Human Behaviour

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Lecture - 21
Review of Human Behaviour

Friends, welcome back to this 21st lecture, which is a last lecture in this series on Human Behaviour. Now what we are going to do in this lecture is, we are going to review what we have done in this past 20 lectures. This lecture is going to be a brief lecture why? Because in all the previous lectures what I have been going through is I have been trying to cover up where we started and where did we reach in any particular lecture. So, basically I have been coming up my grounds right from lecture number 2. Lecture number 1 being the first lecture.

So, there is no reason of covering a ground, but from lecture 2 onwards to lecture 20 I have been reviewing what we have done before. Of course, these reviews were not detailed. So, I thought I will dedicate this lecture to reviewing what we have done, and how it all makes meaning whatever we have done up till now makes meaning. In the sense how we did or what we did up till now how does it justify a course on human behaviour. So, this lecture although brief we will try and make sense of what we studied in the in all these lectures, including a review of what we have done in all the present lectures, I will give you a overall picture of the science of human behaviour.

So, we started our journey some 8 weeks back by introducing this course and introducing the idea of human behaviour. The very first lecture itself what we did was we looked at what is human behaviour; so the definition of human behaviour.

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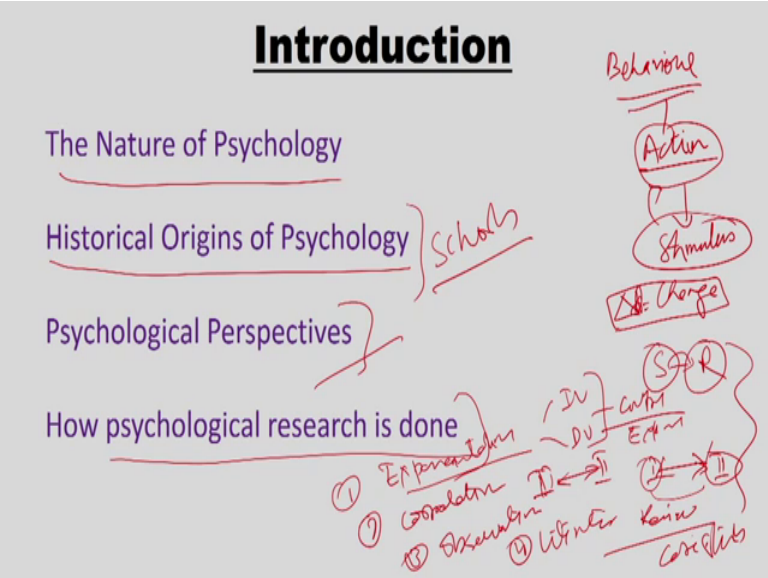

And as we said in that lecture that behaviour is any action that humans take and these actions are the result of a stimulus or I would say a change on the internal or external environment. So, any kind of change in the external environment produces a reaction by an individual and that reaction is called a behaviour. In behaviours psychology we call this as the S R learning where there is a stimulus giving a response or a stimulus invoking a response.

So, the first lecture itself we discussed what is this behaviour and what is the need of study of this behaviour. We discussed the reasons why we should study human behaviour and there we focused on that if we study a human behaviour, since psychology is a stochastic science or it is a science which based on probabilities and randomness, because its very difficult to predict what anybody is going to do. And unlike the deterministic science which are the hard sciences where positions and actions can be determined psychology is a stochastic science a probabilistic science where behaviours or human actions cannot be determined with well develop laws.

And so, to study what a human does or a how a human reacts to any situation, the best idea is to use the science of psychology because that science gives you methods and tools to study human behaviour. So, we started up by defining what is behaviour we started up by looking at why we should study behaviour and the reason that I gave is because if we can I predict people's behaviour with certain probability, then the success that we have in

our life in any dimension whether it is a solving a problem or any achieving a particular goal, predicting others behaviour will also help us develop our social world having a better life and all kind of pleasures all kind of satisfaction human should get and so that was one of the reason why we study behaviour.

So, we started off by looking at the nature of psychology, what is psychology. So, it is a science of psychology. And we saw how psychology the science which studies human behaviour, it develop from both philosophy questions like the origin of behaviour questions like whether nature or nurture whether genetics or learning has a role in development of the human mind, the concept of the human mind, the concept of the human soul the idea that whether at the time of birth human brain is completely blank or does it come with some kind of information or other practical questions in philosophy those give rise to the science of psychology.

We also looked at the idea that physiology, the study of humans body that also provided a support or that also led to the development of science of psychology or because for studying human behaviour we have to study how human beings work and for that you have to understand the anatomy and the physiology of human body, how the working of the human body is and for that matter one of the historical origins of psychology has been physiology. So, we looked at how physiology helps in development psychology.

We started off by looking at the earliest cools, the earlier conceptualisation psychology where we discussed the idea what is structuralism, which is one school of psychology which says that if you want to study human behaviour, you have to make it into its separate parts.

Now this school of psychology since it has its impedances its coming from Wundt school who Wilhelm Wundt by the way was the father of psychology, who started the study of experimental psychology or I would say scientific psychology, and so, he was coming from the hard sciences. So, he believed that behaviours could be studied by breaking the human behaviour into its constituent parts in terms of what is psychological and what is physiological.

And so, here you would remember the concept of coal lemonade that I gave you in that lecture. So, basically structure is believed that study of human behaviour requires dividing the behaviour or breaking the behaviour into its part. In opposition to that the

Gestaltis said that human behaviour cannot be studied by breaking the whole behaviour into its constituent parts rather the whole behaviour itself and parts of the behaviour will have different meanings, and that is why they gave the conceptualization of how the sum is different from the sum of parts or the whole is different from different parts combined together.

And so, this was the direct opposition to what structuralism was. Then another school of psychology which is called behaviourism was proposed, which proposed that if you want to study human behaviour you have to see the behaviour in continuity you have to see the behaviour actually happening.

Further to it we had the science of behaviourism we said that human behaviour occurs because there are certain well learned responses. So, human beings in presence of a stimulus act in a certain way, and if acting in a certain way is rewarding for them is giving them some kind of the benefit, they will learn these associations, they will learn this act that if a particular stimulus for example, if somebody shouts at you and you shout them back and because of you shouting them back they runaway.

