

History & Systems of Psychology PSY502

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INTRODUCTION

Course Objectives

The objectives of this course are to introduce the students to the developmental history of the subject of psychology, to prepare students to appreciate and use more advanced materials of psychology and to provide the basic and the most modern knowledge related to psychology.

Methodology

Main features of a given topic shall be discussed supported by reference materials and examples from everyday life. You might be quizzed verbally by the teacher asking a question, letting you write the answer and then giving you the correct answer. For example, “Freud established the Behaviorist School?” Right or wrong? The correct answer is of course “wrong.” Watson’s name is associated with Behaviorist School. At the end of two/three lectures a homework assignment would be given. Homework assignment would be in the form of a short essay-type exam. It might also consist of multiple choice questions (MCQs). There would be a mid-term exam after the completion of 21, one hour lectures. There would be a final exam after the completion of 45 lectures.

Grading

Midterm exam will carry 35% weightage of marks for the total course. Final exam will be a comprehensive exam and will carry 50% weightage of the total course. A total of eight assignments shall be given carrying 15% weightage of the total marks in the course.

Texts

Two main text books will be used for the course. The first one will be:

- “A History of Modern Psychology” by Duane Schultz & Sydney Schultz and
- the Urdu text book used will be “Nafsiyat ka Irtika,” by Rafiq Jaffer and Humair Hashmi.

Both books are easily available in the market. Handouts for the entire course, prepared by the instructor will also be available for your benefit.

Course Overview up to Midterm

A review of the ancient philosophy / psychology in the Indo-Pak Sub-continent, we will then have a look at the ancient Greek philosophy/psychology and go on to read about philosophy/psychology in the 5th to 12th century AD. We will then consider the impact of renaissance on psychology; it will thoroughly reviewed; we then look at the British Associationism and go on to review the French and German contributions to psychology up to the 18th and 19th Century. A review of Reflexive Psychology will follow and then we will see the impact of physical sciences on psychology. We then look at the Structuralist School of psychology, followed by a discussion on the Functional School of psychology, we will then review psychology in the beginning of 20th century with the American contribution that is known as “Behaviorism,” and review “Behaviorism” and “Neo-Behaviorism.” Midterm exam will be held for course covered from “Ancient philosophy/psychology to Neo-Behaviorism”

Course Overview up to Final Exam

After the mid term exam more recent European contributions to psychology shall be discussed those will include: The Gestalt School of psychology, the English Dynamic psychology, the Historico-Evolutionary Psychology. We will then take a scientific outlook at mental illness. And then study the Psychoanalytical School in the beginning of 20th century, followed by Jung's Analytical Psychology, and Adler's Individual Psychology, followed by Psychodynamic contributors. It will then lead to a review of Humanistic Psychology. We will then see the modern trends in psychological treatment of mental disorders, including Anti-psychiatry Movement. We shall then see the development of psychology in parts of Africa and Asia in 20th Century and finally a look at psychology in the 21st century.

Ancient Philosophy/Psychology in the Sub-Continent

The first and the foremost problem in any discipline is that of the scope and the definition. Such is the case with psychology. It is only when we define psychology that we can move forward to view "psychological" thoughts and ideas of man from ancient times up to today.

Psychology for that and the present purpose can be defined as the "study of mind and body." The ancient man regarded "soul" as something that was invisible and resided inside a person. He had his own explanations for the behavior of the soul and the body. For example the soul escaped the body when a person was asleep. The escaped soul then performed certain actions on behalf of the person that was visible in the form of dream work. Further, dream work, fainting spell, epileptic fits, mental and physical discrepancies were also regarded as expressions of the soul.

The ancient man also believed in what is termed "animism." Animism is the process of seeing human qualities in inanimate objects such as moon, stars, stones etc. He humanized those objects in order to make them easy to understand. The ancient man had a strong belief in magic and tried to learn and adopt magical tricks which were his way of exercising control over things around him.

Ancient Indo-Pak history of psychology was no exception where also magic was an important element. Magic as mentioned earlier, was used to exercise control over others and nature. It may be used for negative purposes or positive purposes.

The ancient man also indulged in different exercises and activities to gain control over his body. Yoga was one of such exercises involving breath control and different body postures. One of the yoga's beliefs was that body and soul are related and connected and this connection influences body and soul both.

The ancient philosophy or psychology of the sub-continent advanced the belief that consciousness is related to the brain. The ancient Europeans, the Greeks for instance, thought that consciousness was a function of the heart of a man.

About a thousand years B.C. the sub-continental differentiated between mental and physical labor. Mental labor was the process of thinking and using the mind to solve problems, while physical labor was to perform certain tasks physically. Mental labor was considered superior by the ancient man while physical labor was considered inferior. They also believed that our mental faculties are inherited.

According to the sub-continental Atma or the soul of a person was the pure self. Further, the world around us was an illusion or a deception played on us by our senses. Some others believed that consciousness and mind were the products of material development. These two beliefs are called Idealism and Materialism today. The later ancient Greek philosophy has a number of similarities to the sub-continental views.

