Indian Institute of Technology Kanpur
National Programme on Technology Enhanced Learning (NPTEL)
Course Title
A Brief Introduction to Psychology

Lecture – 7
Learning

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Having understood perception to a written extent we are now moving to our second concept that we would be trying to discuss at length and that is learning.

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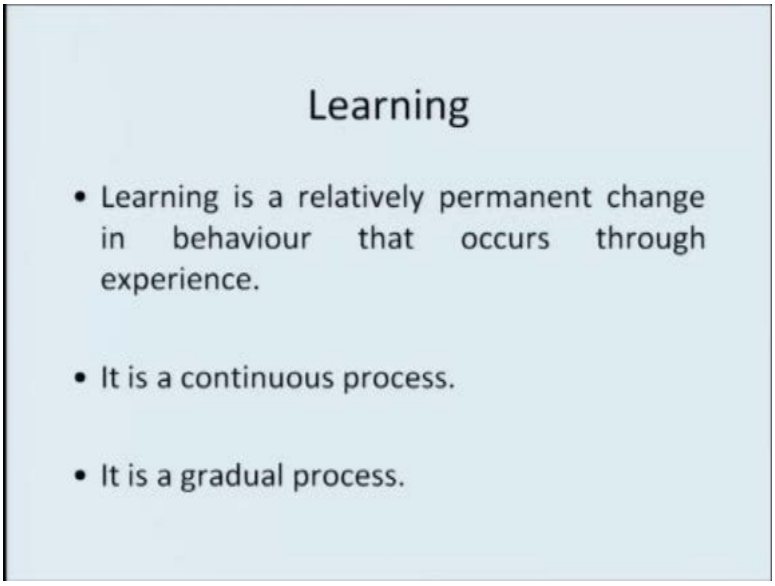

The way we are proceeding as part of this very brief introductory psychology course is that we have first tried to understand how the stimulus, how the sensation from the external world reaches us, how we try to assign meaning to it there by trying to understand how do we perceive things, how do we make out, sense of how the world is around us. Now that we have understood how we perceive things we are now moving a step ahead trying to understand that having sensed the world, having perceived the world around us how do we learn things okay?

So let us understand what actually we mean by learning in psychology. Learning basically is a relatively stable change, relatively permanent change in the behavior which is basically a byproduct of experience fine, so we have our experience coming to us and those experiences which makes us learn to the extent that certain degree of stable change come to us, so that next time when similar experience comes the behavior is by and large guided by whatever has already been learned.

This is called learning okay, so that could primarily mean that it is a continuous process because we always experience.

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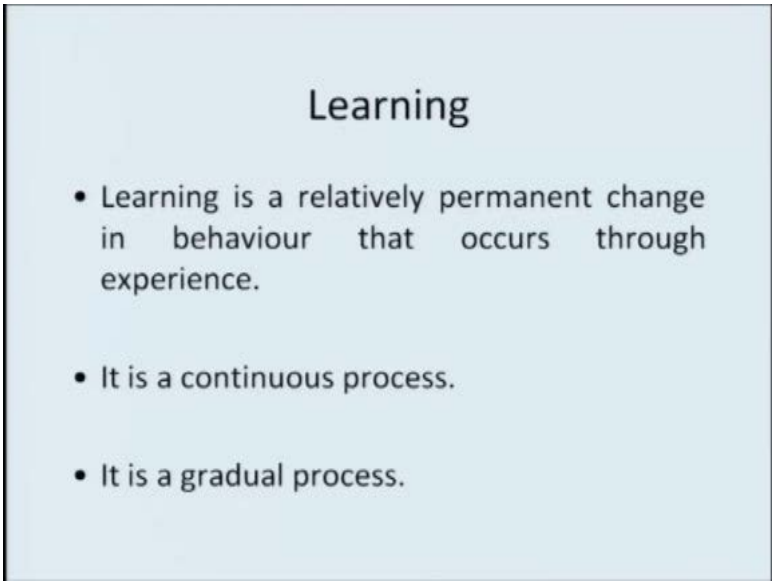

One thing or the other in life and depending on the novelty of the experience realizing the fact that the stimulus might take a different turn we do try to modify our behavior, so depending on the external environment, depending on the incoming experience, depending on the entire synthesis the relative for change that takes place within us, that will guide us, that will facilitate us towards a situation where we yield a response but we take minimum time to arrive at that very decision that this is the most appropriate response in this given situation.

Remember we are repeatedly saying this fact that as biological creature we have to basically economize on our effort, so a relatively permanent change, a continuous process and also it is a gradual process, gradual process because any change that you see in the behavior will not come overnight okay, so gradually you learn certain things, recollect your own past experience okay.