So, you will learn that shouting back at shouting people is a good habit . So, that is how you learn behaviour and that is how you develop behaviour. So, that was what the behaviour is thought. Further to it we had the psychoanalytic view which believed that human behaviour basically develops from the unconscious the human mind is basically unconscious and there are desires and hidden motives and everything stored in this unconscious and that drives a human behaviour. Then we looked at the historical origin psychology and that is why I was discussing this schools of psychology. Further to it we looked at different psychological perspectives.

So, studying the same behaviour studying any behaviour can be done by different perspectives. For example, if somebody gets angry, now this act of getting angry when somebody curses you or somebody talks to you loudly can be explained by different perspectives. And so, there are various perspectives of psychologies from a biological point of view this getting angry is basically coming from evolution it is from the evolutionary point of view from the biological point of view this getting angry comes from the interplay of neurotransmitter.

So, certain ion neurotransmitters force you to get angry and for cognitive point of view, by thinking about the situation that somebody shouting at you they trap your previous experiences and memory and you come to know that when they are shouting at you; obviously, it means that they are not happy at you and so, if they are not happy at you and you have not done anything wrong. So, shouting back at them your past experiences says is going to prove what they are fate and so, you basically bark back at them or shout back at them and then that is how the cognitive perspective believes. So, there are the four or five different cognitive perspectives which we discussed and this cognitive perspectives are various ways which can explain human behaviour.

And lastly we looked at how psychological research is done. So, within the psychological perspectives we also saw some newer dimensions of psychology for example, the idea of cognitive neuroscience, the idea of psycholinguistics how these new schools or the idea of neuropsychology. So, how these new schools have come up and how they are explaining now the human behaviour. And later in the lecture we looked at how is psychological research done. So, we looked at four or five different methods, we started by looking at what is experimentation.

And how this experimentation is done using an independent variable and dependent variable and so and using control and experimental groups; so something like that. And then we looked at doing research using the correlation method. So, in correlation method although there are two variables variable I in variable II and they are related to each other, but it is very difficult to say whether a variable I causes variable II. So, there is a its basically a bidirectional reaction which means that whenever a variable I changes in some way variable II also changes.

But there is no direct cause and effect relationship. So, when I say cause and effect relationship, it does not prove this relations does not prove whether I leads to II or II leads to I, I i do not know it is a both way kind of an act and we looked at several other methodologies or studying human behaviour for example, using observation and using the idea of literature review and this kind of case studies and this kinds of methodologies to study human behaviour. So, in the first section itself we looked at these introductions of how human being varies.

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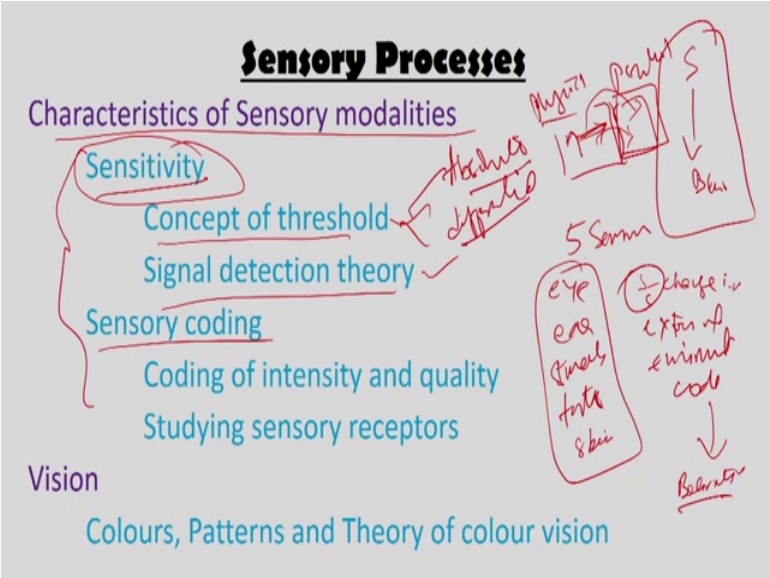

Now, when once we know that people react to stimuluses and so, behaviour comes from a certain stimulus. So, people react to stimuluses. So, basically then there is something that we have to learn that is how the stimulus is or change a in the external environment coded. So, the stimulus change or the stimulus how it is coded in the behavioural system; now human beings there are two dimensions that we have to look at one is called the physical dimension this is where everything outside of us is, and this is called the psychological dimension this is inside of us.

So, how change in something which is outside of us for example, the wind blows and because of that the leaves they start moving and because of that a cool breeze blows and this cool breeze makes you feel cold and you start wearing a jacket. So, this idea that the wind blowing and making the producing the cold wind which actually makes you feel the loss of temperature, how is this coded this sensation coded into the psychological realm. And for that any kind of change in the external environment how this is encoded into the psychological domain is happening through a set of process in a set of systems and this process systems combined together are known as sensory system and sensory processes.

So, next we looked at what is sensory modality and what are the different sensory modalities that humans have. Now of course, the humans have five different sensory modalities starting from the eye to the ear and then you have the smell, taste and skin.

So, these are the five different sensory modalities meaning with that each of these have receptors which can take in information from the external environment, and code this information into the psychological domain and these based on these codings human beings react or make certain actions.

So, next we looked at the idea of the sensory modality how the sensory modality really functions. And so within that we looked at the idea of what is sensitivity and sensory coding. Now in any sensory system any sensory receptors have to have certain properties. Now one of the properties the sensory system has to have is called sensitivity. The more sensitive sensory receptor is the better chances for it to detect changes in the external environment and this sensitivity is then explained in terms of threshold and signal detection theory.

Now, sensitivity of a system is measured in terms of whether it can detect something called the absolute and differential threshold. Now what is absolute threshold? The absolute threshold is that minimum amount of change in the external environment, which makes a sensory system by detecting it say that there is a change from no stimulus to yes stimulus from a zero stimulus to one stimulus and so that is what is called absolute limn or absolute threshold. Now in comparison to that there is another threshold which is called the differential threshold. So, we have something called the absolute threshold and we have something called the differential threshold.

So, this differential threshold is the minimum amount of change in a stimulus which has been detected by the sensory system so, that people can see the next change. So, if I have two units or something and a one unit change is done on to it and if I cannot notice this change, then it will not be set to possessing differential threshold. So, differential threshold is that amount of change or that amount of increase in the intensity of a stimulus so, that it can be detected. Once the absolute threshold has been established and this is called the differential threshold. So, basically the idea of absolute threshold and differential threshold is what defines a sensitivity.

