways of looking at things, this can have

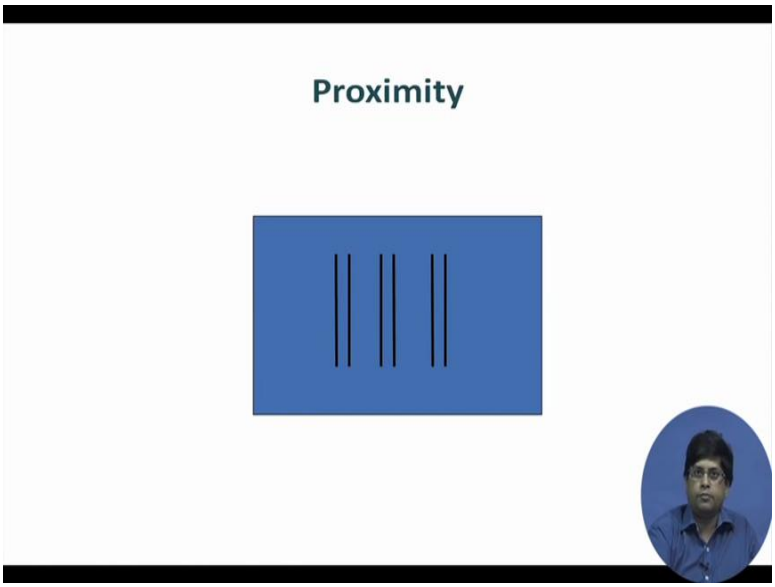
interesting consequences, when you apply that to visual communication, they can make for interesting pictures, intriguing pictures, draw attention can do n number of things.

(Refer Slide Time: 21:00)



We talked about subject to con, contour a little earlier. So, we will skip that for the time being.

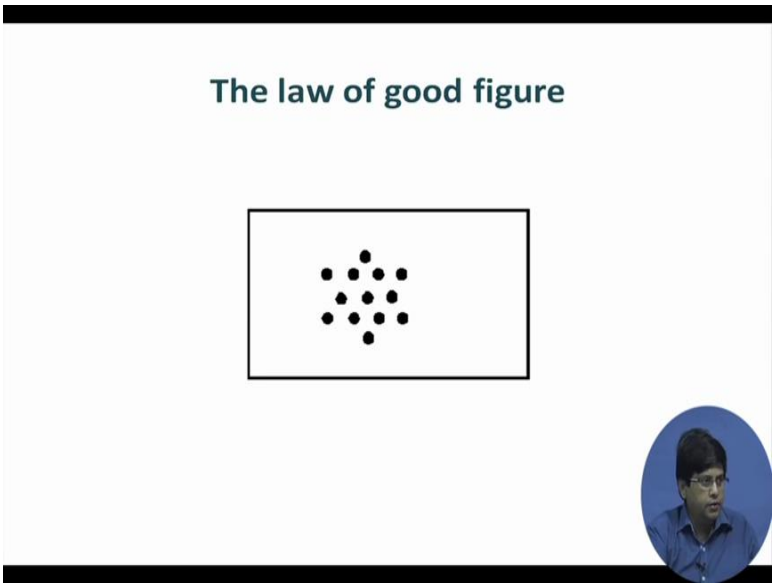
(Refer Slide Time: 21:06)



But there is another interesting thing which happens, when we are perceiving form, which is we tend to group things together. If you are looking at the 6 lines, we tend to see them as three sets of lines, rather than 6 lines. When we see people clustering together,

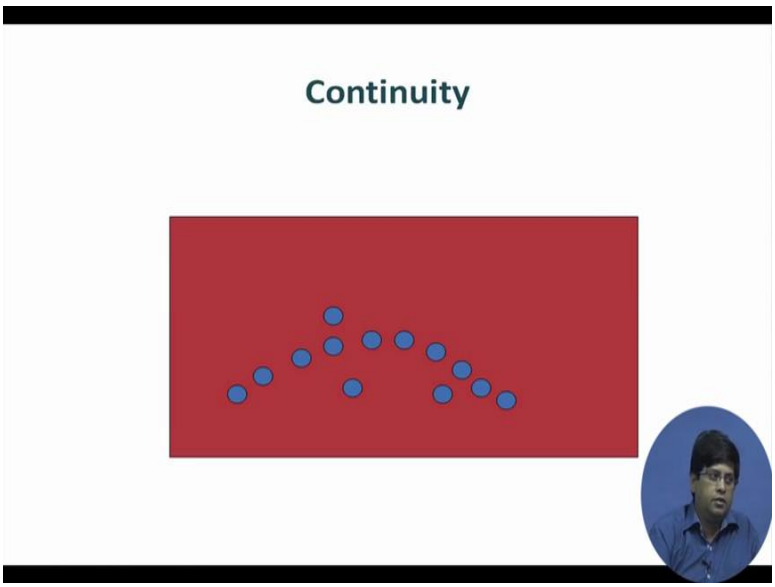
will tend to consider them as a group, this is one group standing over there that is another group standing over there, creating groups, this is again a very interesting tendency that we have.

(Refer Slide Time: 21:36)



We try to make sense of the data, which is scattered. In this case, we try to create the shape of a star or whatever. So, this is known as the law of good figure and this tendency is very much in a trying to make sense of something.

(Refer Slide Time: 21:54)

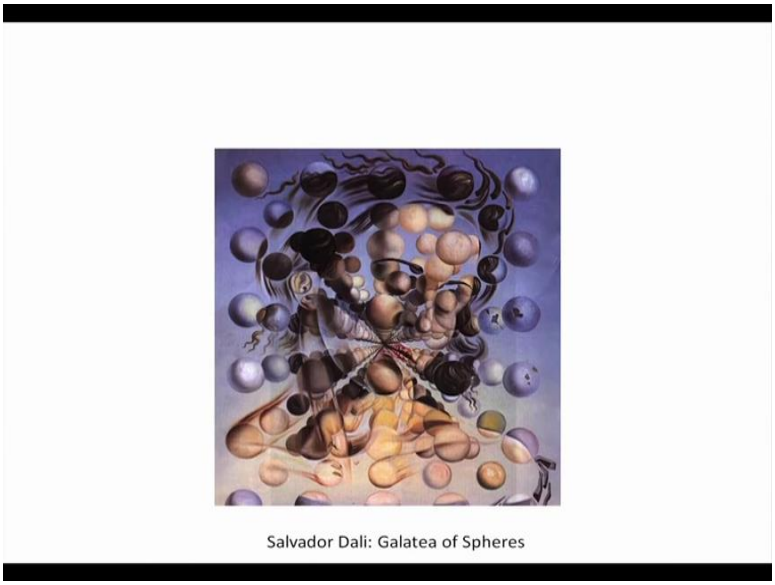


Continuity, when you looking at this particular image, probably this is considered continuous and these are considered as things by accidentally, things which are accidentally over there and this is a very interesting tendency that we people have and these are all link to the concept of forms, different forms how we align them or how we try to make sense of by linking them together, how we try to get a sense of completeness out of that. So, this is very interesting and these are small instances of the way we categorize and classify different kinds of forms.

(Refer Slide Time: 22:34)

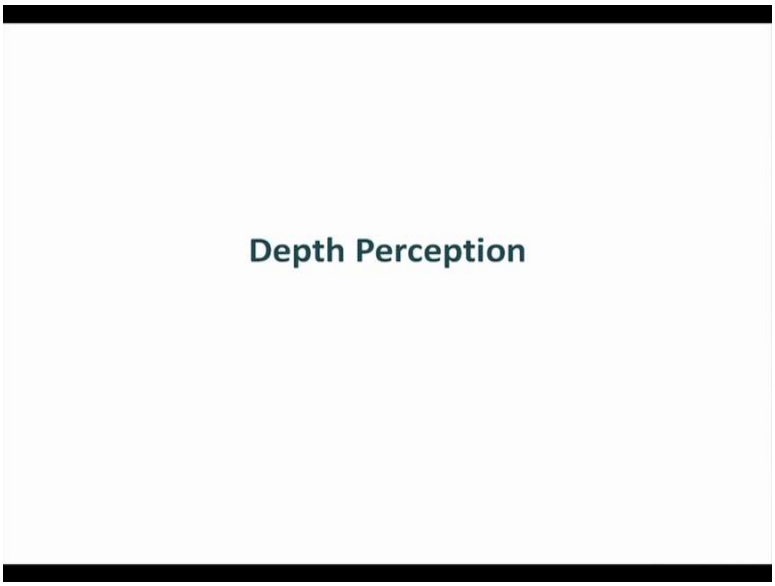
Now, here are example of form perception, figure ground relationship, because you can see over here that, the cart you can either consider it as part of this landscape or you can consider it as two figure sitting on the horse cart, you can have two different interpretations of the same thing and this is interesting, because you see that, this leads to switching back and fore between fore ground and background, we talked about a little earlier.