ANCIENT GREEK PHILOSOPHY/PSYCHOLOGY

The ancient Greek philosophers/psychologists regarded three elements to be the basic ingredients of all matter including humans. These three elements were:

- Water
- Air
- And fire

The ancient Greek philosophers also put forward the view that contradiction is a permanent element in the world and because of it the world is influx all the time. This means that every time a phenomenon arises there is a counter explanation to the phenomenon. Thus a contradiction in explanation arises which leads to further investigation and further phenomenon and counter phenomenon. When this process continues over a long period of time, we find the world to be in a constant influx.

One of the greatest developments of the Ancient Greek philosophers was that they put forward the view that everything consists of small indivisible particles and these particles act upon on the soul to create sensations. This was later found to be true with the discovery of atoms.

Socrates

Socrates is considered to be one of the most important ancient philosopher/psychologist. He laid the foundation of ideas for many philosophers/psychologists to follow. Socrates was born in 469BC and he died in 399BC. In his opinion knowledge and truth reside in the mind and one has to look for and find it there. It means that in order to gain knowledge and understand various phenomenon one has to look inwards instead of looking at the outward things and trying to find an explanation in them.

He further said that knowledge and awareness create virtue, so in order to be virtuous one has to look into the self. In other words, Socrates stressed on the study of soul i.e. looking inwards, and he rejected external observation.

Another of the Socratic contributions is that he defined the concept of happiness. To Socrates, stealing is not happiness but the satisfaction gained through acquiring by honest means is happiness.

He regarded the soul, called psyche in Greek, as superior to body and said that the psyche or the soul helps us to distinguish between good and bad. Socrates asserted that all things have a definite purpose and nothing occurs without that purpose.

Another of the great contributions of Socrates is his method of teaching. It is called the Socratic method of teaching. It is also the modern method of teaching and it consists of a dialogue, rather than monologue and focuses on the logical correctness of the argument. The teacher and the student interact with each other and have an intelligent dialogue that helps them to understand and comprehend better. The monologue is discouraged because it involves only one way flow of information, further it does not clear up any misunderstanding that may arise in the mind of the students, who are not able to express themselves. The Socratic method of teaching is in practice these days.

Plato

Plato was a pupil of Socrates and another important Greek philosopher/psychologist. He was born in 427BC and he died in 347BC.

Following the Socratic tradition, Plato was also of the view that knowledge is innate and inside the mind. In order to extract knowledge one needs to look into the mind rather than looking at external objects. This method was later called the introspective method in which outwardly observation is discouraged and looking into the mind or the soul is encouraged. This method was later adopted by many philosophers/psychologists who agreed with Platonian and Socratic methodology.

Plato is also considered an idealist philosopher who believed in the supremacy of ideas. He did not believe in acquiring knowledge by empiricism and observing facts. He thought that ideas are the only source and the true source of knowledge. As an individual looks into his ideas he can extract the best possible solutions and explanations to the problems that are encountered by him or her.

Another of Plato's contributions is that he described the parts of personality as

- Intellect
- Will
- And appetite.

The intellect is the ability to understand, while the will is the drive to do something. Appetite on the other hand is the part of the personality that deals with bodily needs. According to Plato, ideas are eternal, they are not born, and neither do they die while worldly objects change and die. Therefore, true knowledge, as mentioned earlier, can be gained from ideas rather than observation. Plato also regarded the soul or psyche to be permanent and the body as something that could change. This further suggested that knowledge could be acquired through the soul or the psyche but not by the use of bodily sensory organs. To Plato sensory organs were a hindrance to the acquisition of knowledge.

Plato suggested that the soul has three parts:

- Reason, located in the head
- Passion, located in the chest
- Appetite, located in the stomach

The function of the reason is to control and direct the passion and appetite. Passion is the desire to perform a certain action. Appetite part of the soul refers to the natural needs of the body, such as hunger, thirst etc. According to Plato, some passions and appetites are satisfied in dreams. This concept given by Plato is similar to what was later given by Freud as id, ego and super ego. Plato was the one who established the first ever university by the name of Academy.

GREEK THINKERS

Aristotle

Aristotle was one of the greatest philosopher/thinker ever in the history of mankind. This Greek philosopher/psychologist, Aristotle was born in 384BC and he died in 322BC. Aristotle was a student of Plato and his ideas not only show the influence of Plato's thinking but also sometimes Aristotle has presented completely opposing views to his teacher.

Aristotle wrote a book by the name of De Anima which means "the Soul." Since soul was considered to be the primary topic of interest for philosophers/psychologists at that time, Aristotle is considered to be the first psychologists ever. Aristotle rejected the idea of dualism of soul and the body and put forward the view that these two are not separate but one entity.

Aristotle was of the view that ideas in the human beings tend to become associated with each other and there are three reasons for the association of ideas which he gave:

Similarity

Similarity means that the mind tends to see certain similar patterns between two things and relates them together. This is the simplest explanation of the association of ideas where, for example, two events which a person witnesses have certain common elements. These may then be associated with each other due to the similarities present in them.