So, can first of all if I am thinking of in terms of electrical current or if I am thinking of in terms of a multi meter and if I am looking at electricity how electricity is measured. So, first of all the first thing is how do we define this multi meter is working. The first is the sensitivity of the multi meter and that is defined in terms of whether the multi meter

can detect changes from zero current to one current; zero current to some voltage of current or zero current to let us say 0.00001 volts of current. Now if it can do that the lowest number that it can detect the highest sensitivity it can do.

So, first thing is when if it can change it can detect the change from no current to yes current and the second thing is can it detect further changes in subsequent changes in current. So, can it detect change between 1 volt to 2 volt? Now if it can that is called the change from 1 volt to 2 volt and 2 volt to 3 volt is called differential threshold and the change from 0 volt to 1 volt or 0 volt to 0.0000001 volt is what is called the absolute threshold. Then we defined our what is called signal detection theory and signal detection theory basically is nothing it is a process of how we can detect signals or extract signals from noises. Now we know there are several kinds of noises the noises could be in terms of external environment and the noises could be in terms of internal human noises which the brain produces.

So, in presence of these external internal noises how human beings detect changes in external environment is what is the idea of signal detection theory. And we have discussed in details so, go back to that lecture and then have a look at it. Then we looked at sensory coding which is how these informations which has this idea of concept of threshold detection how this sensory systems actually in terms of biology of it register these changes into the human brain and that happens by coding for intensity and quantity.

So, the sensory receptors which is the eye the ear and the smell taste and skin, they detect changes in the intensity and quality of information, quality of information which is falling on to it. So, the rate at which and the information is falling and the amount of information which is falling on any sensory receptor is basically coded in terms of intensity and quality. And then we looked at how the sensory receptors actually while taking this information, how the sensory receptors function. For that we took a classical system which is called the vision and we looked at how colours patterns and theory of colour vision.

So, we looked at the eye human eye and we looked at how this human eye takes in information and produces the idea of colour produces the idea of pattern viewing colour viewing and we looked at many different theories of this vision.

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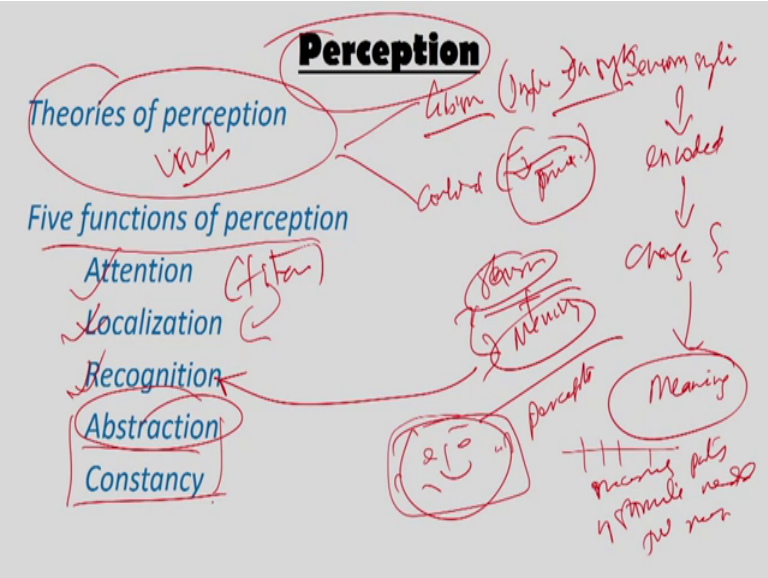

Now, once some information has been processed some. So, once the sensory systems has encoded changes in stimulus, the meaning has to be given to it and this meaning is given to it through a process of perception. So, what is it? So, we looked at two theories of perception one theory of perception says that in terms of the visual perception.

So, basically I would say it is visual perception. So, one theory of visual perception says that which is called the Gibsonion model and Gibsonion model says that information which is falling on to the eye is enough for producing all kind of perceptions and then there is a combined view which says that it is not so, information which is falling into the eye plus information processing both combined together to form perception. So, it is not only that the information which is the light rays which is falling on your eyes is enough to make meaning of what the external stimulus says.

You also need your past experiences memory and all kind of processing through the brain to understand what a stimulus means and then when we looked at the five different functions of perceptions. So, starting with attention which is the first step in perception where anybody puts his cognitive resources or people put their cognitive resources in full, in grabbing what the external stimulus has to send to them.

So, the sensory system has a lot of information with it a lot of information is falling on to it. So, attention is the process of putting filter. So, attention is the process of putting filters on to those number of information which is falling on the sensory system, and

through the process of attention we pick only necessary information. Now once this necessary information is picked up an idea of localisation or the process of localisation starts, where we start locating or where we starts putting what stimulus or where this stimulus is in the external environment.

Now, once we know what stimulus is and where this is, we can make meaning out of it. This will help us in moving through the environment which will also help us in knowing what kind of stimulus it is and navigating the social path. So, we start this process of localisation by using both the binocular and the monocular cues. So, two I cues and one I cues. So, please go back to that section on perception and have a look at how this really works. Then the third process is called recognition this is the actual process of making meaning.

So, up till localisation attention we have grabbed stimulations and we have grabbed this stimuluses and also located them in the external environment or we have been able to perceive, what is the background and what is the foreground and all kind of other informations regarding the stimuluses. Now all these informations are combined together for example, perception of form, perception of colour, perception of distance, object symmetry and all those things have been grabbed by attention and localisation depth and all those things have been grabbed.

And so, by that the process of recognition takes this information all this information together and then projects scheme or makes a meaning of what the stimulus is compare in terms of what information is coming from the sensory systems and also from previous learning or from your memory. So, those information from the sensory system and information from the memory, they are combined together to form the actual perception and this happens at the recognition face.

Now while doing recognition two things are considered or two things are held constant one is called abstraction. So, whenever I am looking at any information from the external systems, what we do is we abstract information which means that we make or we only take the necessary parts of stimuli which is needed for recognition.

So, if we are looking at human face for example, the most important part that we need is not where the eye the mouth and the nose is there are two eyes and one nose and that kind of information is not needed, Any special feature here for example, a cut here or

something else that is noted because the idea of the human face is already there stored in the human memory. So, we only need the special feature and because of that we can identify the face so, that is the process of abstraction. And the process of constancy says that there are certain things which are constant which the brain assumes pre assumes. So, somebody coming from far towards you does not change shape because you have the idea of constancy the brain has this idea of constancy which means that things certain things remain constant. So, whatever angle you turn something into there is a factor of constancy, which makes the image perceivable or make meaningful.