(Refer Slide Time: 23:08)



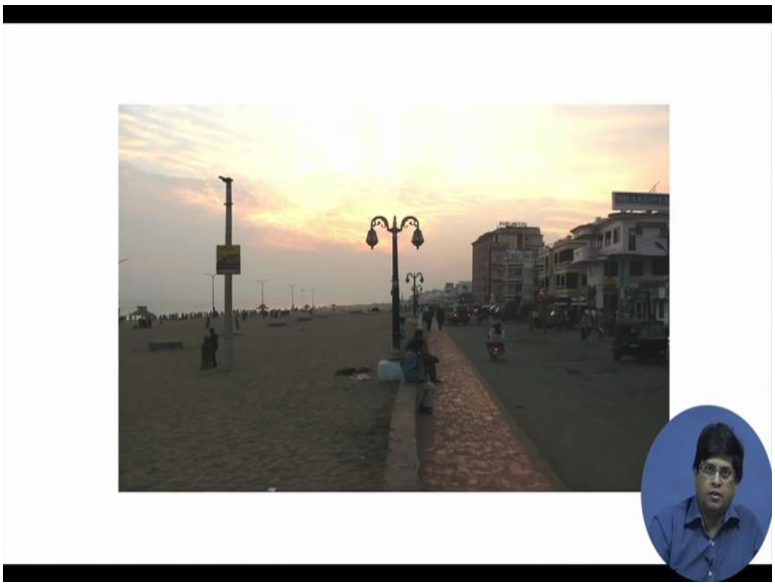
So, here is a visual artist, who has explored that. Here is another, where you see that discrete elements are brought together and if you look closely at it for some time, you can identify a face. This is another technique known as closure, which is again aspect of form perception, where we try to bring discrete objects together and try to give it a sense of completion. So, we are able to see women, we are able to see her hair, in spite of the fact that if we actually look deeply, none of these things exists.

(Refer Slide Time: 23:39)



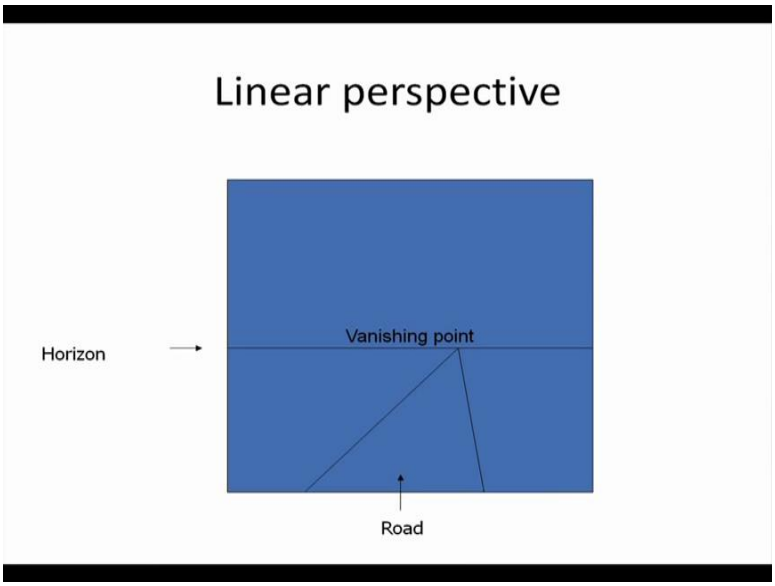
Now, we quickly switch to depth perception and again it is important aspect of perception. As I told you few know about the basics of these three, then you get the good idea of how you are going to work with it. So, in the context of depth perception, how do we make sense of distance?

(Refer Slide Time: 23:57)



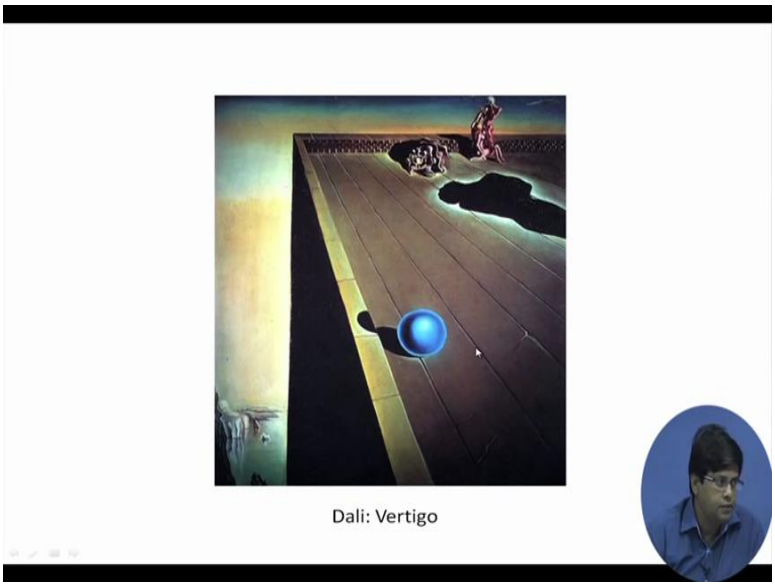
If you are looking at this image over here, you find that you are able to find that there is a lamp post over here, there is a another lamp post over here, there is a still smaller post over here, there is a another lamp post which probably is parallel to this. This is a two dimensional image and yet you are able to see things, discern things, like distance are the fact that some things are nearer to us, some things are further away, how do we make sense of this? Think about it for some time and jot down a few points before we come down to, the way that we do this.

(Refer Slide Time: 24:41)



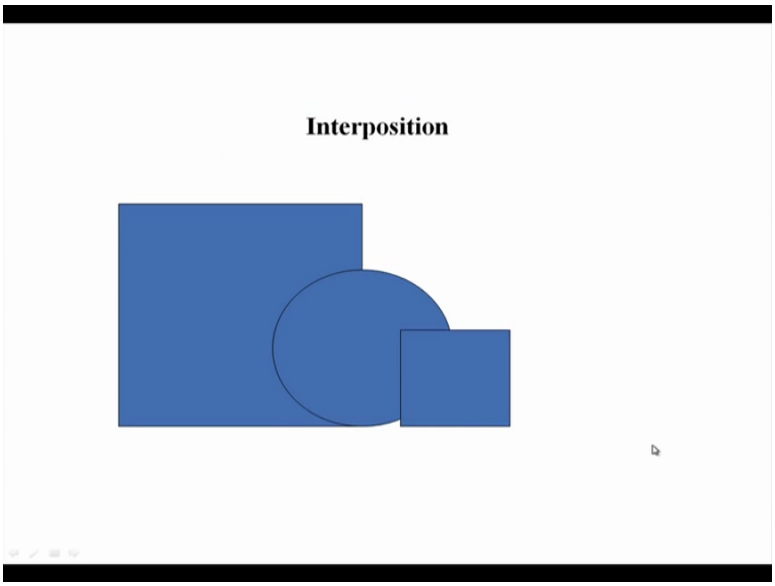
Your time is out. The first thing that we do is something which gets linked to the concept of linear perspective. What happens is that, if you remember a little earlier as I shared with you that, things which are nearer to us looks larger and same things when they are placed at a distance looks smaller. So, if you looking at the road over here, find that the road actually takes you further away, in the direction of a vanishing point over here and you see that if you are looking at long distance roads, they look like this, because you see that the road is gradually become narrower, until particular point, which is the whole line of the horizon, that is if you actually you are able to see the horizon, you are no longer able to see anything other than a point.

(Refer Slide Time: 25:28)



Here is an example of linear perspective being used. So, converging lines, you can see them over here.

