

The Nature of Psychology
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Lecture – 01
Introduction to the Science of Human Behavior - I

Hello friends, welcome back to this new lecture series of MOOCs. The present course is called Human Behaviour and in this course what we are going to focus is on what is human behaviour. How do we study human behaviour and what is the need of studying human behaviour. The core to this course is studying human beings and the most difficult thing that had happened since the inception of time is studying humans. And why this is difficult is because human beings do not follow predictive paths.

Now just like chemical sciences or physical sciences where atoms, molecules, planets and other objects they follow certain laws and can be studied; human beings cannot be studied following certain universal laws; the reason being that human beings want to study human beings and that is one of the basic problems. And so science of studying human being is very interesting. One of the most primitive questions or primitive powers that humans wanted was to control; to control other humans. And this is very interesting because imagine a situation where you got the chance or you got the abilities to control other people.

Now, if that is true or that power becomes available to you we could do wonders, we could control other peoples thought, we could get into other peoples mind. We could predict what other people will do and it would be nicer world, but the problem is we do not have that power. So, the best possible option which is quite near to controlling other people is studying human behaviour which is basically a probabilistic science. So, what we could do is observe; what certain people do in certain situations. And based on that make predictions of how someone would react at certain period of time and that friends is a science of psychology and that is what this course is all about.

So, in this particular course what we are going to do is study those methods, those problems, those techniques, which actually help us understand ourselves and that is a very great power. The power to understand human beings to understand why human beings do what they do, why they do, when they do and what are the outcomes of

whatever a person does. So, this is at the core of this particular class or this particular lecture on human behaviour. Now, since this is the very first class what I am going to do is I am going to introduce the field of psychology or field of human behaviour to you.

And in this particular lecture I am going to tell you a little bit about what entails the study of human behaviour. How do we start, what are the methods of doing it. A little bit about the history of how science of psychology or science of human behaviour actually came through and a little bit about the problems that we can study with this science. Now the problems that I am going to discuss here these are not exclusive there are a number of problems beside the ones that I am going to name here, but these are just representative problems that the science of psychology can actually study.

So, let us quickly dwell in to get into this course of psychology and study the nature of the in the first lecture study the nature of psychology. So, before we begin this lecture let me give you a small snippet, a small story and tell you what psychology can do. Now in the early 20th 21st century or 20th century rather in the United States students were not able to focus or school students were not able to focus on their course, they are not able to do read. And so the community decided that they are going to help this children, this younger adults into studying.

So, what can the community do and this is the first or I would say a very good application of psychology. So, famous pizza chain came up to school teachers offering them help saying that the students who perform very good in their exams they would be given tokens by the teachers. And these tokens can then be later on exchanged for discounts and pizzas. And pizzas is something that people like eating, it is rewarding, it is very good. And so this kind of an paradigm was developed, this kind of an offer was developed. And so what really happened is that students started studying and performing well on their exams and exchanging these for pizzas or for discounts on pizzas on pizza chains. This could have been good this thing was very good because, children started studying more and more.

Now, with the passage of time after a period of time these companies are profit companies. And, so they decided that they would stop this offer of offering pizzas. And so as soon as this pizza offers were stopped the performance of children, the ability of children to read they went down. So, children started performing more poorly and so this

was one example to show that an external stimulus. And an external reinforcement or reward can actually make people do better on certain tasks.

And so what happened is the very idea that they are going to get something good, they are going to get something deserving, they are going to get something that they want which is the pizza made them work harder on their test and earn good marks. Now there is an extension of this particular approach. And I will discuss this extension in a minute, but this is a very good example to show what psychology can do. So, people when they were or children when on their own when not able to perform or when not willing to perform good on the exams were pushed or were associated using a theory of learning with a deserving reward.

And this deserving reward had the capacity to make people perform better. And also the fact that after certain period of time when the reward was taken back this children perform more poorly. Non extension of this project was done where two group of children were taken: one group and both this group of children were actually given some tasks some puzzling tasks and some mathematical puzzles to play with. Now, both group of children actually started playing with these puzzles and tasks. After a certain period of time one group of children were actually given a reward for the playing.

And the other group of children were actually not given a reward at all, no reward was given and they start kept on playing on their own. Certain period of time passed and after that the reward was withdrawn. It was found out that the children who were actually given a reward to perform better, to play with certain tasks or to get engaged in certain mathematical puzzles and tasks. Their performance decreased sharply, but the other hand the children were not given any reward and they played on the task on their own were performing in the optimal level. There was no deviation, there was no change in their performance.

After some time passed the rewards were again given back to these children. And it was found out that the children who were not given at any reward to start with, when later given a reward they performed at a very very high level than the children who were actually given a reward then blocked the reward and then the reward was given. What could be the reason? The reason is that the children who were actually not given a reward to start with started enjoying the task, started enjoying playing with the task and they

were not doing the behaviour or they were not playing with the task just for the pizza or just for the reward that was given to them; they were playing it because they liked it.

And so when a reward was added to it the performance increased. What does this mean? Does this mean that reward actually increases performance and an optimal question here or a question here is that marks that people get are actually also rewards. And so should people be given marks because if you give marks then people perform better. So, should people be given higher marks for performing better? Obvious answer is no, these marks that people get are not actually reward; because rewards that you get are fixed. And so the marks that you get is not actually a part is a kind of a reward or not and not actually a reinforcing reward, the reason being that the marks that you get is the contingent upon your performance. The better you do, the better the marks.

So, marks is not something which is given to you or given to people in a uniform manner. On one hand the pizza which was given to children was in uniform manner. So, let us say one slice was given to everyone, but in terms of marks that we get and on exams it is not that similar marks are given to everyone. The marks are contingent or dependent on how you perform. And so marks are not a part of a reward, it is actually a manifestation is actually a measure of your performance. And so that is why they are not reward contingent.

