Visual Communication Design for Digital Media
Prof. Saptarshi Kolay
Department of Architecture and Planning
Indian Institute of Technology, Roorkee

Lecture – 09
Design Semiotics and Visual Perception Part-I

Hello students, welcome to the NPTEL online course. And in this module, today we will start up with design semiotics and visual perception. In the initial module, we will start discussing our design semiotics. So, what is semiotics? Semiotics is a theory of a science.

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In many digital media design, for example, web design and software applications, we need to understand the sign and its meaning. Sign just not mean that it has to be an icon or some pictograms, it can be a meaning of a picture how it interprets and how user with their social and cultural backgrounds how they interpret the meaning.

So, today we will start discussing that. So, we will just brief what will touch within semiotics because it is a complete domain will not to go in deep into this. So, we will just discuss the theory of semiotics, and then what are the divisions of semiotics or syntax, semantics and pragmatics. And we will again go deep into the syntax, what are the divisions of syntax, how the syntax of the formation of a meaning happen or the structure of the meaning happen. And then semantics what is the meaning, and how it has been

interpreted. And the pragmatism, what is the functional part of the sign, what is the communication happening within the user and the signages that we will discuss.

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So, to start with so semiotics is the learning and various ways that designers can empower meaning and motivation by a the visual choices. For example, we can take the example of a website there with the words, there also will be logos, for example, here you can see the home button, we all know that this is the home button of a website. Otherwise, if some people does not know if not associated with the web application or have not seen might not be interpreting this as a homepage of a website because this so shows as a just as a icon of a home.

Even the second icon what we can see is a denote settings, but this has nothing to do with settings, because this is just some gears associated with that because we are preconceived and we have that preconceived idea of this we will denote settings so that we know. So, how people interpret these images, and how what kind of communication happens within this icons and users mind that comes under semiotic analysis and semiology.

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So, we can say the semiotics is a science of science and it is the science of graph, it is also the science behind the graphic design. So, in design, semiotics is a study of communications through signs and symbols, and their uses and interpretation and the meaning.

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So, here we can see that it can be depicted through a involved. For example, in the first in the diagram, you can see there is a first here its written tree, so that also when we read the word, if somebody knows the language in which it is written, so that a visual image

of a tree comes into a peoples mind. And similarly if you see a pictogram or icon, icon or a realistic picture of a tree, but which is a picture not a 2D picture of painting or photograph, then also a trees identity a tress conception or the mental model of a tree will come in to users mind. So, this is the initial idea of semiotics, we will go deep into this.

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So, for example, FedEx logo we can take that FedEx logo, it is a typographic logo it is just written FedEx, but there is a interesting visual graphics into it. So, if we see carefully there is a arrow symbol coming out with the figure ground relationship. So, arrow symbol means that it is something to do with movement and something to do with delivery, so that is the concept of the FedEx and this comes into users mind; and if somebody is associated with that and gives the brand identity of a FedEx. And it can also be very universal for example, danger, the sign of danger the generally we see that is depicted with red which is the color of danger which is associated with the word danger and even we see that the skull and the bones which also evoke some sensation of fear.

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So, if you go back to the historic backdrops, so it starts the semiotics is a started with the very ancient time we can trace back to the Plato's time, but Ferdinand de Saussure is the father of the modern semiotics idea. And he developed the concept of semiotics in the contemporary idea of semiotics. So, if we think about semiotics, it is not just the meaning it can go beyond the meaning and it can have a sense, it can touch to our senses like it can be a visual sensation, it can be a sound, touch or smell or taste. So, all these things comes into semiotics.