Contiguity

Contiguity refers to two things or events happening close to each other so that the person is able to relate them to each other. For example, if two events occur consecutively, one after the other, they tend to get associated with each other. This is an example of contiguity of ideas, where one even may remind of the other event which is contiguous to it.

Contrast

Contrast means that two events or ideas are completely opposing to each other, which results in the formation of a link between the two. Humans tend to associate the ideas together. These may be two conflicting statements by someone. One statement would remind a person about the other conflicting statement immediately.

Therefore, in this way ideas tend to become associated with each other.

According to Aristotle, man is a biological being whose functions include:

- Eating
- Perceiving
- Having children
- Thinking
- And doing things.

All of these are characteristics of living organisms. It eats to fulfill the requirements for the nourishment of its body and its growth. It perceives and responds to stimuli according to its perception. It has the ability to procreate and expand its species. Higher form of living beings such as humans has the ability to use their mind to think and analyze objects and happenings around them. Further, according to Aristotle, one of the functions of human beings is doing things, which means that humans are involved in various activities which they perform throughout their lives which may be anything such as reading this text.

According to Aristotle's teacher Plato, ideas are eternal. They are neither born nor do they die while worldly objects change. Therefore, according to him the true source of knowledge is ideas themselves. Plato further asserted the soul or psyche to be permanent and the body as something that could change. Therefore, according to Plato, knowledge could be acquired through the soul or the psyche and sensory organs were a hindrance to the acquisition of knowledge. This was an introspective and subjective method of learning, which means to look into the mind to find solutions to problems. Aristotle on the other hand rejected his teacher's views on introspection and said that true knowledge can only be gained through observation and empiricism. As human beings observe the phenomenon going on around them and the world around them, they tend to make judgments and decisions that are based on their objective perception rather than their subjective biases. Therefore, instead of looking to the mind, one needs to look at the world around in order to gain knowledge. This implies that in Aristotle's views, sensory organs are not a hindrance to learning, but they are the source of gaining knowledge.

Aristotle also described two types of human motives which are

- Primary motives

Primary motives are basic motives which are the desires of all human beings and are mostly bodily desires such as such as hunger, sex, thirst, anger and need for rest. Such motives are not just possessed by human beings but may also be possessed by other living beings. An important aspect of such motives is that they are not learnt by the organisms; rather they are a part of the genetic makeup of all organisms. Humans are born with these motives, in other words these motives are inherited and they become the cause of propelling a person to perform a certain act or to do something. For example, hunger may cause a poor man to beg for food. Therefore, his basic bodily desire has caused him to perform a certain action. Such desires or motives are called primary motives by Aristotle.

- Secondary Motives

Secondary motives are those motives which are learnt by organisms and these become habits of the individuals. For example, it is the habit of certain people to socialize with others. Some people have the desire to dominate their fellows. These motives become the habits of individuals and they tend to follow them quite often. Therefore, they are called secondary motives by Aristotle.

Another great contribution of the great philosopher Aristotle was that he recognized that there are individual differences in various respects in people. These differences may be in the intelligence level, in certain abilities, sports, math etc. For example, one individual may be a very good sportsman but not a very good musician, while another may be a very good musician but not a sports man. Therefore, differences exist in all individuals as far as their personal characteristics are concerned. This is the reason for some individuals to excel in certain fields.

Aristotle further suggested that these individual differences are created during the life span of a person, but they are inherited by the person. He is born with these differences which may although be discovered in later in life.

Apart from these individual differences that are inherited and are a part of the genetic makeup of all individuals, Aristotle was of the view that the early childhood experiences and training of an individual have a profound impact on him or her. Childhood is the time when the mind is open to all influences from the environment. A child would learn to behave in a certain manner as he would see the individuals around him doing. Further, training of a child is also an important factor that would influence his behavior throughout his life. The way he has been trained and educated during the early years of his life, that is childhood, he is expected to show some influence of it in every part of his or her life. A child of Pakistani family who has been educated and grown up in the United States cannot be expected to behave in a similar manner to the one who has been grown up in Pakistan. That is because his experiences in his environment and training that he gets is absolutely different from the child grown in Pakistan. This influence is expected to last through out his or her life.

Aristotle also gave the concept of Catharsis. Catharsis is the sudden release of emotions by a person when he sees, hears or feels something. For example a person may start crying when he hears about a tragedy that someone else has encountered, or a people often have soaked eyes when they watch a tragic scene in a movie. These are the examples of catharsis where emotions are suddenly released by the individual. There may be also the emotions such as happiness or joy which someone feels when a villain is being beaten up by the hero of the movie. The list of contributions of Aristotle is a long one. This is why he is considered to be one of the greatest thinkers of mankind. His ideas have left a profound and a long lasting impact on man's thinking.

PSYCHOLOGY IN THE 5TH TO 12TH CENTURY

The period from 5th to 11th century A.D. is considered the dark ages of Europe. It was the period in between the great Greeks and the progressive industrialized Europe. The dark ages were the period when there was a general discouragement of research and investigation. Problems were not solved in the light of research and observation but by invoking religious edicts. Intellectuals adopted Plato's idealism while Aristotle's empiricism and observation were rejected.