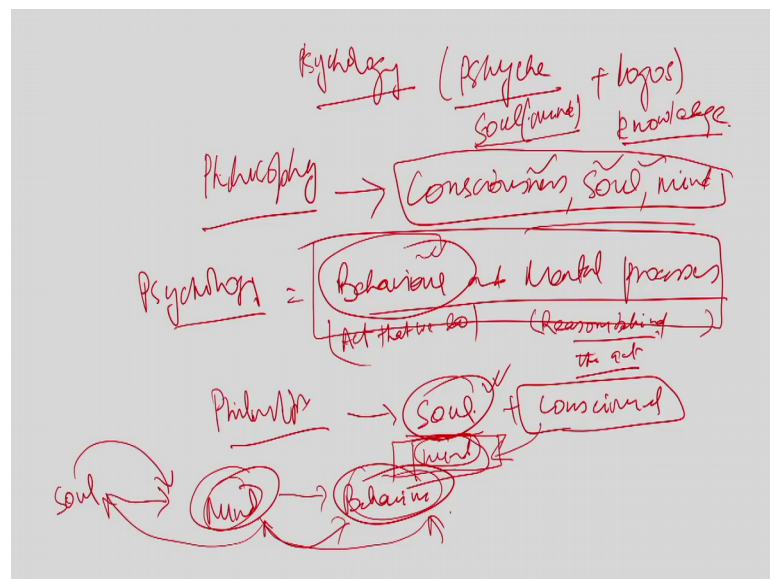
So, summing it up this is what psychology can do this is the power of psychology; psychology can make or the study of psychology or study of human behaviour through the method of psychology can actually make you perform an act which you never wanted to perform by associating this act with something that you were never liking, with something that you never wanted to like. So, this is all about psychology or the study of human behaviour.

Now, generally speaking then what is psychology and where does it come from. Let us get a idea of that; now this course on human behaviour is centered on the study of psychology. And so what will be doing here is introducing you to the concepts of what is psychology, what does psychology do and what are the methods of doing it. And what are the areas or what are the fields of psychology and what are the sub problems of psychology.

So, that is what we will be doing and since this is the first lecture I will be just telling you what is psychology, where did it come from, what are its history. And what how we do psychology, what are the various methods of doing psychology and so on and so forth. And, in the upcoming lectures we will take up several other associated fields or associated events in psychology like studying memory, studying perception, studying sensation because, all of these are psychological processes.

So, what we will be doing in the upcoming lectures is studying these processes. So, we will be studying perception, sensation. We will be studying consciousness, we will be studying memory, learning, social influences. So, how people behave in society, how to study people in a social group and also what is personality, what is intelligence; all these will combine to together to this course of psychology. So, let us start with first looking at what is psychology.

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So, the definition of psychology is like this the word psychology comes from two words which is psyche which is the soul or in some terms it is called the mind plus logos which is the knowledge. So, psychology is the study of or the knowledge about the soul. And the question is where did it start from, where did the whole idea of psychology start from. Obviously, we have established that it is a science, psychology is a science. Why it is a science, because psychology does everything that the science does.

What does the science do? Earlier believes or psychology or earlier proponents of psychology believe that psychology is not a science. But the modern study of psychology says it is a science. Now psychology started from philosophy and in philosophy the main questions in the 4th, 5th, 6th century was about consciousness. About the idea of soul, about the idea of mind and these were the questions that philosophers were looking at. But what they were doing was not scientific, the reason being that they were proposing theories. So, people like Aristotle, Socrates and other people are the philosophers they were proposing theories.

Some kind of proposing knowledge banks, but then they were not able to scientifically describe what it was all about. And so from philosophy a branch broke in, a science broke in or a field broke in which was called psychology. And that was that branch tried to study scientifically these problems. So, we will come back to that. So, basically what is psychology? Psychology is the study of mental processes and behaviour. The definition of psychology says that psychology is basically a study of behaviour and mental processes. What is behaviour?

Behavior is any act that we do, let us try and explain what is behaviour. So, somebody is angry at you comes to you and slaps you the reaction to this is your behaviour. How do you react to that is what is called behaviour. And this behaviour is influenced by so many things; it could be experience influenced by your past experiences, it could be influenced by your judging of the situation. For example, if it is a hefty person, if it is person the person who slaps you is big, tall, bigger than you might not think of hitting him back. But if he is smaller than you can manage him you will hit him back.

So, this is basically dependent on perception. This behaviour of hitting back can also be explained by certain personality types. For example certain people are aggressive and so if you hit them they will hit you back, certain people are not aggressive or cool people. So, they will think back and then they will react later on. So, this act of hitting back the behaviour is influenced by so many things, it is also influenced by cognitive processes. For example, how do you perceive the situation to be. Maybe your boss hits you do not want to hit him back because you think of losing the job.

But, on the other hand if your personality is different you might hit him back and not think about losing the job. And so this behaviour or the act of hitting him back is

influenced by so many things and what we will do in this course is study all these perspectives, focus on all these perspectives. So, psychology is basically the study of behaviour, how we act and the mental processes which is the reason behind the act.

What do you think made you act in that way. And so psychology is not just studying behaviour simply what you do or simply how you act. But also the study of mental processes, also the thinking that went into it, the kind of imagination that you had, the kind of problem solving factors or thought processes that emerged in you before doing an act. Now, this is what the scientific study of psychology is and it is derived from philosophy in certain ways.

Now, what philosophers are actually; well philosophers were actually focusing on is the study of soul. But, the problem is soul cannot be studied. The question that philosophers had was studying consciousness; and consciousness cannot be studied scientifically. So, what psychology did was developed methods of studying soul and consciousness. Now what is soul? The idea about soul was closely linked to the idea about mind, because soul cannot manifest itself, soul cannot show itself. And so the most clearest act.

So, how do I study soul for studying soul I have to observe it and there is no way to observe the soul. So, the manifestation or the act of the soul or whatever the soul wanted was actually mirrored on to something called the mind. And what philosophers wanted to do is to study the soul was to study the mind. What psychology did was to study what is this mind, also consciousness was related to this mind. Consciousness of which is basically how aware you are of your external features, of your external environment is what is consciousness.