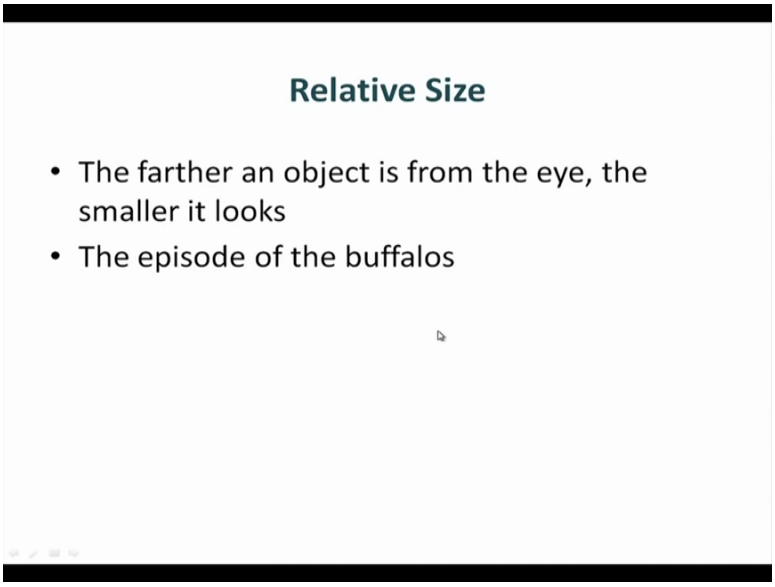
(Refer Slide Time: 25:41)



Now, here is another example of the way we make sense of distances, which is in spite of the fact that, they are located on the same plane, we would say, that this is in the fore front, this is in the middle and this is in the background. How do we do that that is because we have a tendency of interpreting complete objects as being in the front and incomplete objects as being behind them and hence although the last object is the largest

object, it is most distanced among them, because it is being blocked by this one and then by this one, we consider that this is the object which in the fore front.

(Refer Slide Time: 26:30)

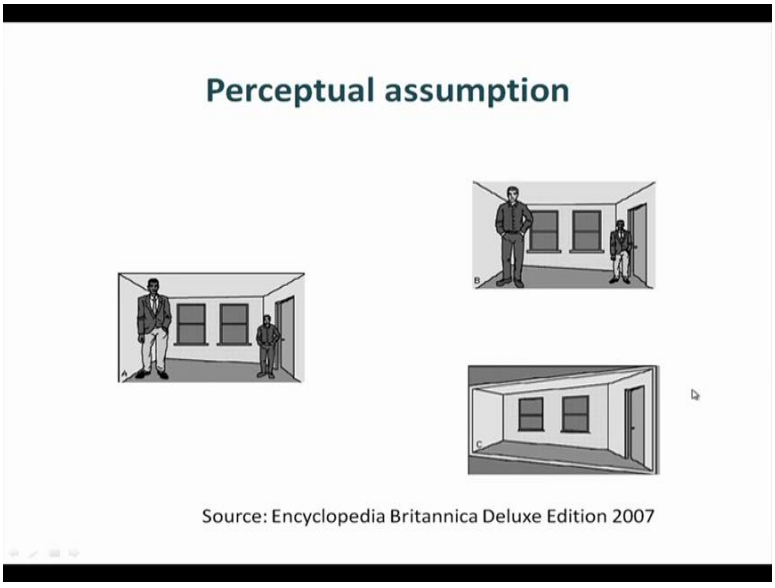


So, the further an object is, from the eye the smaller it looks, but and you see that, it is so happened that, in one tribal area, where people lived in very dense forest, there was a person and an European took him away from there and took him to place where there was a vast landscape, with buffalos at a very long distance and since this man had never experienced distance in his life, he initially thought there were hands. So, this clarifies one interesting point, that our understanding of distance is to be very great extensively learnt, it is not that it is given to us intuitively.

(Refer Slide Time: 27:14)

There are many such interesting things, but right now we will not touch upon those, will focus on perspective, as I told you, these objects becoming smaller, as they go forward, the building becoming still smaller, as they go in this direction. So, perspective effect which I was talking about.

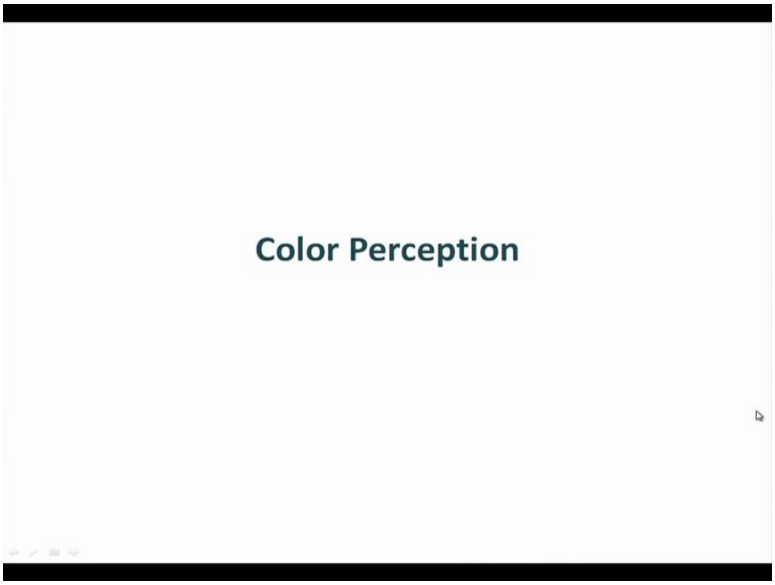
(Refer Slide Time: 27:31)



Now, having done that, let us look at a very interesting house which exists in a museum, where as you move between the different parts of the house, you will find that, as you move from this side of the house to this side, you have become very large and as you

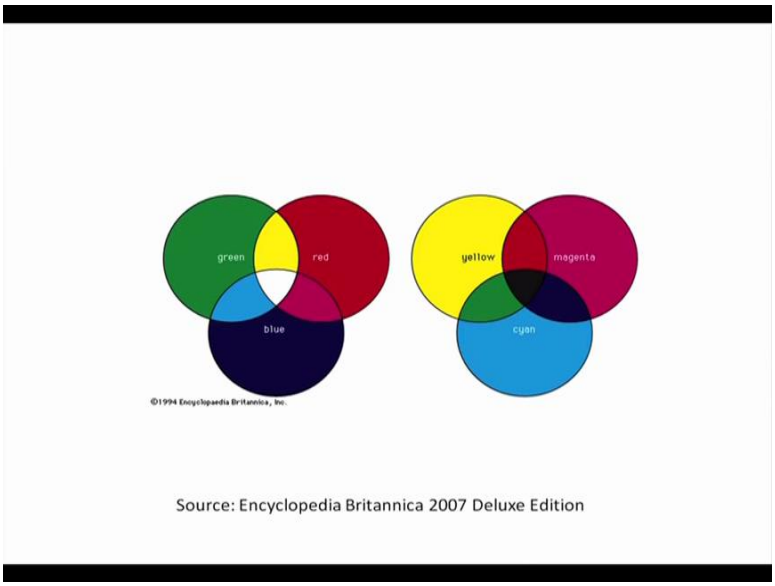
move from this side to this side, you have become very small. This illusion is based on the fact that, you have a distorted house. So that, as you move around, you see that the distance in kind, rectifies our perception and the illusion of moving between a large, becoming a giant or a pigmee, is something which is created in this apparently magical illusion house.

(Refer Slide Time: 28:19)



Now, having said that about depth perception and the way that it can be manipulated and give rise to very interesting effects, let us now talk about colour perception. This is the third and the most significant aspect of things, because we live in a word where colours are becoming very, very dominant. There is a theory which tells us that colours are more conducive to emotions, than black and white images, colours pay very strong dominant emotional role and there will be some reference slides which will give you an idea about how significant colours are.

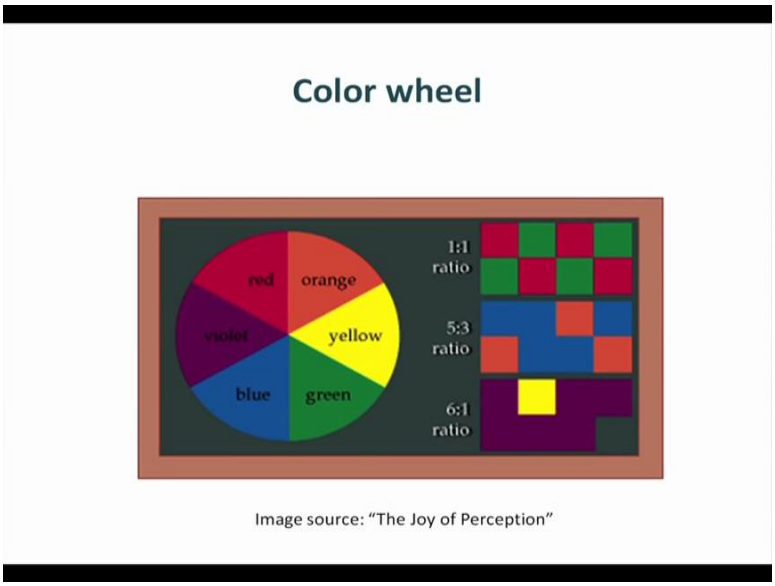
(Refer Slide Time: 28:56)



But here for the time being, let us quickly touch upon some of the basic aspects of colours. If you look in closely, you will find that on the left hand side, we have what is known as what is concept of additive colours, are there additive colours, the way we see it on television screen or in light and you put a prism and light colours are divided into the seven colours. So, in additive colours, green, blue and red are the main colours and then when green and red are mixed, you have yellow, green and blue are mixed, you have cyan, red and blue are mixed, you have pink and then when all the colours are mixed in the appropriate proportion, we have a white light, this is how the monitor and your screen on which you are seeing right now, operates.