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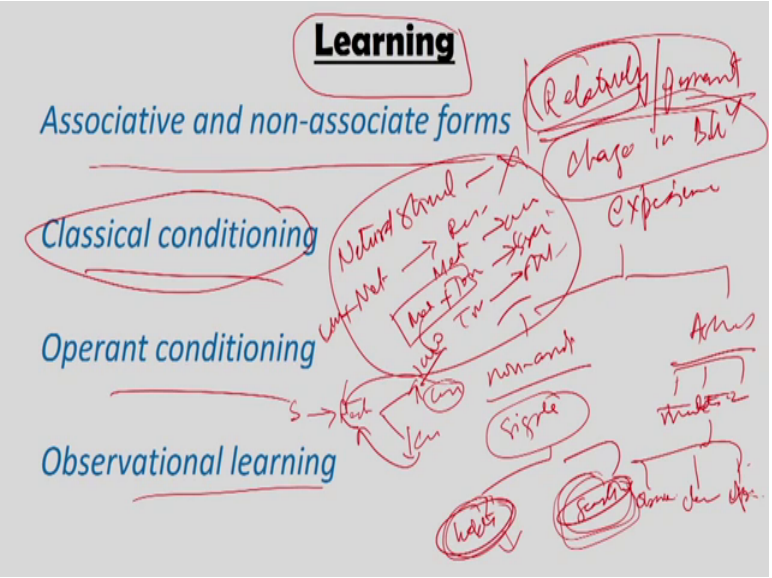

Then we looked at what is learning and how does idea of learning really works um. So, learning has been defined as a relatively permanent change in behaviour which is happening through experience. So, relatively which means that it is related to something. So, learn for learning to occur there has to be some experience previously and in previous to that experience, when you are gathering some new information that is what is called learning. So, it is a relatively then it is called the relative is permanent.

So, it is relatively permanent which means that if you learn something it can also be unlearned for example, there are certain habits that you have learnt while you started living alone after graduating or after passing out of your high school when you are now in your colleges you are there are certain kind habits for example, getting up late and other things bit once you get in your job all these habits will go away.

And so this learning that you have done of becoming late or becoming lazy all those learning will go away and that is why it is called relatively permanent and what is that a relative permanent? Change in behaviour. So, this is a change in behaviour early you are getting up early and studying and now you are not doing it, or whatever a kind of change which is there.

So, learning is being formed in this way or learning is the process to which describes this now this learning has two parts one is called the non-associative form. In the non-associative form generally we look at single stimulus learning and in the associative form what we do is that multiple stimuluses. So, more than one stimulus multiple stimulus combined with each other to form learning or to make you learn certain things. Now single stimulus learning there are two types one is called the habits and the other is called the sensitization. So, we have discussed both these.

And in terms of the associative form we have something called the observation learning we have something called the classical conditioning and we have something called the observational operant learning. Now in the sensitization what happened in the in the habituation what happens is that in a it is a response to in ocular stimulus where your response decreases. So, imagine that your friend is there and so what he does his to make you angry or to make you fearful when you enter your room he blows a horn and so the first time second time third time he can make you a fool, but after that you are expecting that and so you do not become that much afraid now the same stimulus so, that is called the habituation because later on your habituated to that particular sound.

Now, in such a sensitization what happens is the same horn if it is used in a context where if you are going in a in a dark place and the same horn is blown, the amount of fear that you had shown previously it will it will institute up and that is called sensitization. So, the increase in your fear does this behavior of fear are running away that basically in a conducive environment is what is called sensitization.

Now in terms of classical conditioning, operant conditioning and observational learning so, what happens in classical conditioning? In classical conditioning a neutral stimulus a stimulus which does not produce any response, that is paid this neutral stimulus is paired with the unconditional stimulus to give a response. Now what is an unconditional stimulus? Unconditional for in for our purpose meat produces salivation.

So, what I do is, in this meat is added with a tone and if you do that multiple number of times and this salivation is the response. So, what will happen is, after 100 or let us say 1000 pairings, this tone which produce salivation. Now in classical conditioning we have looked at various factors of how this whole process really works, we have looked at the cognitive meaning of it the underlying process of how this expectation leads to this kind of behaviour, the idea about extinction the idea about response recovery and so many other things that we have looked at so, go back to that session and read it.

In operant conditioning what happens is you do a particular stimulus gives a particular kind of a response. Now if a person produces a response and because of this response you get a positive consequence then this behavior will be increased, but if the consequence is negative this behavior is decreased. So, in terms of classical conditioning a reward is given beforehand to produce a response, but in terms of operant conditioning, a response if it leads to a positive consequence the response is learned again or its executed again, but if a response leads to negative consequences, it is not initiated again and that is what is operant conditioning.

So, we look at factors operant conditioning, we look at several other variables related to operant conditioning, we looked at the dynamics of operant conditioning and so on and so far, so, we will have a look at that particular section. And then finally, we looked at observational learning which is the kind of learning in which you see someone a role model and you see that role model doing something and you copy that behavior and by copying that behaviour, you actually tend to get the best response or tend to get satisfied. And so you copy that behavior or you copy peoples behavior which produces a good output or which produces satisfactory output. So, that is called operational learning and that is what we did in learning.

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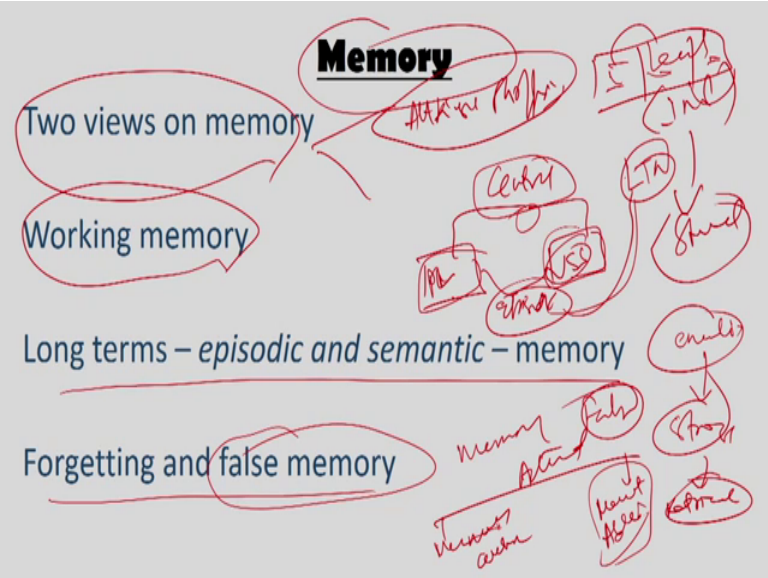

Now, once something has been learnt information's have been learned new information has been gathered, they have to be saved somewhere and that is what is the process of memory. So, in memory we looked at how the information which has been learnt through learning. So, information learnt how they are stored or where they are stored and what kind of information which is stored and the process of memory is a three part process it has something called encoding, which is how information is sent into the human brain then the idea of storage which is how it is stored and the idea of retrieval if of memory, which is how information is retrieved from human memory.