When you try to learn how to ride a bicycle okay it was not at overnight you started no riding a bicycle and driving it, maneuvering it with full skill that is not true for in any one of us, so how did we acquire it, it was a very gradual process okay and now comes a time when you know even though you do not ride a bicycle very frequently tomorrow if you were given an opportunity to do so we can very conveniently do that okay. So the change that has come to us it is a relatively stable change.

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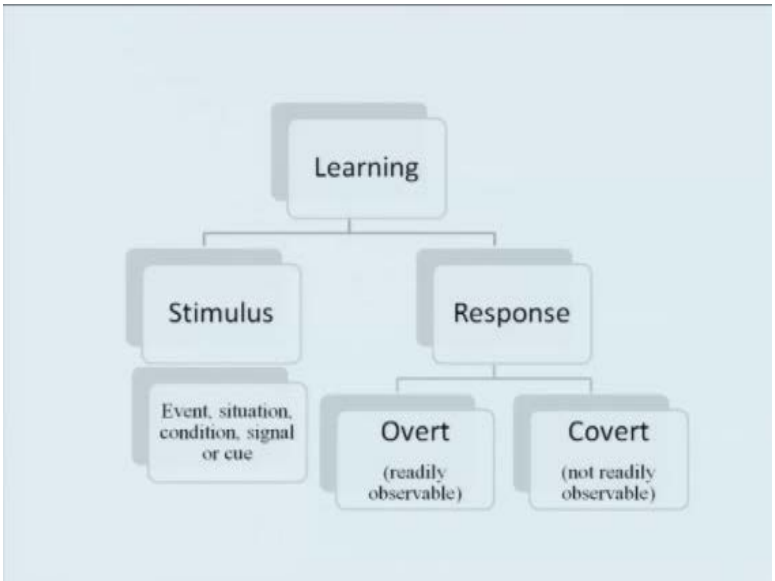

Now let us understand one thing, from a behaviorist point of view we would be looking at the stimulus and the response that is today is elicited once that this stimulus is presented to the organism no, so we always talk of SOR para diamond psychology, the stimulus organism response para diamond. Now a stimulus is basically any event, any situation, any condition, any signal, any queue that triggers you to give a response.

That is the stimulus okay, response you understand the outcome, the resulting behavior that we show that is our response but there could be two types of responses, the overt response and the covert response.

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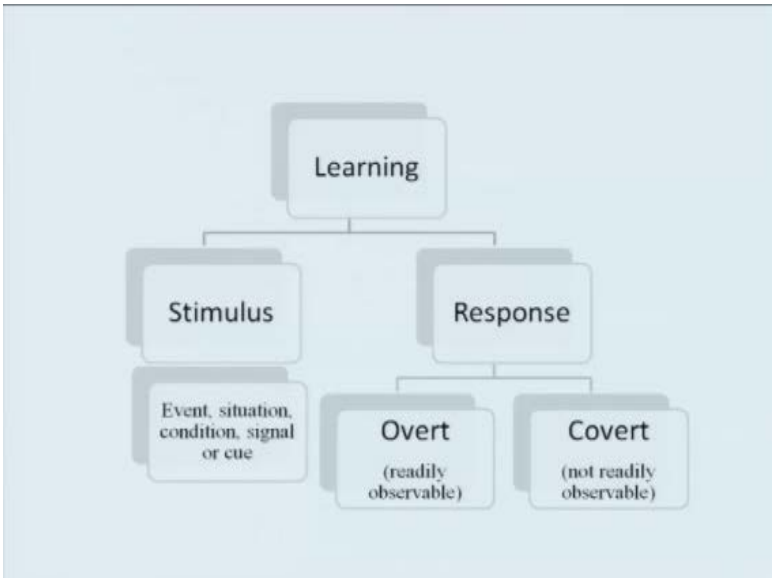

Overt responses are those responses which are very readily observable. I am speaking to you right now this is a readily observable behavior but there could be another type of latent thinking going on which you are not able to observe, those are called covert behavior.

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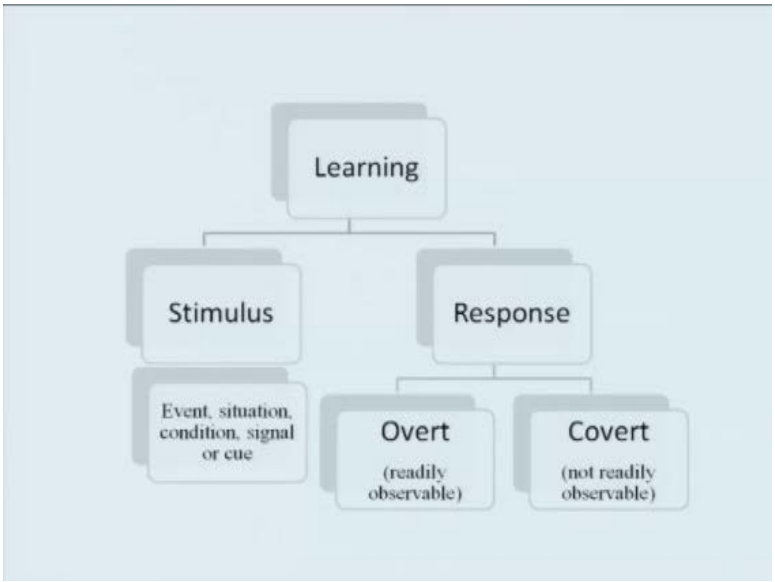