And the study of scientific study of mind and consciousness is what psychology did. So, what psychology did was what it started studying mind, but then again the problem is how do I study mind because, there is nothing called the mind right. So, soul the study of soul is soul manifests itself or soul projects itself onto the mind and the doing of the mind is what the doing of the soul is, but as you all know there is no way to study the mind. So, how do we study the mind? The study of the mind or study of what the mind does can only be done in terms of behaviour.

Let us take an example I want to eat something my mind says to eat something now how do I know that this is what the mind was wants. So, or the only way to understand what

the mind wants is to actually watch the behaviour. So, if my mind says I want to eat something my behaviour will describe it. So, me going to a food outlet, buying something and eating is actually a manifestation of the mind because, the mind wants me to eat something and the soul wants the mind, soul wants the mind that it is hungry. And mind tells the body to do something or to act accordingly and the body does a behaviour in compliance with the mind.

So, so study the mind we have to study the behaviour and that is what psychology did psychology studied behaviour which believed is a manifestation of the mind. And this mind manifestation or this basically projection was of the soul. So, the studying of the soul or the mind in terms of behaviour is what is the achievement of psychology. So, psychology started studying behaviour. So, what is psychology again the definition of psychology is it is the study of behaviour and mental processes. So, before we go further into it let us quickly jump into some brief definitions of what psychology is and what it can do and what it cannot do.

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The Nature of Psychology

- Psychology
 - Can be defined as the scientific study of behavior and mental processes (Thinking, Problem Solving, Memory, Attention, etc.)
- Psychology is very broad in its scope
 - Topics include face recognition, social judgements, memory, obesity, violence and many more
- Psychologists may disagree
 - Research is conducted to increase our knowledge about how people think and behave, and different studies may find different things

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- Science
- Broad
- Interdisciplinary
- Thought
- Ability

So, nature of psychology; as I said the definition of psychology that I have given to you psychology is a study of psyche; which is the soul or which is the manifestation of soul in terms of the mind and the knowledge of it that is a very old definition. The most recent definition or the most accurate definition of what psychology is; is that psychology is the scientific study of behaviour and mental processes that I have not said to you. Now, the

question is what is scientific study as I have said philosophers were theorizing and telling a lot of things about what psychology is or what the soul is, what the idea of mind is what the idea of consciousness is and so on and so forth.

But none of them were scientific; so, how do I describe a science to be or a body of knowledge to be scientific and non scientific. And for that you have to know what is a science. And the basic understanding of science is a four part system. Most of us would have understood or would have learned this very early on in a class 8, 9 syllabus what is science is any body of knowledge can be called a science when it has observation. When you can observe certain phenomena; so, certain acts happen and you can observe it not only observe you can replicate this phenomena.

So, if you observe a phenomena it should replicate a phenomena if you can verify of phenomena. And you can falsify a phenomena these four are the gold standards of a science. So, let us say that each time a dog barks I feel afraid, how do I know that this is a scientific study. Or what is the most scientific way of explaining this can I observe you when a dog, can I observe your fear when a dog barks? If I can do that then what I am doing is a scientific study can I replicate it. Replicate in the sense that in natural setting of course, in a dog barks you will feel afraid.

But can if I can take you to a lab and make you hear a sound of a dog where the dog is not present. And if I can get the same fear out of you then it is called replication. And so the knowledge that I am gathering is scientific in nature. Can I verify it which basically means that each time a dog barks or if I use some other animal which is more equivalent to a dog and you get into a freeze which is basically a reaction of fear or demonstration of fear. Then I am verifying it and falsify if I can use this data and come up with another theory. And falsify the results that has come up then it is a science.

So, what is science is basically using these four methods if a body of science or if a body of knowledge can be observed can replicated can be verified and falsified then it is a scientific study and so psychology. What it does, why it is science is because, it can do all these things whenever something happens whenever event happens whenever somebody acts in a certain way. And if we can observe that not only observe we can replicate that behaviour we can make this behaviour again and again. Or can we be sure

that the same behaviour will happen if same situations appear then this is called replication.

We can verify that in other situations also the person acts in the same way. And if I can falsify what we have proved earlier then it is a science and that is why psychology can be studied a science because, it actually comprises of these four observations or these four laws. So, psychology then is actually scientific study of people act and what are mental processes, what are mental processes? Mental processes are those mental events which take place in your mind. Or for our purpose we will say the brain things like memory perception thinking decision making all these are mental processes these are covert processes.

In the sense that they are not visible to you, but they happen in your head and these processes actually make you add a take a take a decision and so these are called mental process. So, mental processes are things like thinking problem solving memory attention etcetera. Decision making and all these things are mental process. Now, psychology itself is very broad in its scope as I said it starts with management on one side and neuropsychology another side. So, there are various fields of it or there is a scope of psychology is very broad. And so some of the topics which I have here as I said I will tell you what it can do is saw the topics that I have included for you which can be studied in psychology is for example, face recognition.

Now very specific area of the brain which we called the fusiform gyrus actually helps you in recognizing faces. And so damage to this area of fusiform gyrus or the FFA actually makes you not recognize famous faces or any face for that matter and this is called prosopagnosia. This term of not recognizing faces is called prosopagnosia face aphasia. Now, psychology goes ahead and tell you why this face recognition is not possible. And there has been cases for it there have been times people have been studied where they have damage to this area.

And the damage to this area make them not study or make them not understand people or make them not recognize people at all. This has been studied by several people and one queer case or one curious case exciting case that has been developed in face recognition was of a person who was actually sitting in a restaurant. And he complained the waiter that somebody was looking at him. The waiter pointed very quietly and gently to him

saying that sir it is a mirror this is actually looking at you and look at the broad scope of it look at the problem that is happening here. The person cannot recognize himself a very famous book written by a very famous author neuropsychologist.

Oliver Sacks is the person, the man who took his wife for a hat where they have demonstrated how this prosopagnosia superior which is the damage to the fusiform area of the brain actually not let us you recognize any faces other than that you can recognize. And anything and everything and so one dimension of psychology or one good demonstration of psychology is a study of face recognition. The other could be the other area or the other interesting problem that can be studied in psychology is the idea of social judgments.