So, there are two views of memory the first view is called the Atkinson and Shiffrin model. Atkinson and Shiffrin model which believes that memory is like a there are different store houses and memory human memory keeps information within the store houses and there are something called active processes which move information from one store house to the other store house.

In comparison to that in a direct opposition to that there is something called the parallel process model of memory or the parallel processing model neural network model of memory, we say that human memory is not about these structures or these processes there are different processes or there different systems which work at the same time in human memory. So, its not about a certain stores or certain processes carrying

information from one store to the another, many processes act at the same time across several stores to produce memory and that is what the neural network model is.

Now, there was a concept of working memory which we have looked at. So, working memory is a newest conceptualization or short term memory, which uses something called (Refer Time: 29:04) model and says that memory is nothing, but the how information moves from one part of memory or one layer of memory to the other layer of memory from short term to long term, is dependent on how much rehearsal has been done how much action has been done on that information.

Now, if you do something called maintenance rehearsal information stays in working memory and it floats away and, but if you do something called elaborate rehearsal information moves from the short term memory to long term memory. Also for the first time working memory gives the conceptualization that different kind of information which is earlier what we believed is all kind of information is encoded it is the same memory structure. So, there is one memory structure in which the acoustic information, the semantic information, the visual information everything goes in the same place.

Now, for the first time what has happened is, working memory gives the conceptualization that there is something called a central executive and the central executive is then connected to something called the phonological loop and the visuospatial sketchpad. So, visual and spatial information move to the visuospatial sketchpad and the acoustic information moves to something called phonological loop and between them like something called the episodic buffer, which integrates information from both these things both this stores and then talks to LTM memory and borrows rule for it for processing information. The central executive is the process which makes all this happen so, that is the conceptualization of the working memory.

Now, we also looked at how this long term memory is divided into two parts, one is called episodic and the other is called semantic. In episodic what kind of information is stored all episode related information all events in your life is stored in episodic memory, and in the semantic memory you have information related to truths, rules, procedures facts all those information are stored in semantic memory. So, it is a good thing to go back to that lecture and have a look at how we looked at.

And then finally, we looked at how information is lost. So, how do you forget and so we looked at the idea of interference and active decay, they lead to forgetting. We looked at also something called false memory. I have already said that memory is never accurate and so the conceptualization and memory construction and memory construction and memory addition these leads to the idea of false memory.

So, memory is never accurate because if similar information is given to you, it and it fits the schema in which your memory is lying what will happen is this information will be taken it is embedded together and you will get a new kind of memory and so memory should never be trusted and the idea that false memory which means that new memories can always be generated. So, memories distortion and memories construction; so, memories can be both distorted and it could new information could be added into it.

So, memories that you have can be distorted in ways by putting new information or more information to it, or memories can be constructed. So, whatever memory you have if you put new information to it a new memory altogether will come later that is called the idea of false memory.

Now, once we have done that, we looked at what is language and thought.

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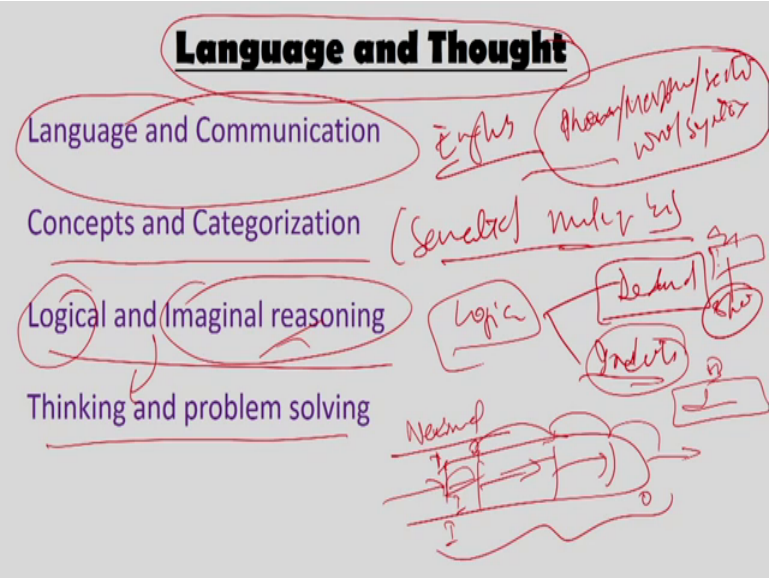

So, once we have new information with us, once we have information stored somewhere, new information stored somewhere, new knowledge stored somewhere this knowledge

has to be communicated between people. So, if I do a particular behavior to particular act and that is rewarding, I should convey this information to other people. So, how do I convey this information? By using something called language.

So, there is a practical difference between language and communication and the difference is that communication is a way of expressing ideas bit, but it is very limited in nature. And in opposition to that in language we have certain rules and so many kind of information many types of information many forms of information can be expressed through language. So, whereas, communication is very respective language on the other end is very progressive.

So, basically all kind of information, all kind of thoughts, all kind of information can be passed on between people. So, we looked at the English language, we looked at the idea of how phonology or phones and the phonemes, the morphemes, the sentence, the word and or the idea of syntax how all this together they form the idea of language. So, we looked at all of these and then how this language really functions and how language comprises of all these parts. So, you should actually go back to that particular lecture and start looking at that.

Then we looked at concepts and categorization we looked at the how the human brain takes this information whatever has been there and they categorize them and they form concept out of it. We looked at how the concept is formed so, the idea of any concept for example, the idea of the apple. So, we looked at how semantic memory or the semantic memory tree concept which was proposed by (Refer Time: 33:43) how that is used for conceptualization and categorization of new information so, that information stays intact and more information can be added to previous stored information.

Then we looked at two kinds of reasoning of once you have information with you and once this information can be communicated and you are able to categorize new information any kind of new information into pre-existing categories into the mind, the idea of reasoning comes in. Reasoning gives you a power of thinking a power of making decisions a power of analysing information.