On the other hand, we have pigments, a sketch pen and the various kinds of the things that we use and we used to explore as kids and we make sense of colours that way, these are known as subtractive colours. The colours becomes duller, as you start mixing more colours and what basically happens is that, these colours the primary is yellow, magenta and a cyan some form of blue and as you keep on mixing them, you have secondary's like green and you have secondary like red or vermillion, you have secondary like purple. Now what is basically happening over here is that, if you remember in the slide which I have shared with you, about making power points. I talked to you about primary colours and secondary colours. And here are examples of primary colours, primary colour 1, primary colour 2, primary colour 3, these are secondary colours, 1, 2, 3 and you can keep on mixing them to make still other kinds of colours.

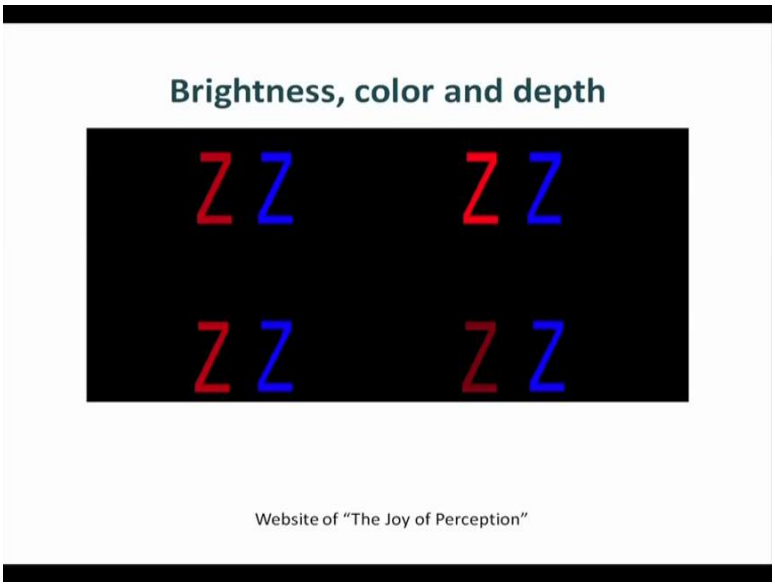
(Refer Slide Time: 30:43)



Now, what is the role that colours play? We can have a quick look at some of the things that happen, just to give an idea, because colour is a fast field, we will to be able to touch upon the major part of it today, but at least we will able to get a glimpse of how it operates. Certain colours are extremely bright, for instance if you want to see the relationship, yellow is much brighter than purple over here. On the other hand if you are looking at red and green probably, they are equally bright and if you are looking at blue and orange, orange is fairly brighter than blue, but not as bright as the relationship between let us say, yellow and purple.

These are just to give you ideas about the fact, that colours have different kinds of relationships, colours can be classified as warm colours, cool colours and n number of other ways of defining colours. Colours can give you a sense of happiness, colours can create a mood of sadness, which is what we look at and blue is a colour which tends to cool you down, to pacify you, to depress you. So, we have the term blues. Whereas warm colours like cream, tend to lighten the mood, make you happy, that is why you have sunlight. Green is a colour which tends to make you happy, that is why you say that we associated with grass or whatever reason. We will look at these issues a little later, that colour has such a significant effect.

(Refer Slide Time: 32:10)



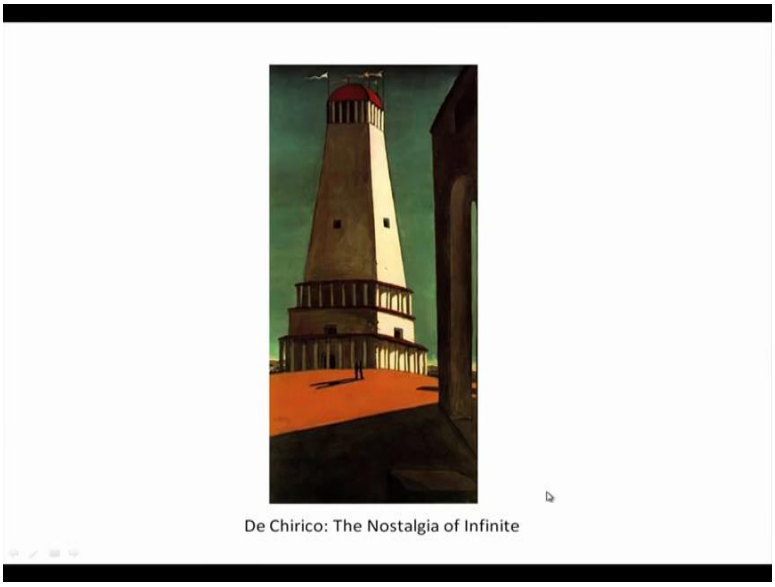
So, brightness, you see that if colour is very bright we have a tendency to interpret this, this is not very clear on the screen, but you can see this on the power point, which I will share with you, that when a colour looks very bright, we have a feeling that it is closer to us, when it is dull we have a feeling that it is further away from us.

(Refer Slide Time: 32:29)

Now, this is something which I have already shared with you earlier, but if you look at this, the dominance of blue and green, keeps a sense of calmness, peace, quiet, other than the forms which are obviously semantically oriented, they have communicate a certain

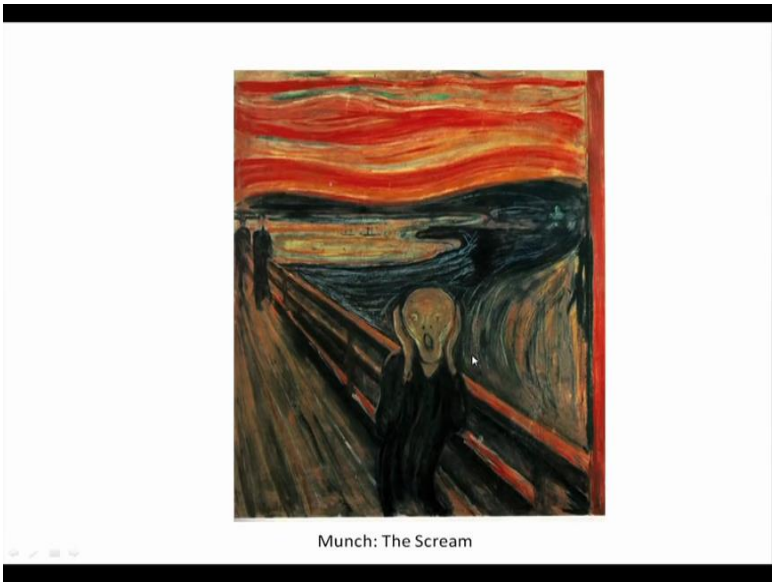
sense of meaning, of redlining posture, of relaxing, but even if you just look at the colour they play significant role over here.

(Refer Slide Time: 32:54)



On the other hand, the abnormal sky, the time of the day depicted, the shadows, long shadows, do not make this, all these things do not make this painting a very attractive painting or a positive painting especially the colour of the sky.