Now, what does this social judgment mean let us say you are standing in a queue. Now you are saying a supermarket standing in very big queue and what you observe is that there is a lady who is taking some supplies grocery supplies. And so what happens if somebody appears suddenly in front of this lady and says that I want to collect some charity the lady gives some money to charity. What do you think is? The lady altruistic is the lady generous. Now most people will actually tell that this lady is generous and she is very good at giving things or she is generous and she likes to help people. But is that true is it not true that she is doing it because other people are in front of her. And so other people are present in front of her and that is the reason why she is generous this basically.

And so it if we study this lady at some point of other time we may not see you see herself as generous. And it is because the other people are there who are evaluating her at that point of time. And she does not want to look non generous non empathetic she gives some money to this charity. But given the fact that nobody is there in somebody else and this person observes maybe this person is not generous. So, how did we decide that this person is generous or this old lady is generous the idea that we while interpreting other behaviour, other people's behaviour hold responsible their personality or their trait to be the reason for the behaviour is called the fundamental attribution error.

And so, social judgments actually are a very good example of study of psychology. So, when we are looking at other people's behaviour we hold that their personality or that their core or that their traits are responsible for whatever we have been doing this is

called a fundamental attribution error. And so the study of fundamental attribution error is basically a subfield of psychology and this can be studied. But there is that there is a deviance the deviance is when we study other people we believe that the core personality is responsible. But when we are studying our own behaviour we hold the situation responsible.

So, let us say two people sit in an exam you. And your friend your friend failed. What is the reason, why he failed? You believe that he was bad, he was poor, he was not working and that is called a fundamental attribution error because, we put more weight on to his personality type. You sit in an exam you fail what is the reason most people describe this as the test was hard the situation was bad the room was all warm and situation was not good the environment was not good disturbance was there noise was there and so many other reasons you never hold yourself responsible. And so this basic act of holding environment responsible for your behaviour and the person this trait or personally responsible for his act is called the fundamental attribution error.

And this is a good way of studying or a good example of what psychology can do memory study of memory. For example, there is there is there is type of disorder in memory where people lose the short term memory in those cases what really happen is people are not able to recover recognize anyone. So, I am talking to someone and people who have lost a certain area of the brain which is called a middle temporal lobe. They are not able to recognize, are not in recognize they are not able to form short term memories.

So, think of a person who is talking to you and within very 5 minutes he goes and ask who are you. And so that kind of thing or how things are stored in memory how do we store factual information things like; mathematical rules, things like; where is America and that kind of a geographical rule or geographical knowledge. And how do we store episodes for example, relating to your birthday, relating to what happened on some other day or some other event. How do we store all this that can also fall into the purview of psychology studying obesity studying the reason of obesity.

Now a lot of people in this world are obese and that is great problem. So, most people who are obese studying the reason behind obesity psychology can help you do that. So, why do people over eat? One reason is that some people and psychology predicts that some people who have been deprived eating at some point of time in the childhood

actually overeat. And some one other reason is that depression makes you eat more and more and so that is another a field that can be that is another problem that can be studied with psychology.

Violence, why do people do violence? Why do people turn up to be aggressive? And one reason that a psychology has provided is that people who resort to violence actually think that they get reward with it. And so here also very simple experiment was done with two group of children. One group of children were actually shown a violent film and the other group of children were not shown a violent film. And later on both the group children were exposed to something called a Bobo doll which is basically a harmless doll. And the people who saw violence or children who saw violent films reacted violently to the doll. Whereas, children who were not seen a violent and film they reacted very normally to the doll. Now it is believed that these films actually induce violence.

Now, there are two theories to it one theory says that this movie actually makes children realize that when the hero does violence he gets rewarded and. So, they learn this and they do violence to the Bobo doll. But the other group of children actually never saw that they anybody got rewarded because of violence. And so they did not follow it and so psychology gives an answer. But there is another approach it basically says that when children do violence they actually let out the cathartic feelings. And because of that they should feel good, but then there are oppositions and there are there is a debate which is going on we will not get into debate.

But we can also study the reason behind violence and there are many other problems that can be studied through psychology as I said the scope of psychology is right from studying management to the other end where we can study. What is neuro psychology or studying the brain? Now another interesting thing is that psychology space must decrease disagree. So, research is conducted to increase our knowledge about how people think and behave and different studies may have different things. Now, one of the good things about psychology why it is scientific is because of this reason. Because what psychologies do is not only study they design experiments to kind to understand the psychological process behind any act.

And not only that they bring up theories with that and then later on they do different kind of studies which sometimes negate each other or sometimes add on to each other. And

that is why psychology is the nature of psychology is scientific. Nature of psychology is scientific because we can not only observe replicate and verify we can also falsify. So this is the idea about falsify. So, different experiments are done to look at how people behave and sometimes they add on to it or sometimes they negate and that increases the knowledge of why somebody does something.

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The Historical Origins of Psychology

- The roots of psychology date back to 4th & 5th centuries BC and the great philosophers of ancient Greece
- Nature-nurture debate
 - One of the earliest debates focused on whether human capabilities are inborn (nature) or acquired through experience (nurture).
 - Most psychologists these days take an integrated approach and look at how nature and nurture combine to shape human psychology

Now, little bit of history. Now the roots of psychology date back from 4th and 5th 6th century BC and from the great philosophy of the ancient Greece. Now, as I have discussed before these philosophers be it Socrates, Aristotle or any other philosopher that matter they were discussing psychology as or the they thought of psychology as a study of consciousness study of soul study of mind and so on and so forth. And so their idea was studying these things right. Now these people most of these people believed that the behaviour of people the way people do what they do how they do is governed by this consciousness or the idea about the mind.

And how the mind plays is structure and so on. So, many other philosophical things not since this is not a class of philosophy we will not go into the details of those. But if you are interested there are several books out there which will talk about the philosophical origins. So, what we will stick to here is the basic premises of scientific psychology. So, what happened is that these philosophers were actually looking at the philosophical questions of what is the nature of self? What is the nature of how anxiety is developed?