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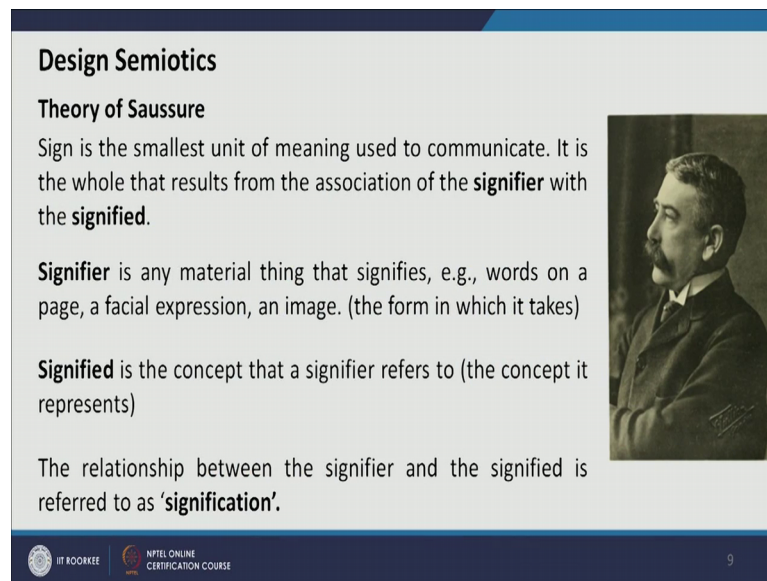
And after that we have Charles Peirce – Charles Sanders Peirce also it takes that semiotics meaning to the social culture context. So, before that it was like what we are seeing; and what is the interpretation. And the Charles Peirce said that it is also a how we read it. So, similar thing similar word can mean differently can communicate differently with the variation of social cultural aspects.

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And also if you are more interested about semiotics, there are Levis Strauss and Levis Strauss theory and Jeck Derry, you can read their theories if you want to go deep into the subject. So, first we have discussed the theory of Saussure. So, what he says he connotes two important terminology, one is the signifier, and one is a signified. So, the way he define signifier is which is the material the things that signifies for example, the word. In the previous slide we discussed the world tree as well as the photograph or the icons of tree which signifies, so that is not the exact thing what comes into people's or user's mind.
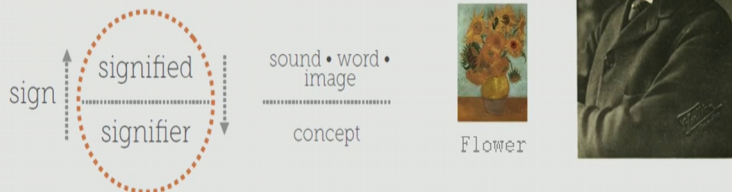
If you think about the mantels image, what uses think, so it is just a word, you have to see the word or you can see the image after that some based on your previous knowledge some something comes into your mind that is the signified. So, here the signified is actually the real tree and signified is the word or image or pictogram whatever what triggers your memory.

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So, for example, with an example of this we can understand this more. So, sign has two part one is the signifier and signified. Here we are taking example of a flower, this is the Bengal's painting. So, flower the word flower is actually the signifier which signifies and if you read the word flower or see a icon of a flower or a real photograph of flowers, something comes into your mind that is the image of the real existence of that flower what you have seen before.

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So, next we come to the Pierce theory. So, Pierce added one-third element that is interpretant. So, interpretant is not the user, but the way the user's mind acts. So, it is the function of the socio cultural aspects. So, if somebody is has a preconceived idea about what it is then he can interpret in a different way. For example, if somebody is more associated with if it take the word flower, if somebody has more association with some particular kind of flower, for example, sunflower, he can think about a sunflower, when he thinks reads the word flower he can think about a particular kind of flower which has a strong memory in his mind.

Or, example: if somebody has a strong memory of some other kind of flower, for example, rose he can think about rose, but that depends on its on the users pre concede idea and the past history how he is associated with that. So, there is a socio cultural concept associated with the meaning. So, for example, in some cultural aspect, if we take the world sorrow, some in some social cultural context it can be depicted with white and in some social cultural context it can be even depicted by black.

So, whether a black color represent sorrow or the white color represents sorrow depends on somebody is a socio cultural context somebody's own thinking.