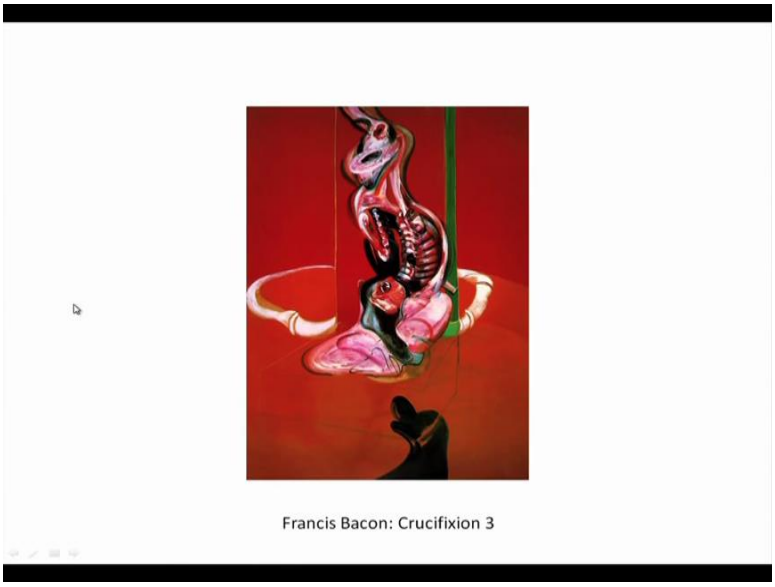
(Refer Slide Time: 33:14)



If you looking at this, this is definitely, distinctly a negative image, dominated by red colour, blue, red and deep dark dirty colours, of course, the form the use of diagonals,

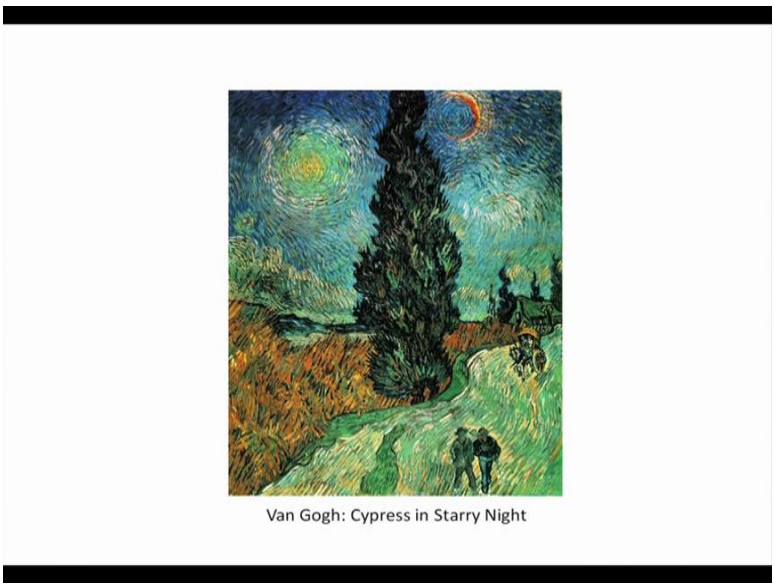
which are rushing away from us, all those things definitely play a significant role, but in spite of that, the colours also play a significant role here.

(Refer Slide Time: 33:36)



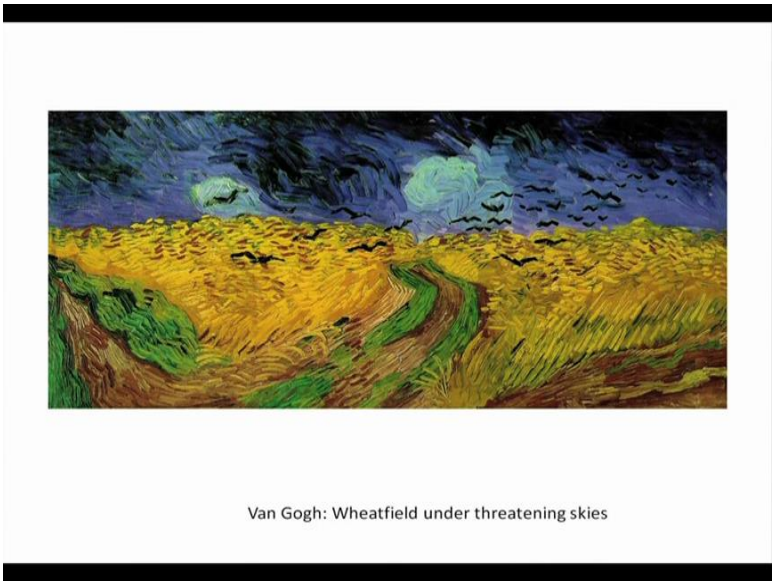
This definitely gives us eerie sense of distortion, of something which is negative. You have apparently colours like pink, which have beautiful colours, but in the combination of the red and black and brown over here and association of a skinned animal, which is hanging somewhere, this gives us a very, very disturbing pictures of things.

(Refer Slide Time: 34:08)



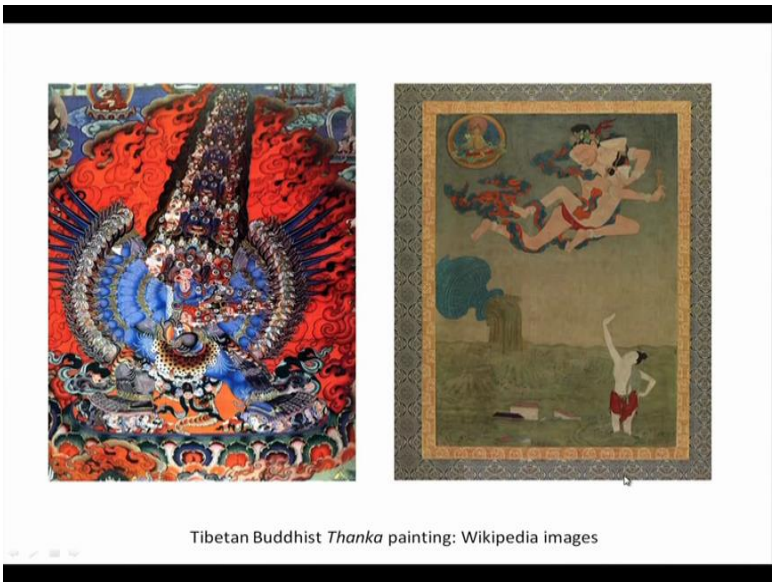
From predominantly, through the use of and the manipulation of colours; on the other hand this has a certain luminosity about it, a certain degree of attractiveness about it, but you say that if you looking at the lines, the dotted lines, they to a certain extent disturb the smoothness of things.

(Refer Slide Time: 34:24)



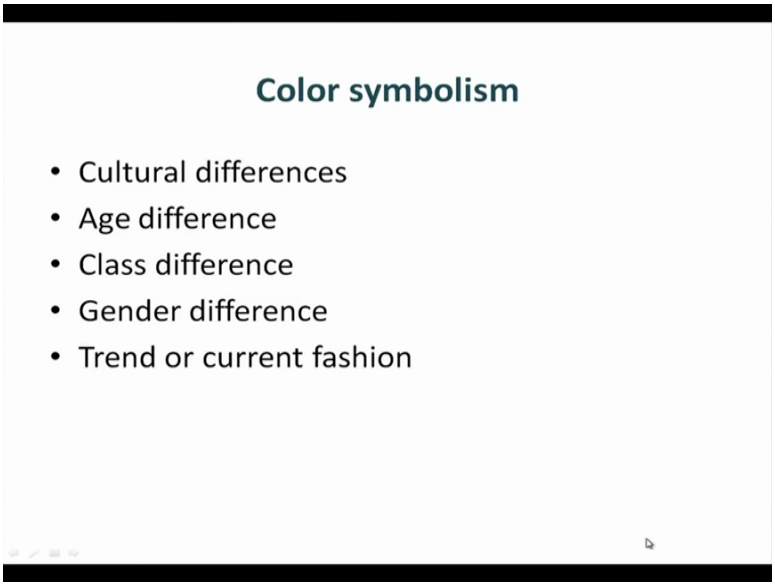
Or if you looking at this image, part of the image is positive and a part of the image is negative. If I might permitted to, I quickly show you how we can actually play around with it, if you are looking at this part of the image, it is distinctively positive, but if you are looking at this part of the image, then it is distinctively negative.

(Refer Slide Time: 34:50)



So, you see that, this small demonstration hopefully give you an idea that, colours can play a very significant role. Here again you find that the two Tibetan Thanka paintings, the one on the left, because of the colours is much more disturbing, than the one on the right, which is because of the colour is less traumatic.