What is the idea about consciousness and so on and so forth? And what psychology did it take to solve all these philosophical problems and started doing research or started studying these problems in a more scientific way.

And one of the most famous debates about psychology is nurture nature what is this debate about. There is a question in psychology which says that whatever behaviour we do whether it comes from nurture or from nature. What does it mean? It means that the behaviour that we do any act that we do any event we respond to whatever the way of response our personalities our self our memories our attention process perception all these are innate in nature. Innate in the sense that it is brought down from father to son kind of a thing; so, it is passed on from father to son kind of a thing. And it is believed that our personalities our self our behaviours all are hardwired into the brain. So, the nature debate basically believes that most of the human capabilities of doing mathematics singing or any other capability for that matter of the way you are the personality the self is basically nature dependent.

Now, there are two groups of philosophers who are actually working with it. Now René Descartes was one of those people who actually believed that most of the human capabilities that humans have. Or, most of the human acts that humans have most of the features that humans have are brought down from nature which basically means that it is passed on from your father to a grandfather and through genes or through some way the nature passes these things to you. So, we are born with certain capabilities and we are born and that is why Mozart was born a good musician, a Freud was born as a good psychotherapist.

In opposition to that there is another group of philosophers which is called the nurturer. The nurture: the nurturers group of people who believe that experiences into the world actually make you develop any capability or any human capability for that matter. So, whereas, René Descartes believes that your the capabilities that humans have for example, the cells the personalities the way of thinking the way of reacting are all formed from nature they are born with it. Another group of philosophers led by John Locke believed that the mind at the time of being born is a tabula rasa what does it really mean it means that the mind is gone blank it has nothing on it.

And so as we progress as we move into this world our experiences make us develop capabilities. The way we are brought forward in this world the way we are brought up in this world the way we interact with this world actually shape our behaviour actually shape the self we are would actually make who we are develop our abilities and so on and so forth take an good example. So, was Mozart's capacity because Mozart actually composes first opera which was which was a wonder and he did that at 6 years of age. So, basically where did Mozart learn all this thing? Was it nature or nurture? So, nature people will believe that Mozart actually got this from nature; which basically means that he was born with these capabilities.

And nurture would say that Mozart was brought up in a situation or brought up in an environment where he actually heard music a lot. When since when Mozart was born of course, his father and mother were trained musicians and he was always around people who actually develop music. So, no doubt that he had intelligence, but this capability of playing music was not inborn. And what happened is that the environment in which he was brought up that trained him into bringing the best music into the world. So, nature people believe that interaction with the environment as we are born, we learn, we experience things and we develop our capabilities from experiences.

Whereas, the nature people believe that everything is fed to us or is passed on to us from nature the way we are born. And that is one of the biggest debate which is which is out there. And in psychology, but now a days we have what we have done is we have married them together these two features and more psychologies these days take an integrated approach and look at how nature and nurture they combine to shape human psychology. So, human psychology is not favour onto either nature or nurture.

But then what really happens is that what today's psychologies is looking at what part does nature has what part does your genes have to play. In what you are and what part does your experiences have to play. So, we have experience on one end and you are in one capabilities or your genes on the other hand they combined together to form who you are and that is what the new psychologists or the recent psychologists are actually looking at. And, so that is historical way or the historical origin of psychology.

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The Historical Origins of Psychology

- Scientific psychology
 - The idea that the **mind and behavior** could be the subject of scientific study developed in the late 19th Century
- Early “schools” of psychology included:
 - **Structuralism**: analysis of **mental structures** *here*
 - **Functionalism**: study of **mental adaptation** *Primitis consciousness*
 - **Behaviorism**: **thoughts** cannot be observed, only **actions** *thought*
 - **Gestalt Psychology**: **experience shapes perception**
 - **Psychoanalysis**: the **unconscious shapes the conscious** *mental process*

So, one of the greatest debate was about nature nurture the other debate was about psychology is a scientific science as I said psychology was developed in the scientific science. So, what is the science about it? Now the idea that the mind and behaviour could be the subject of scientific study developed in the 19th century. In the 18th century it was all about consciousnesses or it was all about studying soul and so on and so forth. But there is no way to study the soul there was no way to study what the soul was doing. And so the idea about studying the mind and behaviour or mind as a projection of the soul and the manifestation of the mind and behaviour developing to the 19th century.

Frankly speaking or actually speaking the scientific psychology started with Wilhelm Wundt start establishing his lab in Leipzig in the late 18th century. So, it around 1879 I do not get the date right now, but around the late 18th century we Wilhelm there was a person called Wilhelm Wundt. He actually started his first scientific lab in a place in Germany which is called Leipzig. And that is the first ever lab which has been established. Now, what Wilhelm Wundt wanted to do was to study consciousness and how would he study consciousness he wanted to study consciousness in a scientific way now how can that be possible. So, what he was doing is he brought a technique from philosophy which is called introspection and used this introspection to study consciousness.

Now, since he could not study all consciousness and which was already demonstrated. So, he wanted to show that psychology can be study scientific. So, he was basically focused on studying perception and reaction times. And so what Wilhelm Wundt actually did was he wanted to see how people respond to certain stimuli. So, his first experiments was on in terms of reaction times. He wanted to see so he had developed a scientific experiment in which ball was dropped and there was a tapping machine in which person can tap. And what he wanted to do is how people how fast can people hear an external stimuli and respond to it.

So, when the ball would hit the ground or hit some desk a sound was made and what people were made to do is respond to that. And, the time was calculated between the time the ball hit the ground and the person tapped on a tapping machine to report that he has heard the ball hit the sound hit the ground. And, that was the calculation of thing calculation of reaction time and what method Wilhelm Wundt was actually using was called introspection what is introspection in introspection a person vividly describes what is going in his mind. So, when a person who is doing this experiment, who is to tap on a tapping machine when he hears the sound of the ball he will actually describe what all is going in his mind through verbal report and that is called introspection.