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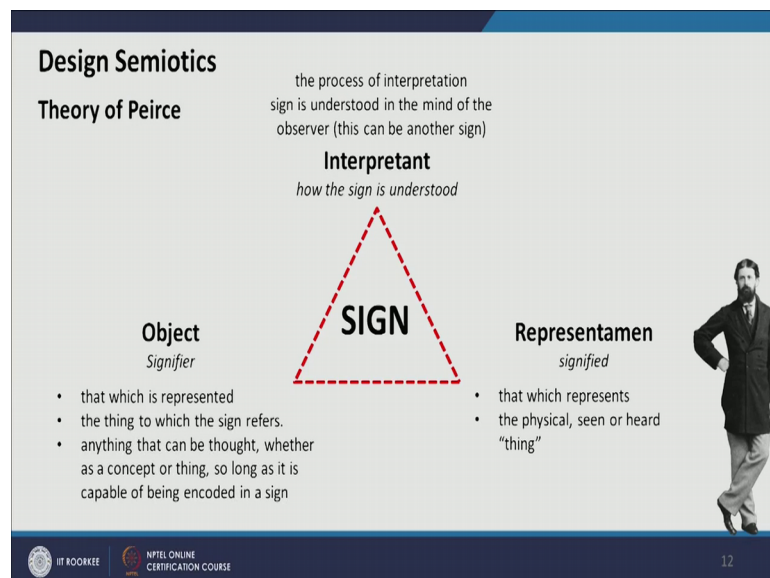
So, there is a triangles. So, one is the object which is the signifier, so that is a real object, and the representation that is the signified that how it has been represented, it can be a photograph, it can be an icon, it can be just a word. And interpretant how people are

reading, reading the sign based on their social cultural context, and based on their past memory.

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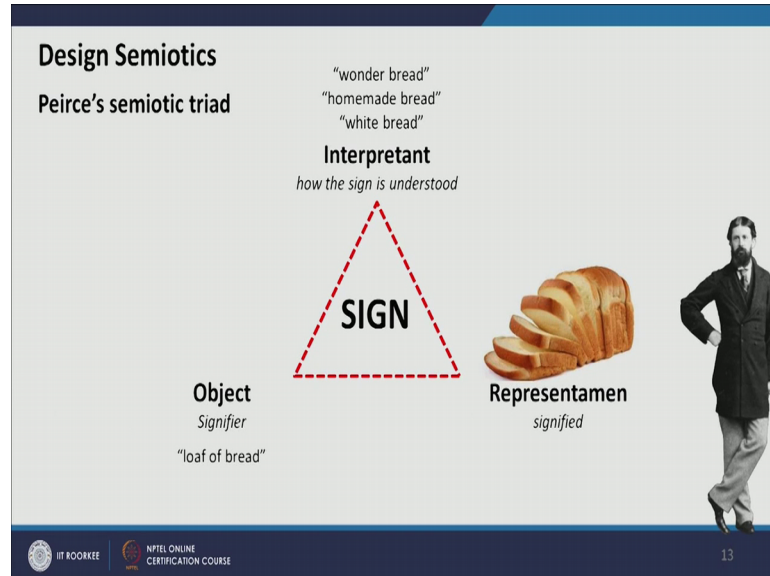
So, we can take different examples, for example, we can have a real photograph of something.

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And for example, champagne it can so that is the real object of a glass of wine that represents this champagne or wine. And somebody can think about a wine as a

celebration, somebody can think about wine as a ceremony, and wine as a happy hour, it depends on the somebody association with the image.

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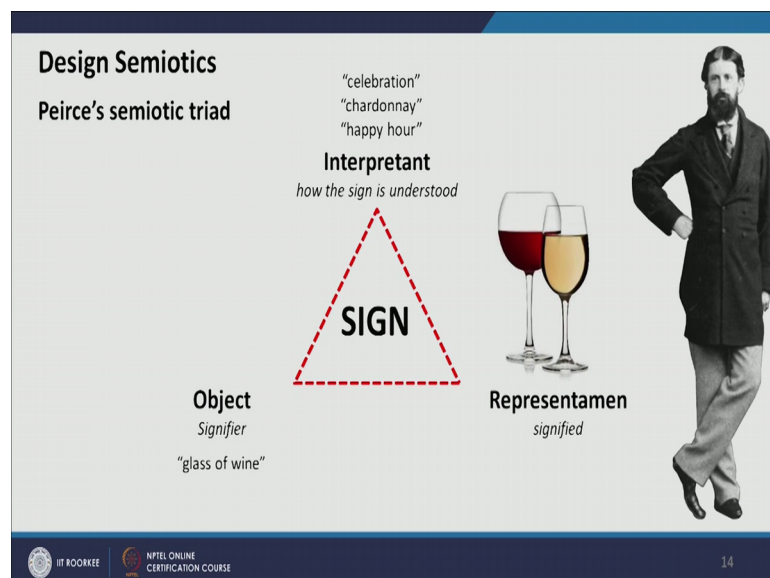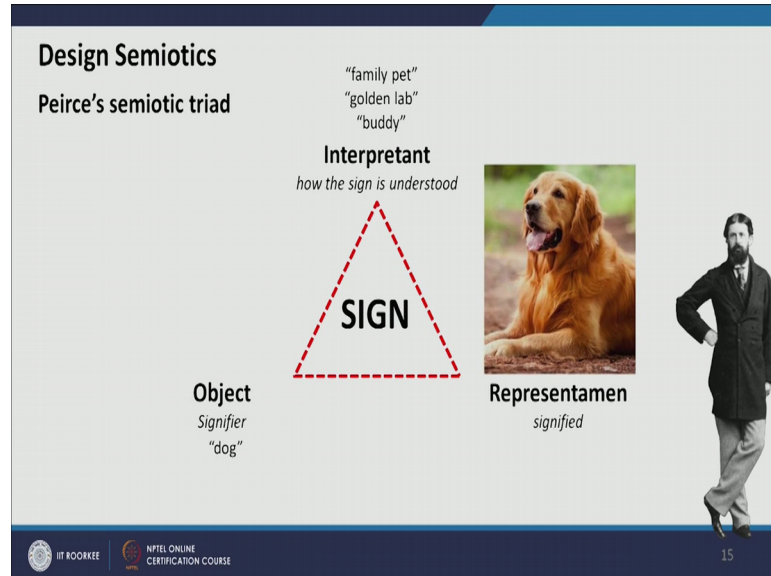Even it can a photograph of a Labrador can be a some for somebody it is just a Labrador, and for somebody who has a pet can be it can be a family pet, and it depends on how people look at to the image.