For instance what am I thinking right now okay or for instance when I right now recording this lecture which is a readily observable behavior and overt behavior what is going on in the mind of the camera man who stands behind the camera okay, that is the covert behavior okay, so when we look at learning we are basically trying to look at the stimulus response association okay and when we say that we are looking at a stimulus response association organism of course has his or her own importance.

But at the same time response means overt as well as the covert response.

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Now learning basically involves associations, relationships, okay so we try to make this association, develop this association, evolve this association between the stimulus and the response, so if this is a stimulus this is supposed to be the response, if that is the stimulus that is supposed to be the response. For instance recollect your school days, a teacher enters into the classroom okay and as a what you call newcomer who is being exposed to formal education for the first time you see that everybody else has stood up okay.

Wishing good morning teacher and then you realize that okay once a teacher enters the room what you have to do is to leave your seat, stand erect and wish to the teacher okay, this is now learn, this is in green and next time onwards whenever a teacher enters your room you first thing you do that you religiously leave your seat and wish the teacher good morning, and association has been formed.

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Between the stimulus and the response okay, now how does this association form? Basically three factors govern formation of this association, continuity, contrast, and similarity, just these three features. What is contiguity, contiguity is no the nearness okay, so you have the stimulus and you have the response okay, what is the temporal difference between the two? I am sure you must have heard this popular joke which perhaps does not make you laugh any more that no somebody had cut a joke and then all other animals in the zoo laughed at the time when the joke was cut, one animal started laughing a day later okay.

Now this is, there is a temporal delay between the stimulus and the response okay. Now associate it with one thing, you answer a question asked by your teacher in the class and the teacher now looks at you with admiration okay, the teacher uses certain words no in order to admire the appropriateness of the response that you have given in the class, the question asked, the answer given, the correctness of the answer and the no operation by the teacher, there is a no continuity between them.

So the moment the correct response is given okay immediately you are given a positive feedback by the teacher and this positive feedback does not no differ too much in terms of time difference

from the answer that you had given okay, so what happens in the case of learning, more and more there is continuity between the stimulus and the response higher is the association. You learn exactly okay this is what is doable and this is what is not.

And therefore in terms of making the social norms learn continuity plays a very important role as one of the dominant pattern of parenting in our culture. Parents will not hesitate scolding the children, many parents will not even hesitate slapping the child okay, now you commit an error and if the magnitude of the error is considered by your parents to be able to trigger a punishment okay you are immediately scolded, it is not that you for instance use a slang right now and after two days your father calls you and then no punishes you, scolds you, that does not happen.

The moment you use a slang the next moment you receive an adverse remark by your father no, he scolds you may be slaps you and this is how you learn that fine although this word exists in the culture, although this word exists in the dictionary this is a non usable type of a terminology okay do's of the society has been learned. So continuity plays.

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An extremely important role in learning. The second is the contrast factor, contrast you understand no so the higher is the contrast the better is the learning no because you can distinguish two things, so the same example if I take the appropriateness of the response the correctness of the word that is being used and the positive or the negative feedback that is given back to you, you give the correct answer to the teacher and the teacher no praises you, use a slang and your father punishes you.

Okay now you very easily understand the contrast between the two situation and this helps you understand that if, if this constitutes the do's then you can understand what the don'ts constitute of okay, so similarly if you know what are the doable things the prescribed things you by default understand what is proscribed, so do's do not, prescribed proscribed okay this association can very easily be formed by contrast, and third.