So, introspection is a method where people analyze them self or analyze their own acts and then report what is happening. But this was not scientific in at all although this is the first scientific way of studying psychology because what Wilhelm Wundt was doing is studying reaction time was studying how quickly people hear or is there is a difference between how people hear and then act. Now Wilhelm Wundt for the first time believed that human body was a machine. And so this machine could be actually studied using the scientific process; now, from the development of psychology using this method of studying mind and behaviour. So, what the mind does and so what Wilhelm Wundt was doing through his reaction time experiment was studying what the mind does and what is behaviour.

So, how does the mind make the behaviour and whether there was a difference between the mind making a decision and the behaviour act on to it and of course, to basically decipher whether the mind and behaviour was related. So, the mind would tell the person that act hear the sound the mind will hear the sound. And the behaviour will actually demonstrate that he has heard the sound because hearing the sound can be demonstrated

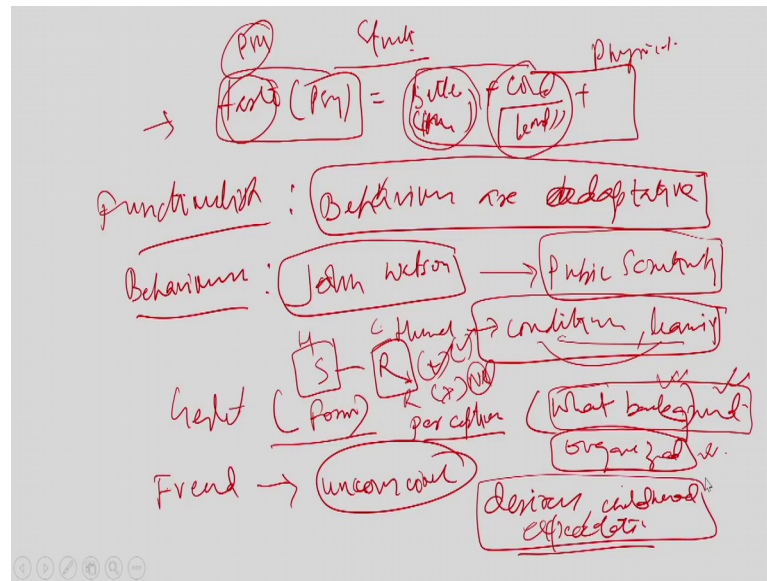
through behaviour of pressing the tapping machine which will tell you that you not only heard this one, but you have reacted to it. Now there are several early schools or several schools of psychology which actually started developing which showed what psychology was all about.

And so the first I have I have made a line through this. So, the first two schools of psychology was called the primitive schools we believe that psychology was a study of consciousness. And the later three schools was actually the original schools or the schools which believe that psychology was not the study of consciousness rather it was a study of behaviour and mental processes. Look here what has happened is that Wundt was studying mind. And behaviour, but behaviourism get started in psychoanalysis were actually studying mind as in terms of mental processes. So, mental processes define the mind not the behaviour.

So, mind is basically a construction of mental processes mind is an organization of mental process and these mental processes actually make the behaviour because what Wundt said is that there is something on the mind, but what is the mind comprise of and that is what these three theory says. So, let us quickly jump into understanding what is structuralism and functionalism; now these are the some schools of and I said these are the primitive schools. So, basically what structure list or the structure list school of psychology how did they start it started with someone called Edward Titchner, who was actually student of Wilhelm Wundt.

But he went to Cornell University in the United States and there he started this school. What was the schools focus on this schools main focus was on how does mental processes really work how does the mind work and what he believed is that mental processes just like any hard sciences chemical and physical sciences mental processes can be broken down into it is physical parts. For example, the taste of a lemonade can be broken down in 2 or the yeah can be broken down into it is physical sensations. For example, bitter cold and whether it is bitter, it is sweet, it is cold and so on and so forth.

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So, the taste so this is structuralism what they believe is the taste which is a psychological property can be broken down to a physical property which is bitter which is physical in nature or say cold which is temperature. So, bitter is a physical property and or some other thing. So, these are physical in nature as you can see and this is psychological in nature. And what structuralists believe is that any psychological phenomena. For example, taste can be broken down into it is physical properties. For example, bitter is a physical property it depends upon how many molecules of a certain cucurbitane you have added or if sweetness.

Sweetness depend upon how much fructose you have added. And all these fructose and all can be measured or for example, how cold is a lemonade. Now the cold can be measured in terms of temperature. So, on this end I have physical properties and on this end I have psychological properties. So, more psychological behavioural properties can be studied in terms of physical properties. In opposition to that functionalist came in and. So, that they said that every behaviour can be broken down to this part. In opposition to that came in the functionalist who said that behave most behaviours cannot be studied in this way. And so what the functionalist actually saw or functionalist actually said that most behaviours are adaptive in nature.

What does it mean? What is the meaning of that behaviour is adaptive in nature. What it says is that for understanding a behaviour you have to actually see a behaviour in action

you cannot have a behaviour somebody acts something somebody does something right. So, you drink lemonade and you feel bitter cold that kind of a thing. So, this act of drinking the lemonade and feeling about it cannot be broken down into taste is equal to bitter sweetness and so on and so forth. The very idea of how you feel the taste depends upon, you are I watching you actually drink the lemonade. And so the same lemonade at different situations will taste maybe bitter to you and sweet to you and so on and so forth.

So, depending upon the environment depending upon your behaviour depending upon your environment where you are the same behaviours can vary. And so what functionally said is behaviours cannot be or acts cannot be broken down into its constituent parts in terms of physical and psychological property. Rather functionalism says that most behaviours are adaptive in nature and for other understanding why people do what they do we have to actually see the behaviour being in action when the behaviour is taking place. And so, these are the two primitive schools one opposing the other. But both of these schools were actually focused on consciousness they were focused on studying the mind and that was what was devoid of.

Now, the problem was there is no way to study the mind and so a very important school came into being which is called behaviourism which was seen with us started by something called John Watson. Now, John Watson is the father of behaviourism and what did he say he said that look if psychology has to be a scientific, science then it is data has to be open to public scrutiny just like physical sciences and chemical sciences. And other hard sciences they give the data to people they give some observations that people can see psychology should also provide data whenever an event happens. And if you have collected data on why an event happened this data should be given to public and public should be able to verify this what structuralism.