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Similarly, the stop sign it does not depend on what kind of language in which language it is written. So, the red bold color for somebody it directly gives you an sensation of that

has to be a stop sign; and also for somebody there the word triggers for example, it is the stop sign is written in different languages. So, somebody reads that and understands that is stop sign. For example, if in the in the first slide we were given the example of home button. So, imagine a website, which has a home button, which has the home icon and also the home page written there.

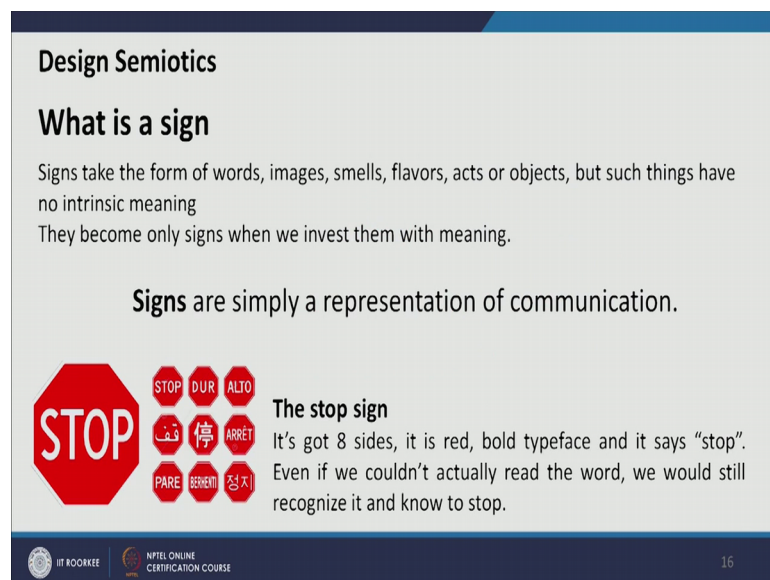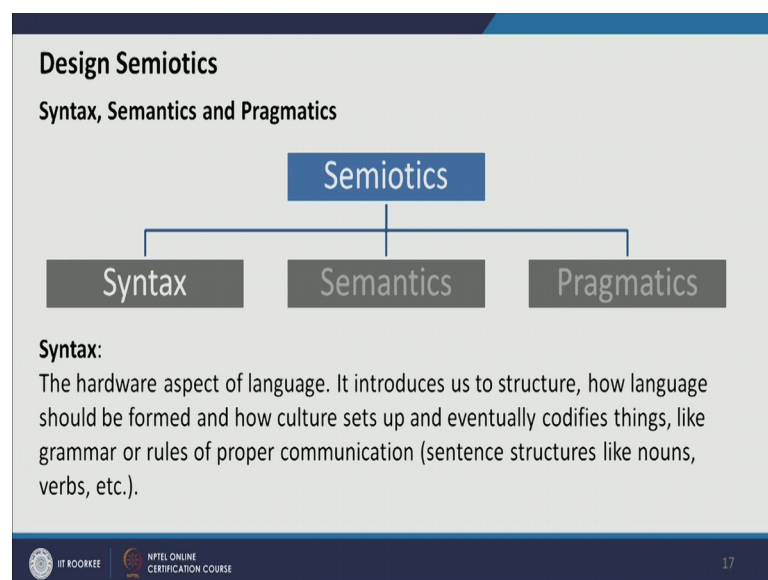So, who can read the language can read that is the home page of the website and who cannot read and reads interprets visually can look at the home icon and understand that is the home icon.