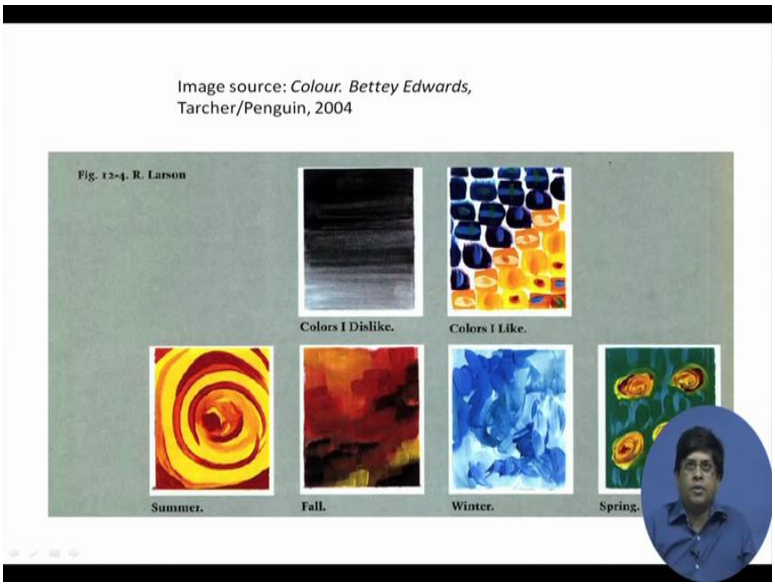
(Refer Slide Time: 35:09)



So, colours play a significant role in cultures, fashion industries thrive on colours, at different points of time. Different colours dominate age, the older people generally tend to use certain kinds of colours, as supposed to younger people and even that depends

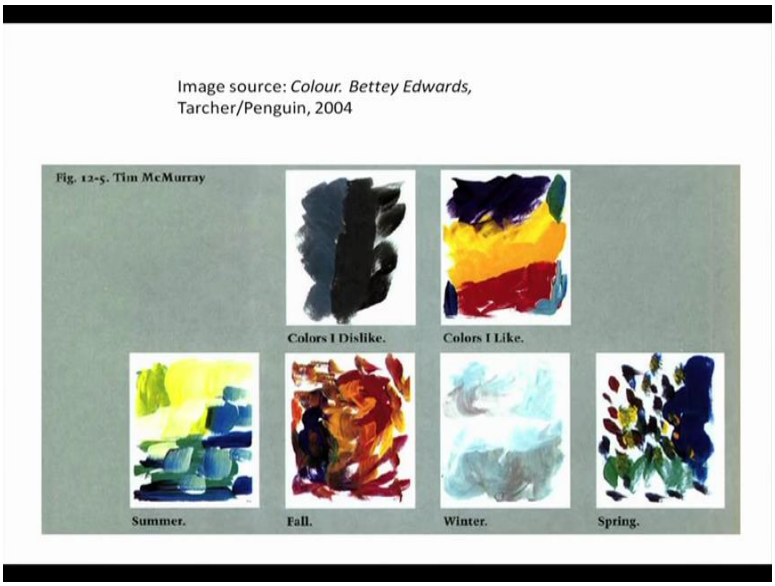
from culture to culture. A classes difference, within quotes, people who are financially better off, generally tend to less bright colours, whereas, people in the lower economic status, very often use bright colours trends of fashion colours, dominate everywhere including advertising.

(Refer Slide Time: 35:51)



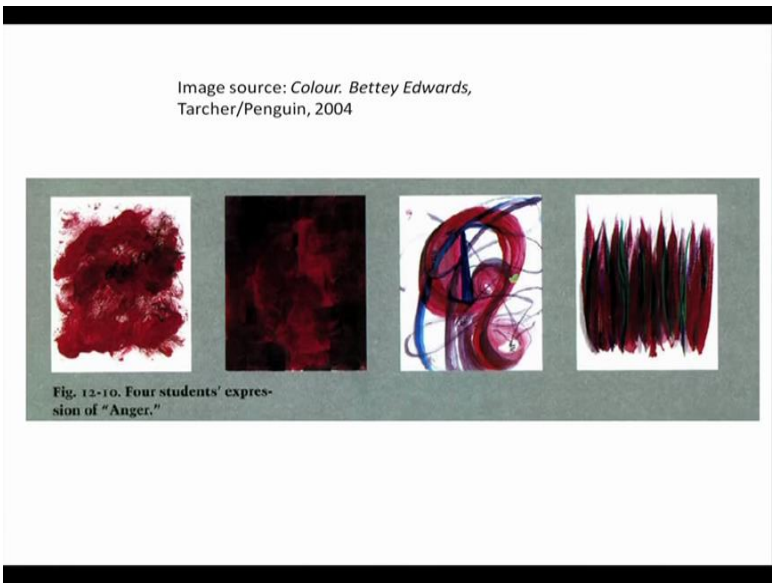
Here are some examples from Bettey Edwards's experiments, with her students, where you see that, as you can see colours I like and colours and I dislike, the significant difference, the way that colours are associated with seasons and those colours are dominantly presented over here.

(Refer Slide Time: 36:07)

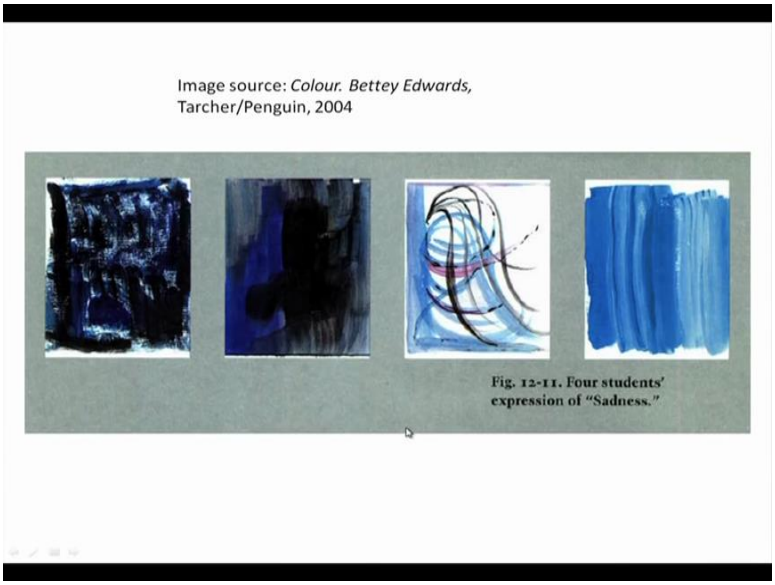


To give you an example, same with this also, colour I like and colour I dislike and you find that between the two students, there is a certain degree of similarity, similar patterns of colours are being used.

(Refer Slide Time: 36:20)



(Refer Slide Time: 36:29)

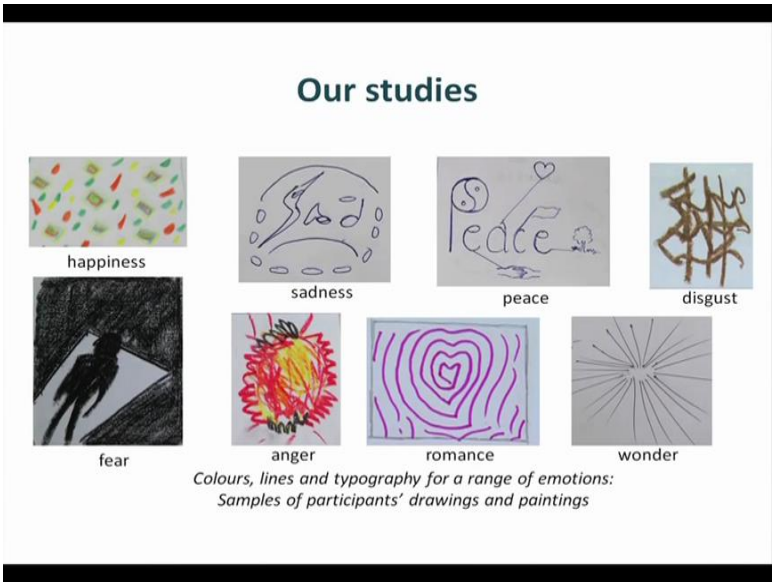


(Refer Slide Time: 36:34)

Similarly, if you are looking at expression of anger, for group of students, you find that similar colours have been used or expression of sadness for a group students, again similar colours have been used And our own findings in a series of study, with more than 60 students also, gave us certain colours. The colours used dominantly in disgust, the colours dominantly used for peace, for sense of romance, for sadness, you can find that the colours are distinctively different. And these are dominant over 60 students. So, the majority over 60 students makes use of these colours. So, this tells us that colours also classified, understood in similar ways, within a specific culture and; that means, that, if

you can make use of this if your knowledge, then when we are addressing somebody, the we can take care of things in a more effective way.