And functionalism was doing is they were using the method of introspection they were using the method of consciousness. And they were saying that whatever psychological behaviour is there it is a part of psychology in terms of structuralism it is psychological versus sensations of physical and psychological properties can be explained in terms of functionalism. If you want to study human behaviour you have to actually see it doing, but all these are personal to people I cannot people cannot view what is happening in their head. But for behaviour for the first time said that no this is wrong in psychology

scientific what we have to do is take it is data and give it to the public. Now there is no way to study the mind and so how do we study psychology using behaviourism.

So, what behaviorism said is psychology is or human acts human behaviour is influenced by something called conditioning and learning. So, people behave in certain ways because, they are conditioned in certain ways because, they learn that certain acts are rewarded and certain acts are not and this is what is called the famous SR psychology. What this SR psychology? Really means that if this is a very simple psychology what it says is when you do a particular act when you when a particular when you get into a particular situation you do a particular kind of an act. So, let us see you get to get into a cold room you wear a sweater.

Now, wearing the sweater actually helps you is rewarding right it is rewarding to you and you learn this. So, each time you go into a cold room you wear a sweater because sweater protects you from cold and. So, this act is rewarding and so, once this act is rewarding you do this act again and again. Now, you go into a cold room and you do not wear a sweater you drink a cold drink and because of this cold drink you actually catch cold. And so this act of drinking a cold drink in into a cold room will be non-rewarded will actually present some kind of a discomfort for you and so you will not do this act.

So, those acts because being in a situation and doing a certain act if it rewards you in certain way people choose to do that act again and again in future. But a certain acts actually do not reward you in certain way then people do not choose those acts and that is called learning. And that is called conditioning the conditioning and learning conditioning means that learning is learn learning is realizing that these acts are good. And these acts are not and conditioning is giving reward for doing the certain act giving reward.

Remember the first case that we discovered about the pizza there we actually showed that giving certain reward actually may made students perform better. And so what behaviorism says is that there is nothing called mental processes mind and all so on and so forth. People in certain situations act in certain way if the act that they do is rewarding they learn it. And they do that act again in future if the act becomes non-rewarding then they do not do this act and this is called a simple law of effect law of effect. Says that

people learn through association if doing something in a certain situation is rewarding they will do it again and again.

And if it is not they will not do it and this can be verified because a person if he if a person is more prone to doing something in certain situations. We can very easily predict that getting in this situation the person will do the same act for example; somebody who is afraid of horror movies closes their eye. And if we have we have established this then we can very easily predict that, this person when he goes to the movie again which is a horror movie he will again close his eyes because that is rewarding for him. And so this prediction can be made and there is no need for understanding his mind mental process thinking and so on and so forth.

It is very easy so take this person into a horror movie he will close his eyes as simple as that a stimulus leads to a response. And why he is doing that response because it is rewarding closing his eyes actually make him not fearful if he opens his eyes he will see the movie he will become afraid and. So, closing his eyes is related to watching this movies and this is called what is called behaviourism or the proponent of behaviourism.

Where everything that psychology does is in terms of stimulus response the responses which are rewarded are learnt. And the response which are not rewarded are not learned. So, rewarded response learn not rewarded response not learned the fourth kind of theory or the fourth theory of psychology was the gestalt psychology. Now at the time when John Watson came up with his idea of an objective psychology where data can be viewed group of psychologists in Germany they brought up a school called gestalt psychologists which are actually about perceptions about experiences and so on and so forth.

And so what this school actually did was they wanted to study sensory perception they wanted to study sensations sensory perceptions and things like that now the father of this school was Max Wertheimer Kurt Koffka and Wolfgang Kohler and what these people were actually doing gestalt were actually doing is the meaning of gestalt in German is actually called form. And so what they said is perception is dependent on what background something is presented. So, perception is dependent on background how do we perceive things? How do we see things? And these people say that we see things in relation to two things first what background it is presented in and second how it is organized things are organized in certain manner and the way things are organized

together we see things in this way. So, certain things which if they are close together we perceive them as together.

And that is this idea about this school brought us the knowledge of how people perceive motion. How people perceive look at movies how do we see movies there are 24 frames which go one after another and since they are 24 frames which are passing over the eye one after another we actually see the movie moving if we make only twenty two frames or less frames people will not see us movement because these 24 frames appear to be grouped together and that is how we see movies.

So, basically that is what gestalt psychologists proposed they believe that perception is all about what situation in things present around and how they are organized also one important thing with gestalt one important proponent of gestalt one important knowledge from gestalt is that the whole is not the sum of its parts what is the meaning of this the experience that you have by observing something as a whole cannot be equivalent to something seeing something as parts think about the favorite song that you can hear or your favorite song.

When you hear the song it has lyrics it has music it has. So, many other things into it now when you hear the song with all lyrics and music and everything you have a different experience together. Now take away the lyrics and just hear the music take away the music and just hear the lyrics and take away the music and lyrics and just hear the tune and so on and so forth. If you do that one by one the same experience that you get when you have when you hear the sound or when hear the total song is not equivalent to just hearing these tones music and lyrics alone on their own.

So, if you combined them together the experience that you have is entirely different from the experience that you have when by looking at its parts or looking at these three things on their separately which basically means that the song itself everything composed together gives you an entirely different experience. Then the tune played alone and then the lyrics played alone and then the music played alone and so on and so forth. So, basically this is what gestalt is all about, but we will study gestalt and all these theories one by one in a later class and the last school was the psychoanalysis or the last origin of psychology was the psychoanalysis.

Now, psychoanalysis was started by someone called Sigmund Freud and most of his theories Sigmund Freud based on the idea that most of human behaviour is unconscious. So, most desires that people have or childhood expectations childhood desires if they are not fulfilled or if they are not worth fulfilling not worth will worth looking at they are pushed into the unconscious. What is unconscious? Unconscious is a part of the brain or part of the mind which you cannot see which nobody can see and so what Freud believed is that the unconscious are unconscious shapes are conscious how we are our personalities are.