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So, semiotic has three different divisions, we can break down the semiotics concept of semiotics into three different aspects, one is the syntax, and the second is the semantics and then the pragmatics. Syntax is the arrangement, how it has how all the pictures are associated and structured, it can be structured, it might not be structured, it can be an association, it can be a set of some pictures which means something else, or it can be logically sequenced which means something else.

So, that will discuss that is this that comes been in the syntax. So, what is the formation of the pictures or icons or the images or the signs, and whether it depends on the some particular set of arrangement or it is independent of some particular set of arrangement that comes in the syntax. So, this is the hardware part or the formation and the structural part of the communication of science, so that is the syntax.

After syntax, the next part is semantics. So, semantics is the meaning part of it. So, it is language software which creates the meaning so, but it is not the way user interprets, this is the way the designer some thought about it. So, it is the icons and the all the possible meaning associated with that, so that part is semantics. And then we have the pragmatics, pragmatics is the relationship between the sign with its syntax and everything and the semantics the meaning associated with that. And here comes the socio cultural effect because here the users mind is involved. So, for each and every people, the pragmatics can be a little different because it is this is the functional part the function and the context of the user is important as Macoy's said. So, here the meaning can be diverse based on users mind.

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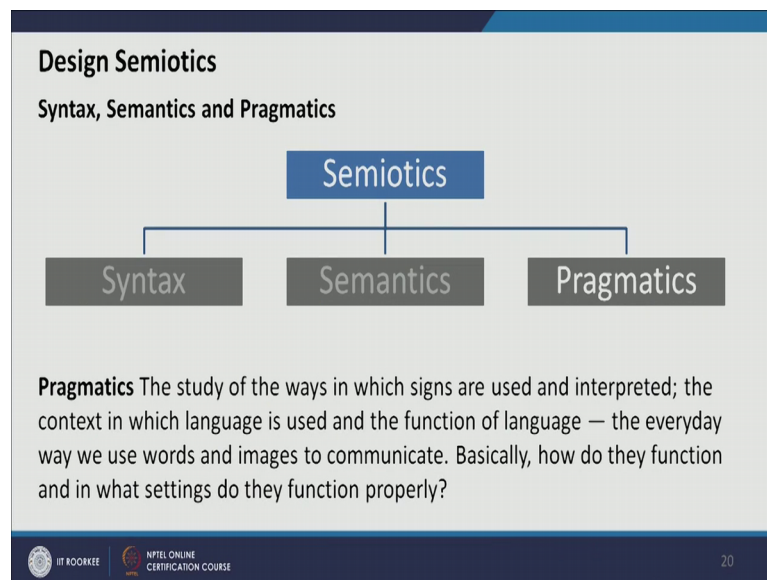
So, pragmatics is the study of the way in which science are used and interpreted the context in which language is used and functions of language. For example, the everyday way we look at the word and the image and their communication that is a part of the pragmatism and that affects the meaning that affects even the semantics part of a sign. So, basically how we how icon functions and how we interpret that that is the pragmatic part. So, first part is the arrangement of the icons and everything that is the syntaxual part. And each syntaxual or the formation of the design or everything and then the meaning part of it is the semantics, and the interpretation that is the pragmatics.