And so, there are two kinds of reasoning one is called the logical reasoning the other is called the imaginal reasoning. Within the logical reasoning you have something called the deductive reasoning and you have something called the inductive reasoning. Now in

deductive reasoning what happens is a lot of information is given from to you and from that. So, coming from general to specific is what is called deductive reasoning. So, you use certain kind of logic and certain kind of reasoning analogous and based on that from you come from detailed you come from general information to specific information and that is called the deductive reasoning you deduce something.

And inductive reasoning from the specific if you want to go to general; from a specific bit of information if you want to go to generalize this information if you want to predict things if you want to come up with future predictions, what type of reasoning that you use is you use inductive reasoning. And so within that we have discussed all kinds of reasoning paradigms conditional reasonings and all kind of things into it. The if p then q kind of a format and many other kind of formats that we have looked into. So, the idea would be to go back to and actually look at that particular thing.

Now, in relation to this kind of a logic based reasoning, we also use something called imaginal reasoning. Sometimes logic based reasoning does not work so, we have to use an imagination for reasoning. For example, all those questions in which you have to rotate something spatial rotation or you have to imagine something in terms of movements or if you have to imagine moving from one place to another, in those cases we use something called imaginal scanning and imaginal reasoning we do not use logic we use our imagination to come up with reasons, you have to come out with why something has happened.

And lastly we looked at thinking and problem solving, thinking being the process of using reasoning to come up with valid reasons and making decisions out of it and problem solving the process of how a particular problem is solved. So, we have defined what is problem solving, I use the idea of something called Newell's method of how we divide a bigger problem into smaller problems and then try solving the smaller process.

If this is a bigger problem what we do is we use something called the Newell approach in which what we do is, we divide this bigger problem into smaller problems which can be solved and so this is the bigger problem is this is the I the O and this is I 1 O 1 which is the output here which is the final solution here for this smaller problem from this we will solve this problem here from here, here and then we have a final solution for this

problem and so this is kind of a approach of how we solve problems. We discussed how experts and wise solve problems and with we looked at that kind of thing also.

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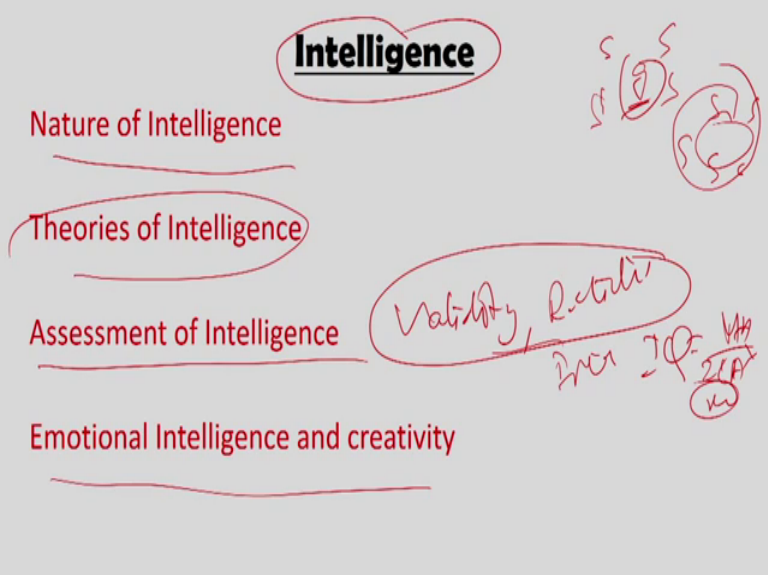

Next we discuss the idea what is intelligence, we looked at the nature of intelligence how intelligence has been defined as a special ability of differentiating between peoples the idea of how whether intelligence is one single factor with a couple of multiple factors, couple of specific factors or whether intelligence is specific factors combined together to give intelligence.

Now the single factor approach says that there is something called a general intelligence, which is present in everyone and based on that you can measure intelligence. The specific factor of intelligence says that intelligence is not measured by one specific one general factor, there are specific factors and everybody has a specific types of intelligence or everybody has is competent or intelligent in one specific domain.

Now, there are theories of intelligence that we discussed. So, we looked at Andersons information processing theory, we looked at the idea of how Steinberg's hierarchy theory works, we looked at Gardner's theory we looked at several other theories of intelligence of how they define what is intelligence and what is a intelligence process. We looked at the idea of validity and the idea of reliability and how this validity and reliability actually help in designing a intelligence test. And we looked at the idea of how I Q which is mental age by chronological age into 100 which defines our intelligence.

Lastly we took a model system which is emotional intelligence how people manage their own emotions and how managing this emotions make them a better person, and how creativity is related to emotional intelligence that is what we focused into the end of this lecture.

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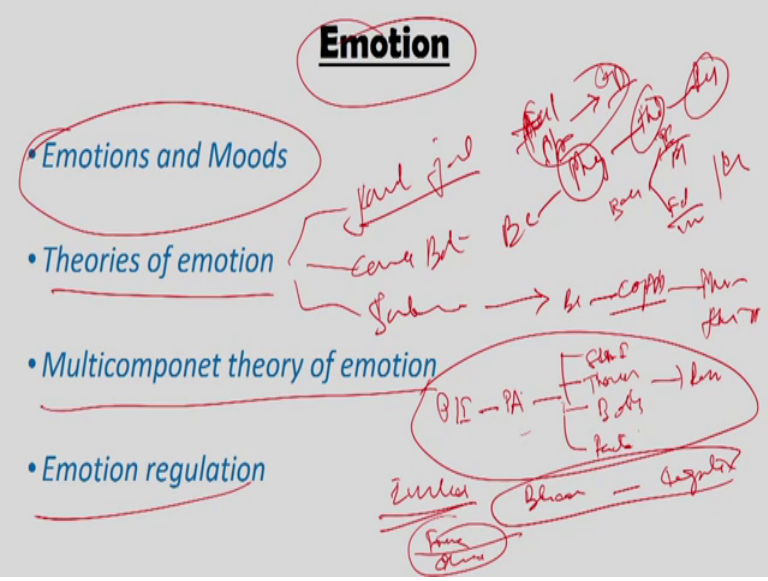

Further we looked at the idea of what is emotions. So, emotions as we discussed a specific responses of humans and in terms of certain changes in stimuli. So, we discussed what is emotion and how what is difference between emotion and mood and there we discussed that emotion is a specific process, and it is relevant to one stimuli and it is it picks in a very specific time frame whereas, mood stays for a longer duration of time and there is no specific stimulus that is related to; so emotions has moods differ in different ways.