So, first theory is basically a personality theory as well as a theory of psychoanalysis. Or psychotherapy theory what Freud believed that the behaviour that we do any behaviour that we do is governed a lot by the unconscious. And what is in the unconscious the unconscious compose is composed of all those acts all those childhood desires all those wants that we have desires that we have which we cannot openly express. So, those desires are pushed into the unconscious. For example if you see a girl you think about kissing her but, you cannot do that. And so this act of your act of thinking or your thinking about doing this is pushed into the unconscious or pushed into the push into your mind deep back into the mind where they it cannot come up.

And so by the very act of not being able to kiss this girl what really happens is that you will show a deviant behaviour. So, maybe you make a comment now this comment is now is a actually a cover up of your desire that you wanted to kiss this girl, but you cannot do that and so the comment is actually a manifestation of the unconscious. Unconscious wants to show behaviour. Now, this behaviour is this comment is actually a behaviour which basically shows that you wanted to do this act. But since you are not able to do this act it is replaced by this act and that is what Freud said.

And most of what Freud said almost of what Freud's theory about human behaviour is in terms of sexuality, that most behaviours have sexual core or anxieties behind it is behaviour. So, most behaviours have either a sexual interpretation or some kind of an anxiety or aggression behind it is doing any behaviour is composed of these things. So, we will look into Freud psychoanalysis also at a later point of time.

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The Historical Origins of Psychology

- Twentieth Century Developments ✓
 - *Information-processing models:*
study of humans as processors of information
 - *Psycholinguistics:*
study of mental structures associated with language
 - *Neuropsychology:* *Sperry*
study of relationship between neurological events and mental processes

So, these are the historical origins now the 20th century started with some new fields of psychology or 20th the coming of the 20th century brought some new fields of psychology. One of the most important field of psychology that was brought up in the 20th century was called the information processing field. So, the world war coming up these schools of psychology that we had which had mostly theoretical in nature and had data which cannot which could be verified to certain levels that died. So, the Second World War come came up and with the Second World War after Second World War newer equipments came in, newer methods of doing things came in studying the mind came in.

And, so for the Herbert Simon in 1950 around 1950 he developed the information processing theory which now believes that human behaviour can be studied in terms of the computer model. Of course, the computer of a design in terms of human being or could be could be developed the human behaviour could be studied through the information processing model. What is the information processing model? It believed that human beings are just simple processors they are machines which human beings are machines which can process information. So, they have an input system which takes an input and so the senses are input system then your main your brain which you have or the mind that you have is actually a processing system which processes information and then the behaviour that you do is actually an output system.

So, the input system the mind that we have this is the processing system. And the output system can explain any behaviour that we do and this is the first development of the 20th century. Another interesting field that came up with the 20th century was the idea about human language what is human language and what are the mental structures which are there in human language. How do people invent language is a very powerful thing, the most basic thing, the most interesting thing that has happen to human is language; most lower forms of animal do not have a language they do have a language they do have a method of communication. But they do not have a language with human beings we have language we can communicate with each other.

And, so the development of language was a classic impetus to the study of psychology. And, so Noam Chomsky developed this idea of what are the mental structures which are involved in language? How people make language? How they understand language? And how is language formed. And so another interesting school was started in the 20th century was how and what mental structures form language and how they are processed and how language is used by people. And the third important thing or third important school that came up with the 20th century or 21st century was the study of neuropsychology. Now this to neuropsychology is the field which actually studies how the brain makes the mind.

It studies the relationship between neurological events and mental process for example, certain regions the brain show activities. So, they are coming up with the MRI FMRI EG PT all those machines actually showed that whenever something meant something the person does a mental event happens these events can be captured through certain process in the brain. For example, blood flow certain activity in the brain electrical activity in the brain and so on and so forth. So, there is simultaneously correlational activity in the brain there is simultaneously an activity. So, if you are thinking of something there is an activity of brain if you are thinking or something else there is an activity of brain and these activities can be actually studied and a prediction made about what are you thinking and what mental process you are using.

So, whether you if you are using memory it is the middle temporal lobe if you are using perception it is the all if I or the occipital lobe and so on and so forth. So, different regions of the brain have different idea. And so, George Sperry was the key person who developed this area or this of neuropsychology. And, he showed that the both areas the

brain they are connected to something called commissural fibers and which basically means that the brain does not, the brain is first of all it is split into two parts and it is that both parts of the brain are specialized for doing specialized functions. And so for that he was given Nobel Prize even the information processing model which was developed was awarded the Nobel Prize. And so, these are the new developments in the coming up of psychology.

So, basically what I will do is I will take a break here and let this information whichever are given to you grasp onto you. So, let us do a quick recap of what we did in this class what we actually did in this class is I explained to you what is psychology. And what it can do, what are the, what is it is breadth in length what kind of problems do we study in psychology. And what is it is scope with that we went into studying some of the problems we are looking at some of the problems with psychology can do.

And then we went into a little bit of history of looking at how psychology started we defined those questions which the philosophers are asking. And we also define how psychologists tackle those questions we looked at some of the basic schools. For example, structuralism, functionalism, behaviourism, gestaltism and psychoanalysis and what are the basics of these schools and how these schools handle problems of behaviour? How these schools actually explain? How human behaviour can be defined? Then we I define some of the recent schools of psychology for example, the information processing school.

Then neuro psychology, neuro psych linguistic school and the neuro psychology school; the psycho linguistic school all these schools are defined. And how these schools actually hand handle modern problems of psychology. So, let me take a break here we will continue on this lecture in the next class. And we will what we will do in the next class is we will take up a problem and I will show to you the various perspectives the various ways of looking at one single problem.

One single psychological problem from different psychological perspectives; what we will do other than that is we look at how is psychological research done. So, that will conclude our chapter or our section or module on what is psychology the nature of psychology. What it can study, what it can do, and what are the methods of studying psychology so for.

Now, from here it is goodbye.