It was believed that God was the most exalted being, followed by wisdom, followed by soul and then followed by matter. So matter of the body was the lowest from of existence and wisdom the highest after God. It was also thought that wisdom could be gained by looking inwards and by reflection which was the Socratic and Platonian point of view. The dark ages also had an impact on psychology. But during the same period emerged some prominent philosophers/psychologists whose contributions to psychology are noteworthy.

Saint Augustine

An important contribution to the subject of psychology of those times is that of Saint Augustine. He was born in 354AD and died in 430AD.

Saint Augustine proclaimed that evil or sin is a product of free will. This means that it is the free will of an individual that makes him indulge into sins, evils and crimes. There ought to be checks on every person's free will which is certainly what the order of the society is about. A society imposes certain limits to the exercise of free will of a person which therefore results in regulation of the society. If every person is allowed to practice his will freely there would be no society and only chaos. Saint Augustine further proclaims that pride is a cardinal sin which is also the cause of many other evil acts that a person indulges in. It makes him unaware of the consequences of his actions which may be harmful for others. Therefore, Saint Augustine points out certain psychological elements in human beings that influence their actions and the society as a whole.

Saint Augustine agreed with the prevailing ideas that the universe contains two basic principles:

- The principle of light and goodness
- And the principle of darkness and evil

This means that there are two paths in the universe and it is up to the individual to decide upon which path to take. According to Augustine we can discover these by looking inwards into our minds or what is called introspection. This idea is similar to that of the Socratic Platonian ideas. According to them, looking into the self brings awareness and light of knowledge and that is the only way of gaining knowledge. Plato even considered the sense organs as a hindrance to the acquisition of knowledge. Plato and Socrates had also said that knowledge is virtue. St. Augustine added to their views by saying that a person can look into self in the same way as one looks at external objects. How to introspect or to look into the self was one of the biggest difficulties that were encountered by the philosophers and thinkers of that time. St. Augustine provided a simple solution to it by saying that we can look at external objects through our sense organs, but we can look in by reflection. Reflection here refers to looking at and understanding ideas and thoughts and finding solutions to problems through the association of ideas within the mind. This was his solution to the problem of how to look inwards. Because of this stress by St. Augustine on looking inwards and his method of looking inwards, he is usually regarded as the first introspective psychologist. Introspective psychologists therefore are those psychologists who encourage looking into the mind to find solutions to the problems rather than observing outwardly things and trying to find solutions to problems by using the sensory organs, as propounded by Aristotle. Plato and Socrates on the other hand were in favor of introspection.

Another great contribution of St. Augustine is his explanation of consciousness which in his view is constantly flowing. This also is related to his idea of introspection. He said that consciousness flows constantly in the form of a stream and it is up to us how we look into the stream to get ideas and generate solutions to our problems. This stream of ideas is the basis of all knowledge. His ideas of introspection were later used by psychologists such as Wundt and Titchner.

Avicenna

Avicenna holds very prominent position in the history of philosophy/psychology. He was born in 980AD and he died in 1037AD. Avicenna studied the Holy Quran, physics, theology and medicine and adopted a most rigorous method of the distinction between concepts.

Like the ancient thinkers, Avicenna was also of the view that human soul was non-material and immortal. It does not exist in any material form, but nevertheless exists in the body. Therefore he rejected the concept of a unity between soul and the body as given by Aristotle. To him the soul was a separate entity and the body was a separate one. Avicenna was of the view that soul has its identity and its own operative laws just as there are the operative laws of the body. In order to study the soul and discover solutions to problems regarding the soul and the body, we need to study and become aware of the operative laws of the soul. This in turn would then help in the process of gaining knowledge as well. Once the operative laws of the soul are determined, it would be easier to know how the soul thinks and what governs its actions and influences it to behave in a certain manner.

Avicenna was of the view that the mind has a tremendous effect upon the body, such that it can make it sick or make it healthy. Here the mind and the soul are considered to be the same thing as the ancient thinkers or philosophers thought. Avicenna thought that the soul has an influence to the extent that if a person thinks that he is not well the body responds in a similar fashion and he actually becomes ill. Therefore, soul is stronger than the body and it can dictate the body to behave in a certain manner. He further added that strong soul or mind can not only affect a person's own body but it can affect others as well. This is the case in hypnosis where a person tends to bring the other person under the influence of his mind and makes him do what he wants him to.

Elaborating his views on the strength of the mind or the soul, Avicenna said that the soul had the power to the extent that it ordered the body to move and the body obeyed. In other words the soul was responsible for all the actions of the body.

Following the Aristotelian tradition Avicenna recognized four stages of motion. Motion here refers to the process of performing a certain act. Based on these stages of motions, Avicenna tried to explain the human actions. The four stages of motion are:

Imagination

Imagination is the process of thinking about something in which in turn leads to a desire of possessing that thing.