Now, we looked at the theories of emotions. So, we looked at something called the James Lange theory, which says that first we feel afraid a physiological arousal happens then we cognitively feel. So, first the physiology comes then the thinking comes and then we run. So, if a bear is here, we first feel afraidness then we think the afraidness and then we run.

Now, we also looked at something called the cannon and bard theory which says that, if a bear is in front of us we feel the fear and physiologically and mentally also we feel fear at the same time and we run. Then we have something called the Schechter and singer

theory, which basically says that we see a bear first we do something called cognitive appraisal. We actually decide whether this bear is of worth fearing or not and based on that then the physiology and then the thinking part comes in and then we run.

Now, we looked at the multiple component theory of emotion, which says that emotion starts with the person interaction environment. So, there is a person interaction environment leading to something called primary appraisal, which leads to something called subjective feelings, which leads to thinking thoughts and of the thought process and thinking in ways related to what the appraisal is and then there is something called bodily reactions, this leads to facial expressions and finally, a response.

So, we looked at these in detail and finally, we looked at emotion regulation once the emotions sets in, how do we disperse how do we get rid of this emotion there is a behavioral way and there is a cognitive way of getting out of this emotion and the process could be both in terms of engagement and dis engagement and engagement. So, we looked at this chart of how to get rid of emotion. So, how to control our own emotions?

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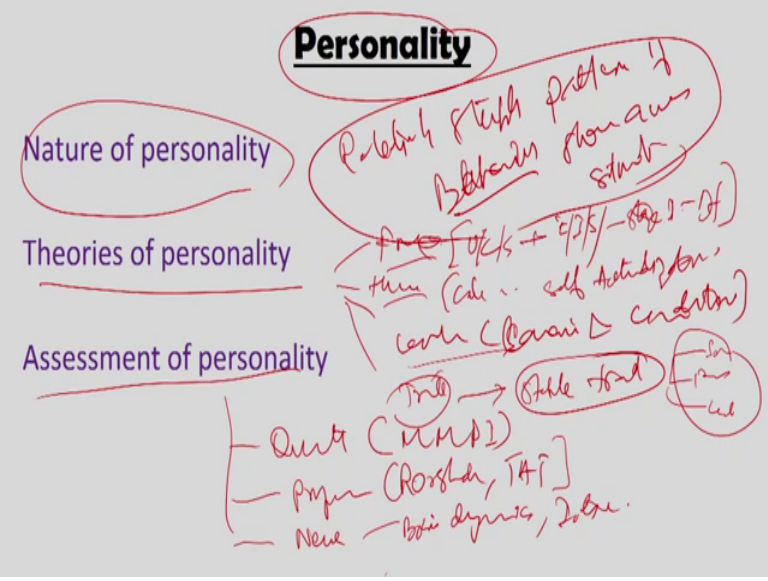

Then finally, we looked at the concept of personality. We describe the nature of personality of what is personality. So, this is relatively stable pattern of behavior that people show across situations, and how this leads to people showing different kind of

acts and how this leads to different kind of processing in people and different kind of behaviors.

Then we saw different theories of personality we looked at the idea of Freud, who describes personality not only as in terms of the unconscious and the conscious and subconscious, but also thinks of personality in terms of the ego the id and the super ego, and also thinks of personality in terms of how the stages of development happened and in terms of defense mechanism or in terms of how managing of the anxiety is taking place.

We also looked at the humanistic theories which is Carl Rogers and others and who believe that it is about self-actualization which leads to personality dynamics we looked at the learning theories which believes that personality is caused by learning and conditioning. So, what you learn and while learning something, if you are rewarded in a certain way you develop that response and that matter of response and that basically changes your personality or changes your pattern of behavior in a certain way and that that affects and finally, that affects a personality.

So, we looked at how learning theories define personality. So, we looked at the Freud theory, we looked at humanistic theory, we looked at learning theory, we also looked at something called a trait theories of personality which describes that personality is dependent on certain stable traits or stable patterns of behavior that people display when they are behaving on and these type of traits are called there are certain type of traits which are called secondary traits, the primary traits and then we have something called the central traits. So, this is how traits are basically a pattern of behavior that people have. So, go back to that lecture and you will be understanding what I am talking about.

And then finally, we looked at how personality assess. So, we looked at the questionnaire method where we looked at the MMPI as a personality inventory, we looked at something called the projective techniques where we discussed in detail Rorschach technique, we discussed in detail the TAT technique and several other techniques of measuring personality using ambiguous figures or ambiguous surfaces which can generate meaning. And finally, we looked at the idea of how the newer methods of personality are used for example, brain dynamics and interviews are used for measuring personalities.

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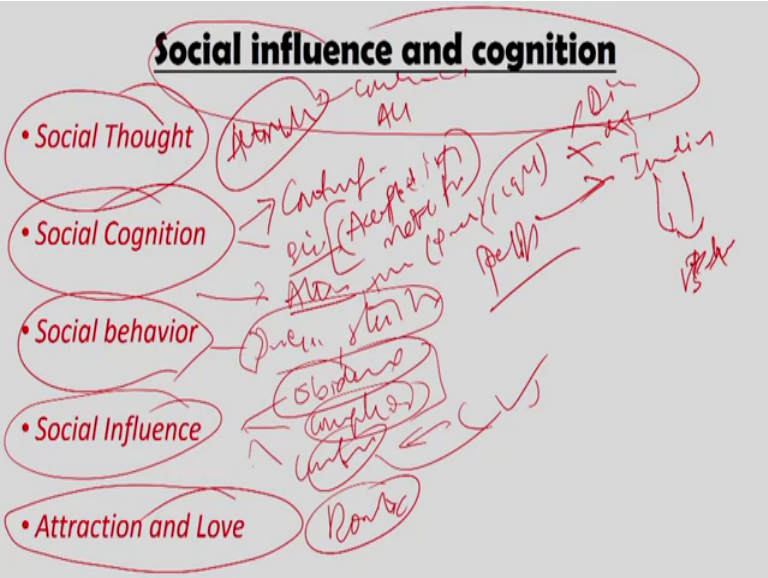

Lastly we had the section on social influence and social cognition and up till now what we are done is, we have looked at how the individual himself causes his behavior, but people's behavior is also dependent on people outside of him and so this chapter was necessary to explain how other people influence our behavior. So, we looked at what is social thought we looked at something called attributions how we give meaning to other people's behavior and how that leads to certain kind of biases and a change in behavior we looked at social cognition, which is how people perceive information about other people how people perceive what other people do and think.