So, now we will discuss first will discuss the semantics, how the semantics are, what is the different aspects of semantics, then we will also discuss the pragmatics and the syntax part later. So, in semantics, we have icon, index and symbol, they are a little different. So, icon is a physical resemblance of a object or concept, it can be very realistic and it can be a map, it can be a diagram and easily understood. So, there is no hidden layer into it.
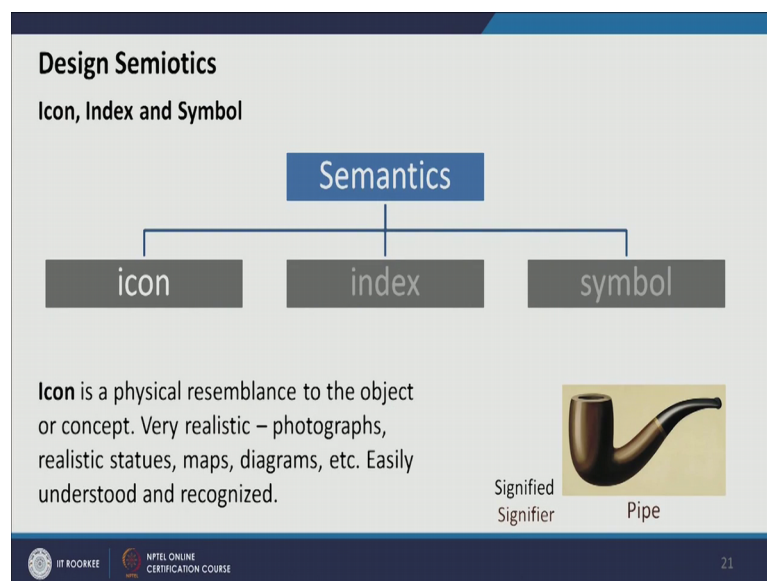
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For example, this is a famous painting, we must have seen that this is a pipe, but it is a painting of a pipe. So, it is also written that this is not a pipe, this is a painting of pipe, but still this is a photograph and this reminds us of a pipe. So, it can be as realistic as possible or it can also be abstract, but it is easily understandable. So, if you want to make an abstraction of this of a pipe, it can be a shell it of a pipe, but still it should not be something metaphorical, something which is not a pipe, but gives us the sensation of pipe that should not be the cases. It has to be represented as directly as possible, so that is the icon.

Then this is the in the next thing is indexed which does not convey the meaning directly which gives us some sensation on there is a cause and effect related to it. For example, we were discussing the danger sign, so if you look at the danger sign, it is just a skull and there are two bones, so that that is nothing to work directly do with dangerous, it is skull. So, if we look at the icon part of it, so that represents a skull that does not represent danger, but with the red color and with the bone and with our previous association with the meaning it conveys, it represents danger.

For example, if we paint heavy cloud it can represent green because that is the cause of heavy cloud is cause of rain and so on so forth. For here, we have an example of munch which is scream. So, here because of the color selection, because of the line quality and because of the expression the person is given, so that is why the expression of scream is well depicted. So, it is the word scream is not written and the interpretation of scream is also very abstract.

So, because through the color, through the line quality and through the brush strokes, and through the expression if you look at the people, the person's the painted person's expressions almost resembles like he is horrified and he has the similar has lot of similarity with a skulled face. So, all these things together evokes sensation of scream that can be a caused as index which is not as direct as icon. There is another thing which

is symbol which is not directly linked as index liker for index it is a cause and effect relationship, but for a symbol it is a predefined symbols.
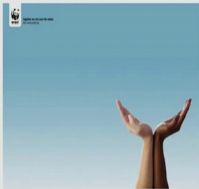
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For example, symbol is a learned and agreed upon code. Here we have a WWFs advertisement; here we see there is a well stale because we have already have a particular idea of well stale shape. So, the two different hands two hands give the formation of a well stale. So, well stales has a particular shape and we also we had an agreed upon code because we have that in our mind. So, we all know that. So, because it creates a similar formation be that is the symbol. For example, we can think about the symbol of a flight departure, flight arrival or elevator and even the home button, so everybody agreed upon that particular code of a code or particular symbol, for example, the WWFs logo is definitely a symbol.

But here the difference between index and symbol is this particular index is not agreed upon code because it is the painter munch, munch is creation. So, he have depicted the scream with different with color do not have different kind of brush strokes, it can be depicted differently as well, but for symbol its more universal and throughout the social cultural context, different social people from different social cultural context will agree on the symbol and we will understand the symbol easily.

So, we can conclude that symbol will be based on a symbol will not be based on social cultural context, and most of the people will agree on the symbols identity. And it will be

more universal, but index is more fluid, and it will be represented and some will represent some other kind of secondary or hidden meaning for it.

Thank you. And next we will discuss the later part, pragmatics and syntax.