Desires

It is the second stage of motion according to Avicenna which represents a person's willingness to achieve something or to act in a certain manner. The person desires to possess something or to do something.

Impulsion

The desires of the person cause him or push him to do something. This is the third stage of motion as given by Avicenna. The person is motivated by the desire to make a certain move which would satisfy the desire.

Movement

The last stage of motion according to Avicenna is the movement where a person actually makes the move to satisfy the desire that was caused by his imagination and which has forced him to perform a certain action or make a movement to satisfy it.

In other words, imagination creates desires, which in turn propels the person and then the person acts.

Another of Avicenna's contributions is that he distinguished between primary and secondary perceptions.

Primary Perception

It is the subjective perception of a person that is based on his personal dispositions. For example if a person is taking a walk in a garden and he has in his mind that there are snakes in that garden, he is quite likely to confuse a twig with a snake. That is due to his personal disposition that there are snakes in that garden. In other words, an illusion is a primary perception. This kind of perception is called subjective perception and in Avicenna's terminology Primary perception.

Secondary Perception

Secondary perception is objective perception based on logical reasoning and rationality of observation. In this case personal biases and disposition do not influence the perceptions which are totally based on empirical evidence.

Avicenna's idea of primary and secondary perception was similar to what was later proclaimed by the Gestalt School as "geographical reality" and "subjective reality."

As mentioned earlier, Avicenna showed the effect of soul or mind on the body. Therefore, he is considered to be a great healer and a physician. He also showed that some sick people recovered from illness by their will power and some fall sick because they lose the will to live. He also elaborated the concept "Wahm" which plays a significant part in Avicenna's thought. "Wahm" is akin to what modern psychologists, particularly psychotherapists describe as "nervous response." The modern psychotherapists have explained that nervous response is the forerunner of many psychological and physical ailments. This is what Avicenna had explained earlier. An example of nervous response or "Wahm" is the stress created in a person, which ultimately has negative impacts on a person's health, behavior and psyche.

Avicenna was the first one to develop a system which looked at diseases from not just the physical but also the psychological point of view. This is why he is considered to be a great physician as well as a psychologist.

PSYCHOLOGY IN THE 5TH TO 12TH CENTURY

Al-Ghazali

Al-Ghazali was a great philosopher/psychologist. His ideas hold a unique position in the development of philosophy/psychology. Al-Ghazali was born in 1058AD and died in 1111AD. He studied Greek philosophy gaining mastery over it, and then studied religion and acquired a vast knowledge on that as well. Having a thorough knowledge of the subjects led Al-Ghazali to see a conflict between religion and philosophy. This conflict could only been seen by someone who had a vast knowledge of both the fields such as Al-Ghazali. The conclusion he drew, created so much stress and affected him so badly that he became physically ill. He continued his study for more than ten years and after much reflection on the subject, he was able to resolve the conflict for himself. He then gradually started to recover from his bad health.

Al-Ghazali had a unique idea about the soul of human beings. He taught that the soul was like God and said that “Allah has breathed His own spirit into man.” This entailed the soul being a higher expression of man’s existence. Therefore, Al-Ghazali also differed from Aristotle on the concept of unity of body and soul.

Another contribution of Al-Ghazali is that he distinguished between positive and negative virtues. In his views:

- Positive virtue is doing a good deed. For example if someone helps the poor that would be a positive virtue.
- And negative virtue is to avoid a bad deed. For example person avoids indulging into a criminal act.

Related to his idea of the soul being the higher expression of man’s existence, Al-Ghazali also distinguished between three stages of being which are:

- Lowest, the material world of existence
- The second is the physical world
- The third is the world of divine.

Al-Ghazali also gave a long list of vices such as hunger, sex, vice of speech, self assertion, love of wealth and hypocrisy. The vices of hunger and sex are physical needs. The vice of speech is to use bad words or to say such words which would harm someone. Another vice described by Al-Ghazali was a unique idea of self assertion which means that being over assertive and trying to dominate others and not listening to what they have to say. That is over asserting one’s own beliefs and thoughts. The next is the vice of love of wealth. According to Al-Ghazali like all other vices it makes a person forget about all moralities and values and he pursue his desires blindly. The last vice described by Al-Ghazali is the vice of hypocrisy which means that a person appears differently from what he actually is.

Al-Ghazali also described four kinds of love:

- Self love
- Love of a benefactor
- Love of beauty
- Love of harmonious interaction.

Self love is the love that an individual has for himself while the love for a benefactor is the love that an individual has for some one who takes care of his needs. For example the love for one's parents is the love for a benefactor. Third is the love for beauty which is possessed by every individual. Man has innate sense to love and admire beauty. This has been identified by Al-Ghazali. Last is the love for harmonious interaction which is the love for association with people. It is another of man's instincts which has been identified by Al-Ghazali.

One of Al-Ghazali's greatest contributions is that he proposed two kinds of selves:

- Nafsay-Ammarah; the primitive self or the negative, bad self
- And Nafsay-Mutminah; the satisfied self or positive good self.