So, here we looked at something called correspondence biases so, and so forth we looked at what is attribution and here we looked at things like counterfactual thinking. One such thing has already been occurred, how we think in terms of what should have occurred and what should not have occurred, we looked at in terms of certain other biases which are there. For example, accepting in terms of others accepting or finding information which match peoples personality and that way this kind of biases can result from social cognition.

We looked at the idea of social behavior of how we behave in certain situations in social cognition, we also looked at something called attitudes. Attitude is how people think about certain situations. So, we looked at the concept of what an attitude is, we looked at

the concept of how this attitude change happens in terms of persuasions and cognitive dissonance using the direct and the indirect method of changing attitudes.

We looked at social behaviors in there we looked at what are called prejudice and how does prejudice define peoples behavior and we looked at the concept of stereotype for stereotype types also define our behavior and how the stereotypes and prejudice can be listened. Last we looked at a something called social influences we looked at the idea of what is called obedience which is basically obeying a certain authority, the idea of compliance how we comply two peoples request and people situation and that kind of a so, compliance obedience and conformity.

Conformity is when a number of group of people are basically supporting a reason how we confirm to them or how we let go of our thought process and agree to other people remember (Refer Time: 45:41) experiment where we actually agreed to other people and we complied to or we confirmed to their decision.

And lastly we looked at what is attraction and love we looked at the idea of romantic love and how this romantic love really functions and how this romantic love and attraction defines our behavior. So, all in all in this lecture what we have done is, we have looked at several processes. We started out by defining what is behavior right how do human beings behave? So, till the last lecture just before the last lecture we looked at a number of individual factors which affect human behavior starting from the idea or sensation to how we perceive things to how emotions can change our behavior the way we behave, to the idea of how personality can be a major factor in changing people's behavior to how your intelligence can be changing your behavior also what processes that you used in making meaning of external stimuli can change your behavior.

What you learn can change your behavior and how learning can change your behaviour, how storing something in the way you store something or what factors can actually make what information you store and that intern can change your behavior. So, we looked at those kind of things also how we communicate information. So, if I if a information is miscommunicated if the wrong information is communicated a wrong type of behavior can be evaluated if you categorize something in the wrong manner a wrong type a behavior could be generated and lot of factors which can actually look at how behavior changes happen or how behavior is studied.

In the last chapter we looked at how other people or our interpretations of other people can change our old behaviour. For example, how we comply to peoples request how we are obedient to other peoples request, how we process information from other people, how attribution which is giving meaning to other peoples acts changes our behavior and so on and so forth. So, in all the lecture the course was designed into looking at as I promised to you, the course was designed into looking at how we study human behavior how we study peoples actions and what can be interpreting to it. And what I have done to this course is given you a number of tools a number of reasons a number of processes through which you can see peoples behavior.

I have also given you large number of factors, which can be part of peoples behavior and how you can spot these factors. For example, if somebody acts in a very weird way now and if you looking at his face you can think that he is emotional right now he is afraid right now that is why he is acting. So, you are interpretation of his behavior will be different. If somebody is angry your response towards him will be different by looking at how we are defined how emotions can affect behaviour. Similarly what somebody says to you or how you see things the or how you process information from the social world or how you process information from the external world, all this information will also define human behavior.

With this course you will be able to not only handle your own perceptions about the people, but you will also think about those reasons. Now you can you can appreciate why people are different why people behave differently. It is not just the process of simple stimulus response it is people differ because people see things differently. The same object as we saw in the sector of perception in terms of illusion the same object can be perceived as different things there are something called reversible figures.

Now, in reversible figures two people will see two different things now it is because they are seeing different things and why do they see different things? They are seeing different things because the eyes, their eyes are actually forming two different views the background and foreground has been process in different ways similarly your past experiences can actually bias your way of thinking. Now not only can your internal factors of who you are in what state you are what kind of personality you are what kind of thinking you require what kind of intelligence you are, all those things will define

your behavior and other people behavior it is other people also in presence of you for example, the idea of social facilitation.

Now, what is social facilitation? Social facilitation is a concept in psychology which basically says that when you compete with other people you tend to behave differently you tend to behave better, but when you are working alone you tend to behave poorer. So, when you when you sit with more people your progress will improve and this is called social facilitation.

Now these people may not be doing the same work that you work, but just by the presence of other people whom you think are evaluating you, you work in a different way and so that way your behavior changes. So, not only the internal factors like personality intelligence and perception memory were change your behaviour, it is also other people around you that can change your behavior.

And so, now, you would be able to appreciate the idea of how these things these factors that we have looked at in this particular course how they can shape peoples behavior. So, by the end of this course I am pretty sure that you would be able to appreciate how may complex is human behaviour, how complex is human actions and what kind of consideration should be given before giving reasons to people's behavior on interpreting other people and by the knowledge that you have gained by this course, I am pretty sure you would have a better understanding of people's behaviour, of peoples action and this knowledge will also help you shape your own actions towards them which will lead to far better benefits which lead to far better situations.

Now, there are some portions in this particular lecture which are also covered in my other course on cognitive psychology introduction to cognitive psychology. For example, the chapter on sensation, perception, learning, memory, thinking and problem solving all these have been covered in detail in the chapter on cognitive psychology or in the course on introduction to cognitive psychology. So, if you are following that course as well because both courses are done are parallel in this time. If you are following that course as well you will get a better idea of what I am talking about you will get in detail you understand in detail, the processes that I have not covered in detail in this course because that was not required, but if you want to study more if you want to study further of how this process really work.

For example how does language really work, and if you want to cover that two or three lectures are there on introduction to cognitive psychology with just that language.; we just look at how language helps you in communication or in passing ideas information storage and so on and so forth there are three or four chapters on memory which look at all the distinctions on memory which are there. So, my suggestion to you would be you start following that course as well and that will help you a lot.

So, at the end before we wrap up this course or this last lecture on this course, what I believe from my side is that this course would have actually helped you in understanding human behavior and not only understanding behavior; but also shaping your own responses or shaping your own acts towards other people and giving people due consideration of why they do, what they do and how you should act in front of them. So, all the very best for your examinations and I hope very good luck to you for examinations.

Thank you and goodbye.