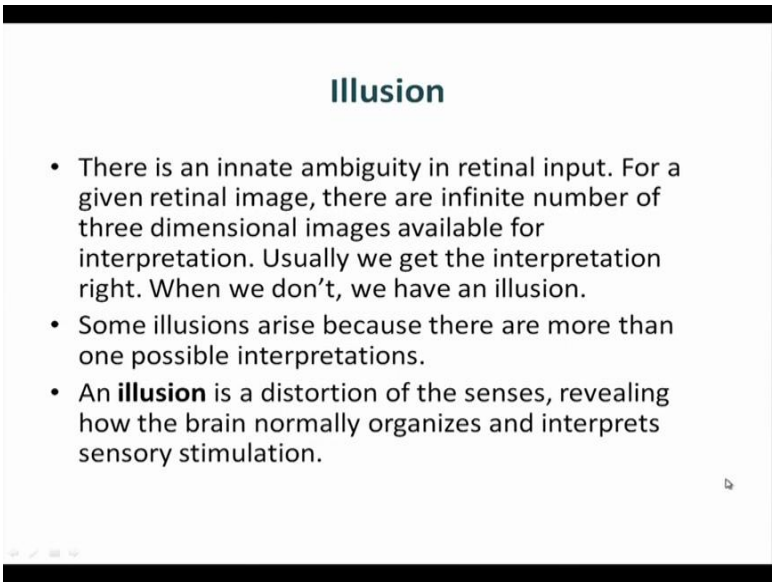
(Refer Slide Time: 37:19)



Our studies also here give you an example of how happiness has been depicted, how anger has been depicted, fear has been depicted, you can see for yourself, that the quite interestingly correspond with many of the things I said earlier. And the colours of happiness are related to yellow, green and blue, interspersed with white light colours, color of anger dominantly red yellow and black and compare it with the picture we saw right at the beginning, by where we talked about let say, here we talk about anger and here we talk about something which is very disturbing, then we find here, that colours behave in specific way, irrespective of the fact that they may had been belong to different cultures, European culture and Indian culture.

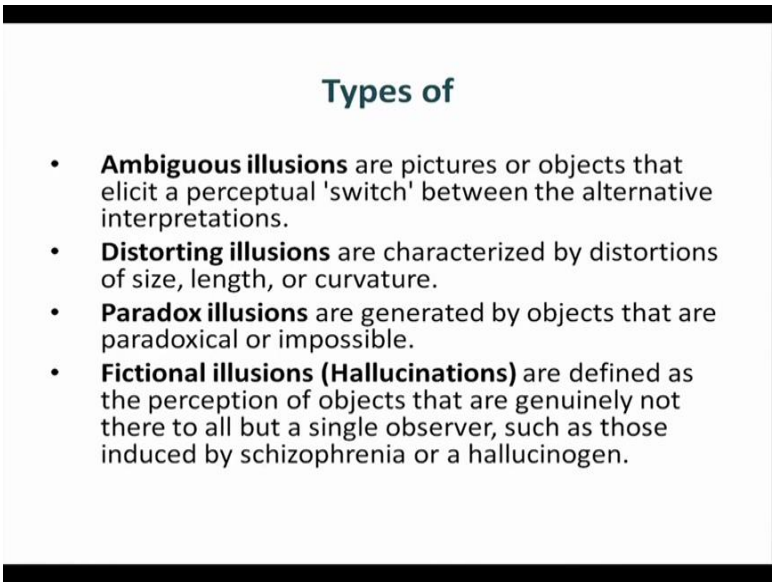
So, these commonalities tell us that, through colours we communicate in a very effective way.

(Refer Slide Time: 38:20)



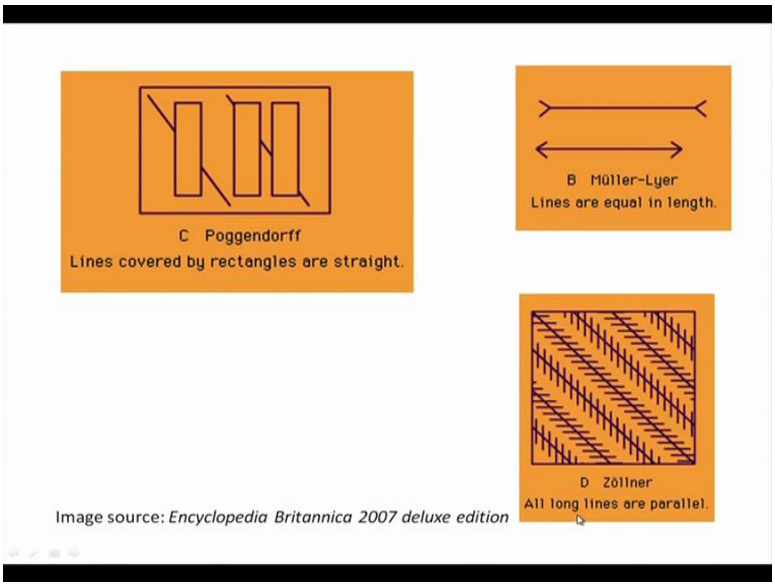
And we need to be aware of this. The final phase of this talk, I will quickly touch upon illusions. I told you that illusions, are where, what we perceive is not what is true.

(Refer Slide Time: 38:36)



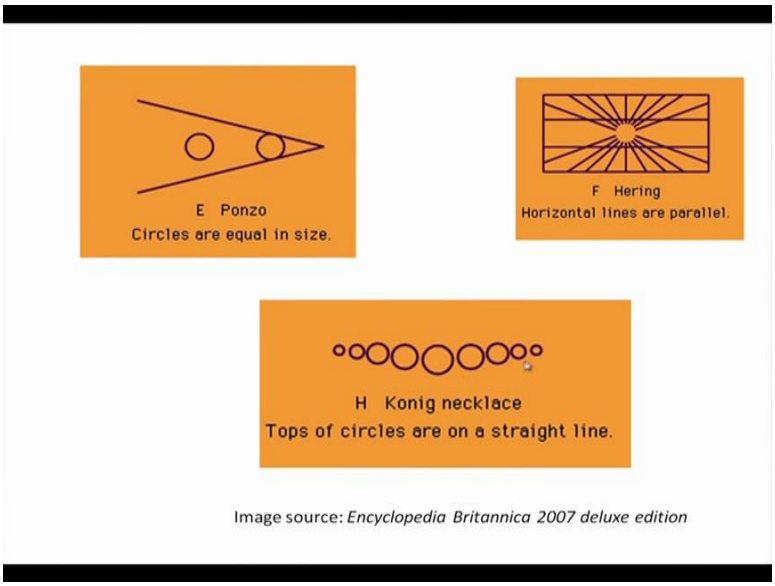
We have examples of that, I will not go into the details, you can look them up in the slides, but you see that here examples tell us that, for instance, this does not look like a straight line, but it is.

(Refer Slide Time: 38:42)



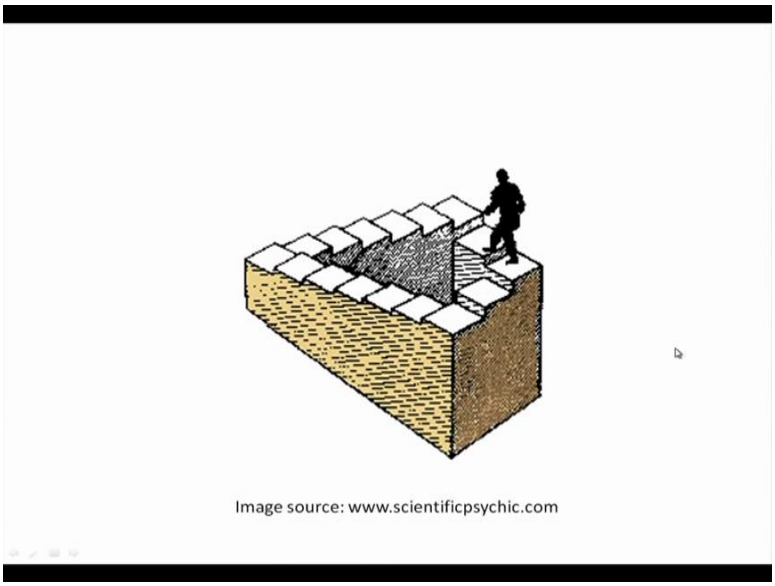
Perhaps this line looks, this particular line over here looks larger than the other line, perhaps these lines do not look like parallel lines, but they are.