Nafsay-Ammarah is original state of self in which man is dissatisfied. Nafsay-Mutminah is the satisfied self when the individual has achieved his potentials and desires and gotten rid of the bad self.

According to Al-Ghazali, man can change and improve himself from Nafsay-Ammarah to Nafsay-Mutminah by doing the right things which according to him are six:

- Masharaqa

This means to put oneself straight. When the person decides that he would change himself and do those things only which are right or which are deemed right by the society.

- Maraqaba

This means to guard oneself from evil and bad things.

- Mahasaba

This means to criticize oneself for anything which is not good, which would ultimately lead to the improvement of that habit or doing.

- Maaqaba

This means to punish the self for the wrong doing and forcefully restraining the self from it.

- Mujahida

This means to express the self in fully and properly and not keep anything hidden.

- Maataba

This means to cleanse oneself of any bad deed or doing.

In view of these ways of self discipline Ghazali is considered by many as a psychotherapist.

Ibn-Rushd, Averroes

Averroes is regarded as one of the greatest philosopher/psychologist of the Middle Ages. He is also known as Ibn-Rushd in Urdu. He was born in 1126AD and he died in 1198AD. Unlike some of the previous philosopher/psychologists, he followed the Aristotelian tradition of observation and empiricism and based his ideas upon logic, far removed from speculation and Socratic and Platonian way of gaining knowledge by insight.

Averroes's views were different from that of Al-Ghazali and he held the view that soul is not spiritual but material and mortal. He further stated that soul does not survive at death. Therefore he rejected and ancient view of the soul being eternal and the body being mortal. That is what Socrates used as a basis for his method of gaining knowledge by insight.

Averroes divided soul into five categories:

1. Nutritive

The nutritive part of the soul is responsible for the growth and development.

2. Sensitive

The sensitive part of the soul is responsible for emotions and feelings.

3. Imaginative

The imaginative part of the soul is responsible for the thinking process of the individual.

4. Cognitive

This part is responsible for association of ideas and for the process of solving problems.

5. Appetitive

This part of the soul is responsible for bodily needs such as hunger thirst etc.

Averroes taught that animals gain knowledge by sense organs, whereas man does it by intellect and knowledge gathered by intellect is the true and correct knowledge. Therefore his method of gaining knowledge was a combination of the Socratic and the Aristotelian tradition where Socrates thought that sensory organs were a hindrance to the acquisition of knowledge while Aristotle was of the view that knowledge needs to be gathered through empiricism rather than looking inwards.

Averroes further asserted that when a change occurs in the world, knowledge also changes. Therefore, knowledge is in a constant flux. Hence, man needs to constantly update his knowledge.

Averroes was of the opinion that all events have causes and denial of causes is denial of knowledge. This is known as determinism. He concluded that knowledge could therefore be gained by looking at causes of objects and events. In light of this theory, even accidents which apparently do not have a cause actually have a cause. For example a car colliding into a tree has apparently no cause, but there has to be a cause for the accident in the view of Averroes. The cause therefore may be that the car was being driven at a high speed or the steering wheel was turned in the wrong direction.

Averroes practiced the Aristotelian way of observation and rejected speculation as a way of acquiring knowledge avoiding unnecessary speculation even in religious matters. Later Europeans adopted Averroes's ideas and rejected speculation which was the reason for their civilization to advance at a rapid pace.

RENAISSANCE

Renaissance is a French word meaning “rebirth.” The term Renaissance is used to describe the development of western civilization that marked the transition from medieval to modern times. It is the period between 13th to 16th centuries AD. Earlier Europe had passed through what was called the dark ages the period between 5th and 11th centuries A.D., when all researches and fresh ideas were discouraged. Problems were not being solved in the light of research and observation but by invoking religious edicts. Intellectuals adopted Plato’s idealism while Aristotle’s empiricism and observation were rejected.

During Renaissance new ideas and fresh research was encouraged. There was a movement to search for ancient texts that would increase current scientific knowledge. Botany, zoology, magic, alchemy, astrology, and psychology were developed during the Renaissance as a result of the study of ancient texts. Scientific thinkers such as Leonardo Vinci and Galileo attempted to refine earlier findings. Many other great names also belong to this period, such as Francis Bacon, Newton and Kepler. As the Dark ages had an impact on the growth of philosophy/psychology so did the Renaissance.

Rene Descartes

An important name in this galaxy is that of a French philosopher/psychologist, Rene Descartes. He was born in 1596 AD and he died in 1650 AD. He was the shining star of the Renaissance; a soldier, scientist, mathematician, philosopher and a teacher. Descartes' methodology was a major influence in the transition from medieval science and philosophy to the modern era. In science, Descartes discarded tradition and supported rationalization and logic rather than ideas based upon experiences. Mathematics was his greatest interest; building upon the work of others, he originated the Cartesian coordinates and Cartesian curves; he is often said to be the founder of analytical geometry. He wrote a text on physiology, and he also worked in psychology; he contended that emotion was finally physiological at base and argued that the control of the physical expression of emotion would control the emotions themselves. His chief work on psychology appeared in 1649.