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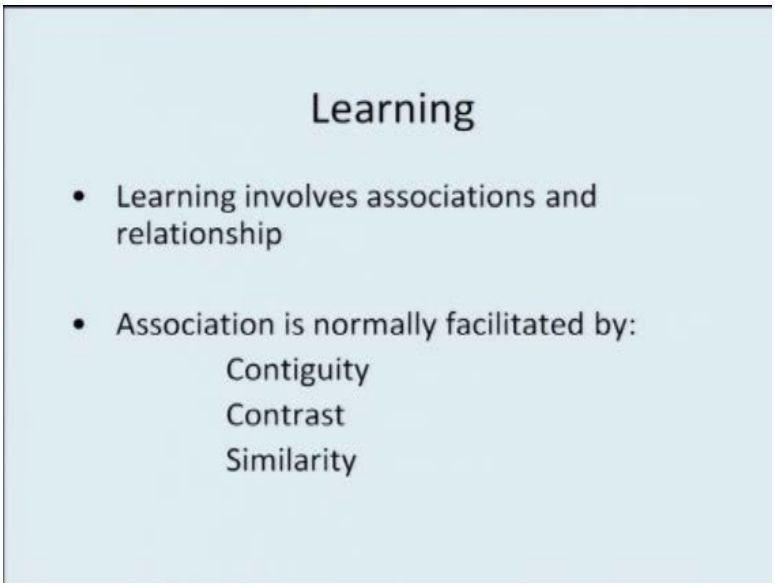

We would like to no go ahead with the know the experience because learning by default is supposed to be a relatively permanent change, so if it is a relatively stable change what should it lead to, it should lead you to a point where if there is a similar situation that you are experiencing for the second time or for n number of time you just extend your previous experience okay.

And based on the similarity between the two situations you decide last time this was the appropriate response therefore this time also this is the appropriate response, take the example of the teacher entering the class okay, the teacher enters the class the student leaves the chair okay and wishes good morning sir, good morning ma'am, first day, second day, and every time you repeat this behavior because there is a similarity in the situation.

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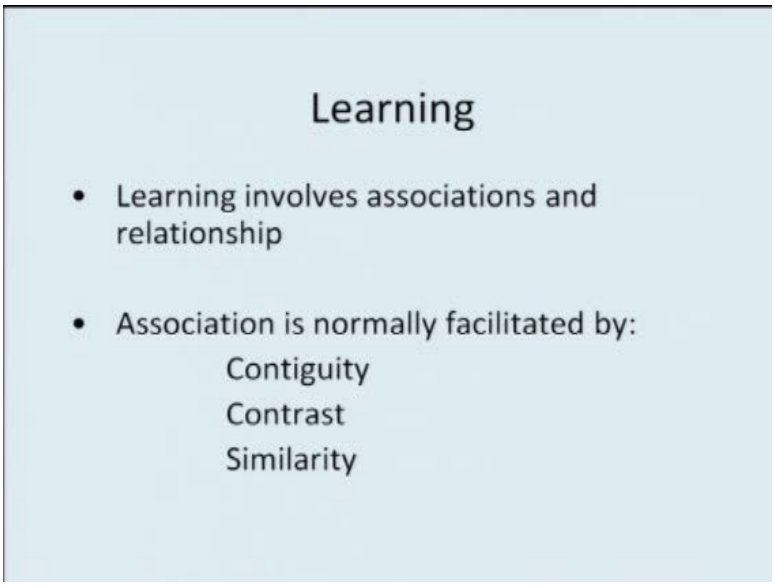

You know that you are in a classroom set up and you also know that the one period is over and now the next teacher enters the room and therefore even though the period varies, the date vary okay the teachers vary but every time the behavior remains the same, and this is governed basically by similarity so remember one thing learning basically means formation of association.

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Okay and association primarily guided by just three factors contiguity, contrast and similarity. Now let us understand learning from the point of view of various theories.

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That has been proposed, you can by and large divide the theories into two groups, the behavioral theories and the cognitive theories. Now basically the behavioral theories are based on the premise that learning takes place as the result of observable responses to any external stimuli okay and therefore it is also known as stimulus response theory. So what would happen, you have an external stimulus, you observe the behavior and based on the observation you try to calibrate okay and this collaboration helps you form that stimulus response association.

Okay, the second set of theories are called cognitive theories.

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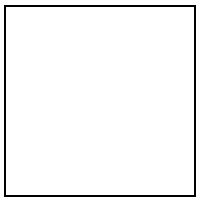

Now cognitive theories basically say that learning is based on mental information processing okay which is often in response to a problem situation, so you are in a problem situation, you try to solve the problem okay and now based on the solution that you have arrived in that very situation you look back and you look at the information processing that has taken place, information processing basically would require that you have an input okay, you have an output and between the input and the output there is a process of transformation.

It is this transformation that you revisit okay and that is helps, that is something.

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That helps you learn the situation. Now that we have talked about the two sets of theories the behavioral theories and the cognitive theories let us look.

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At a few things, I am right now looking at those examples where animals who have been trained by human beings and have been made to learn and behave in a particular way okay. Deliberately I am taking example of animals the reason being that in the next lecture we will come to various theories of learning and there we would be looking at the theory being actually based on experimentation done on animals, so look at these videos.

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