(Refer Slide Time: 39:03)



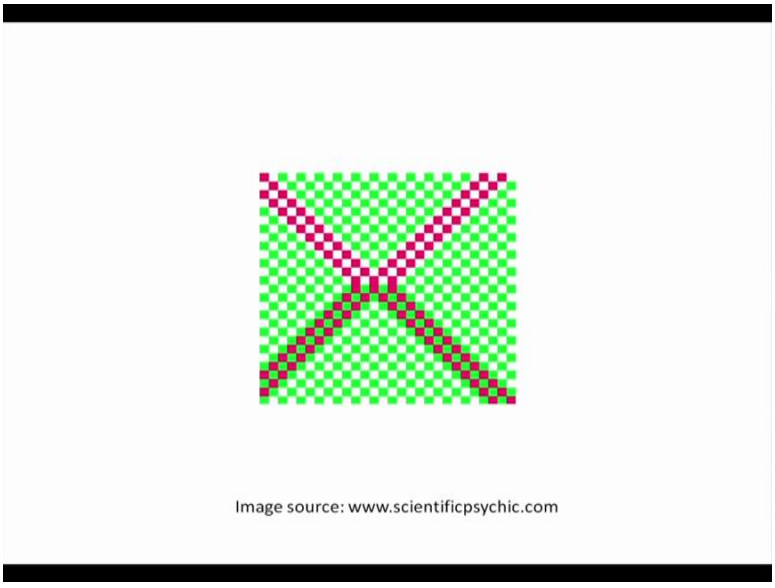
So, these are examples, these lines look like curve lines, but they are actually straight lines. So, they are examples of illusion.

(Refer Slide Time: 39:11)



Here is an example of another illusion, where you are able to climb upon impossible set of stairs, based on the work of Escher, the Dutch painter, this particular concept has evolved and again you can Google, e s c h e r and find a number of wonderful images which explore (Refer Time: 39:37) paradoxical images.

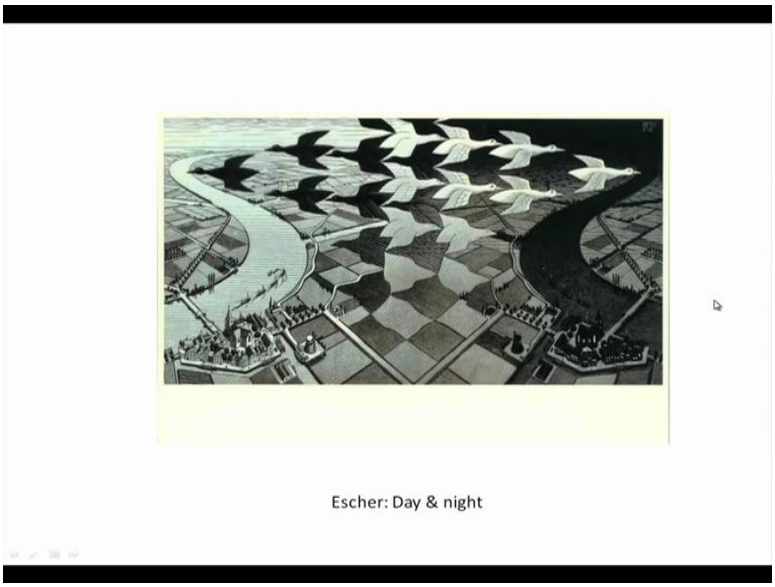
(Refer Slide Time: 39:36)



In paradoxical images nothing is necessarily correct and nothing is necessarily incorrect. You have different ways of seeing things. However, before we go into that, here you can see that, although the colour of this square is the same as the colour of this square,

because the configuration against white and against green, you see that they have an interference effect on our eyes and we see different sets of colours, this as one set of colours and this as another set of colours.

(Refer Slide Time: 40:06)

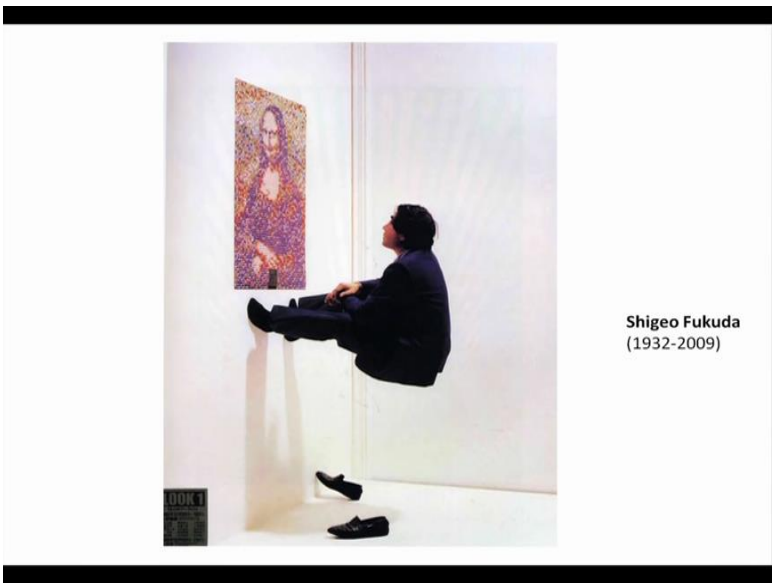


Here you see that, I was talking about paradoxical images, where transformation are taking place and you can look up Eschers very exciting images, to get an idea about them and the way transformation, days transformed into night, night is transformed into day, sky is transformed into earth and earth is transformed into sky. So, very interesting image and these are paradoxical images artists swear on with, which are exciting, interesting.

(Refer Slide Time: 40:36)

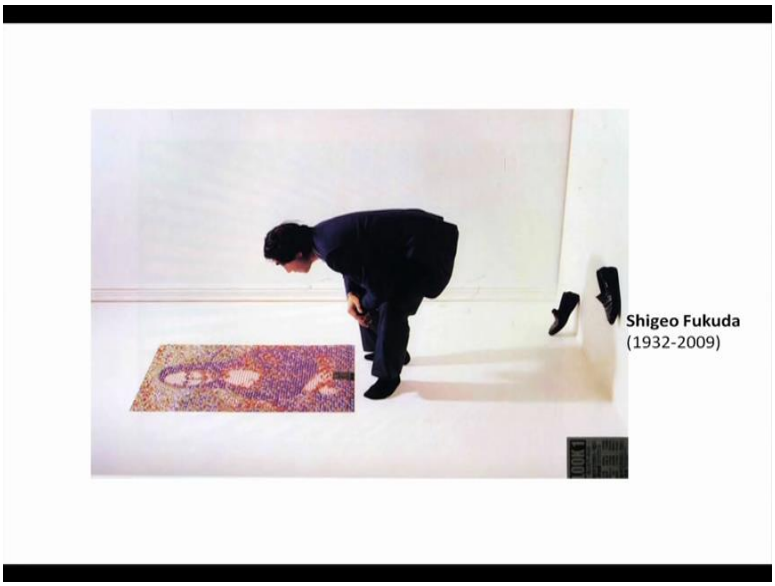
Here is another, I will not going to explaining these, but I will just share with you, how measures manage to communicate paradoxically or creative illusions which have very strong impact upon our minds.

(Refer Slide Time: 40:51)



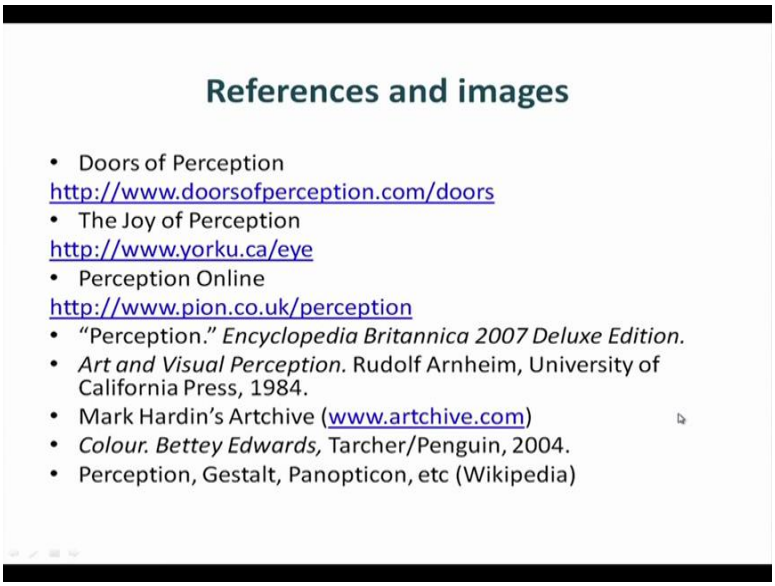
This particular image of which seems very impossible, until all we do is, we turn it round and we certainly realize that it is very, very possible.

(Refer Slide Time: 41:05)



Because focus as experiments are of very interesting and you can again check him out by, on the web.

(Refer Slide Time: 41:17)



So, I hope that, we have had an interesting session and you learnt certain things which you can use in the context of visual communication. As I told you please check out the links, for very exciting surveys, some very interesting images and the way you respond to them will tell us a lot of things and we will share your responses with you, so that we together are able to make some small tiny interesting discovery together. And I hope that

these lessons will, at some point of time, help you in evolving better communication strategies using visuals, because now you know both about visual culture and as well as how to apply visuals, in various aspects of everyday life.

Thank you friends.