Descartes' main method of acquisition of knowledge was to doubt everything. This meant that to him the existence of everything was doubtful and anything that he is feeling or he is seeing may be an illusion. By logically, following his skepticism and his doubt Descartes had come to the conclusion that he could doubt everything. For example, when a person sits on a chair, according to Descartes, the chair may not actually exist and it might just be a deception of his or her senses. If a person is eating something, the food might not be there and it might just be his or her senses which are making him believe that he is eating. Following his skepticism and his theory of doubting everything, Descartes reached the conclusion that he could doubt everything in this world except for one; that was the fact that he is doubting. In other words doubting according to Descartes was beyond doubt. This conclusion further led him to conclude that a person can doubt everything in this world except for his thinking.

Based on these conclusions, Rene Descartes went on to say that because he thinks therefore he exists. This conclusion was beyond doubts, a correct conclusion. This means that the existence of an individual is indicated by his capacity and ability to think. His thinking distinguished him from other individuals. Descartes gave his conclusion as a French term: “Cogito ergo sum.” It means that “I think therefore I am.” In other words, once again thinking signifies the existence of a person.

In the light of this argument, he concluded that thinking or ideas are above everything else. In other words the thoughts are the exalted entities while the actions of the person below them.

Descartes went on to divide the human being into two parts based on his conclusions of superiority of thoughts. The two parts of the human beings are:

- The part that thinks
- The part that acts

The thinking part was obviously the mind or the soul. It thinks, contemplates, and makes decisions for the body. Then these decisions are conveyed to the part that has to act, which obeys the orders of the thinking part or the mind. The part that acts is the body of the human being. This meant, based on the conclusion that thinking was above anything else, that the mind or the soul was superior to the body. Descartes further proclaimed that the mind or the soul were eternal while the body was mortal. This concept was similar to that given by Plato and Aristotle that the mind or soul was a permanent entity.

Another great contribution of Rene Descartes was, that based on his conclusion about mind and the body, he proclaimed that the body is like a machine that obeys the orders of the mind. We can discover the operative laws of the body as we can discover the operations of a machine. This meant that Descartes supported the separation of body from the soul. The ancient Greek philosopher Aristotle had put forward the view of the unity of the soul and the body, but Descartes refuted his claim. This separation of body from the soul is called “Dualism” in psychology.

Further, Descartes was of the opinion that the soul is metaphysical while the body is physical. The soul of the person and his mind interact and influence each other. This is also proven by the fact that the soul thinks and orders the body which obeys, while on the other hand the body feels and receives stimuli for the soul. In his view, the soul affects the body by a gland that he called “Pineal Gland,” which he thought was the seat of the mind.

Descartes also distinguished between two types of thoughts:

- Innate thoughts
- And acquired thoughts

Innate thoughts are thoughts that we are born with. In other words these thoughts are inherited. On the other hand some thoughts are acquired thoughts that a person acquires through the course of his or her life, based on the experiences that he encounters.

Descartes is considered to be the first European who put forward the mechanical view of the body, which was that the body is like a machine which obeys the orders of the mind. He also proclaimed that the operative laws of the body were like that of a machine and could be discovered.

ASSOCIATIONISTS

Associationist is a group of three English philosophers/psychologists of the 16th century. Associationists are given this name because they believed in the concept of association of ideas. They are very important in the history of psychology and their theories are known as Associationism.

Thomas Hobbes

One of the most important names in the context of Associationism is that of Thomas Hobbes. He was born on 5th April 1588 AD and died on 4th December 1679 in Wiltshire, England. Hobbes was a philosopher/psychologist and a writer who is known for his book "Leviathan" which was published in 1651. Hobbes is also known for his emphasis on materialism. Hobbes was educated at Oxford and worked as a tutor to the son of William Cavendish, later the Earl of Devonshire. His connections to the royal family gave him opportunities to travel and pursue his studies, but they also put him in the middle of the English Civil War. In 1640 political turmoil forced him to leave England for France, where he continued to associate with scholars and scientists of Europe, including Galileo and René Descartes.

As mentioned earlier, Hobbes is considered an important materialist thinker of the time. Materialism means, greater interest in material possessions rather than spiritual values. Materialist thinkers were of the view that matter is dynamic, which means that matter changes from one form to another. Hobbes put forward the view that all we see including humans are different forms of matter and the laws that govern matter are also applicable to animals and humans, therefore these laws can be discovered. He contended that animals and man are in fact different types of machines and their functions and operations can be studied, understood, explained and even predicted. This mechanical view of human beings was initially given by René Descartes. Hobbes went on to elaborate the idea given by Descartes by saying that all human feelings and emotions such as laughing, crying, feeling hungry could be understood and explained in terms of functions of the human machines. This means that there has to be an input into the human machine in order to get an output in the form of the above mentioned functions of the human machine. For example, when a person is subject to heavy stress, he may start crying. A person who has not eaten for a long time starts feeling hungry. Therefore, the human machine has to have some sort of an input in order to give the above mentioned responses as its functions or outputs. Hobbes concentrated on finding similarities between humans and machines and this idea of finding similarities between man and machines is called "mechanical materialism," and Hobbes was one of its originators.

Hobbes was of the opinion that our thoughts and emotions are caused by the motion the external stimuli. As the variables of the external stimuli change, they impact the human body which results in emotions and thoughts.

He further proclaimed that motion in the brain creates thoughts. Then these thoughts get accumulated and get connected. This results in creating chains of thoughts or ideas leading to complex ideas. This is what has been termed as the association of ideas. Aristotle has also given his explanation of association of ideas which according to him is caused due to similarity, contiguity and contrast. Hobbes and two other associationists propounded this concept later that ideas tend to get associated.

Thomas Hobbes believed that knowledge can be acquired by observation through the sense organs. Therefore, he rejected the idea of introspection and agreed with Aristotle's empiricism as a means of acquiring knowledge.

According to Hobbes three things create association:

- Habits

- Wishes
- Repetition

Habits result in association of ideas. Wishes create linkages in ideas. A person who wishes for something links many ideas with his wish which in turn results in association of ideas. Further, repetition of event also results in association of ideas. This is similar to Aristotle's contiguity and similarity when two things happening close to each other or having similarity with each other result in association of ideas.

Because of his views of association of ideas he is called an Associationist by historians of psychology.

John Locke

Another important British Associationist was John Locke. He was born in 1632 AD and died in 1704 AD. Educated at Christ Church College, Oxford, he became (1660) a lecturer there in Greek, rhetoric, and philosophy. He studied medicine, and his acquaintance with scientific practice had a strong influence upon his philosophical thought and method. He is considered to be the founder of British Empiricism.

His major contribution in psychology came in the form of an Essay. In the *Essay Concerning Human Understanding* Locke examines the nature of the human mind and the process by which it knows the world. Repudiating the traditional doctrine of innate ideas, Locke believed that the mind is born blank and the world writes on it.

John Locke was of the view that ideas were not innate or inborn, but ideas were developed over the due course of time through experiences that an individual has. In other words he rejected the Platonic point of views of introspection and ideas being inborn. According to John Locke, the mind of a child at the time of his birth is like a clean slate. Locke called this clean slate a "tabula rasa." This means that the mind is open to all external influences. The slate is blank and anything could be written upon the slate. Experiences throughout the life of the individual write on the slate. This is how ideas and thoughts are formed. Therefore, ideas are not inborn; it is the environment around the individual that shapes his or her imagination, feelings and thoughts.

According to Locke, we learn by two ways:

- Sensations
- And reflection

Sensation is the acknowledgement of the stimuli by the body. For example if a person touches something hot, the body feels the hotness of the object and as a result person learns to avoid the hot object. This is learning through sensations, where a stimulus or may be stimuli induce the learning process to take place. On the other hand, reflection means the interpretation of the stimuli by the body. The individual interprets the stimuli according to his own perception. Therefore two persons may differ in their reflection i.e. the interpretation of the stimuli.

In Locke's views, sensations create ideas, but reasoning connects those ideas together and these connections or associations are the source of knowledge. When the sensations are interpreted, a reason for it is sought. This reason results in creating knowledge for the person. For example, the sensation of feeling something as hot may be interpreted by the person as the hot object being dangerous. Therefore, the person may reach the conclusion that hot objects are dangerous, the reason being that they hurt the body.

John Locke was also a political philosopher. He therefore contented that for the society to move forward, prosper and develop, it is essential to gather knowledge. Knowledge can be acquired through the process of sensation, reasoning and association of ideas. John Locke supported the Aristotelian view point of learning by empiricism rather than introspection. His method encouraged learning by observation. Because of his support for the theory of association of ideas, he is also considered as an associationist.

ASSOCIATIONISTS

David Hume

The third British Associationist was David Hume who was born in 1711 AD and died in 1776 AD. He was a philosopher and a historian. Educated at Edinburgh, Scotland he lived in France, where he finished his first philosophical work, A Treatise of Human Nature.

David Hume followed the Lockean viewpoint in saying that senses and observation are the true sources of knowledge and knowledge cannot be gained by looking into the mind. On the other hand Hume denied the existence of material world. The world is what the senses perceive it to be. For example, Hume was of the view that when a person sees a table lying in a room, the table exists because his sense of vision can detect it, but if the person goes away from the room the table does not exist anymore for him. Therefore, the existence of a material world is just a perception of the senses.

According to Hume, human mind tends to establish a cause and effect relationship. This means that if one event follows another, the first event is considered to be the cause and the second event is the effect. In other words, the apparent sequence of events in the external world is in fact the sequence of perceptions in the mind. From this statement Hume argued that our expectation that the future will be like the past has no basis in reason; it is purely a matter of belief. For example when we expect the sun to rise every morning, it is a belief based on the past experience.

Hume believed that the purpose of knowledge is to facilitate life. This is known as the Utilitarian approach according to which knowledge must serve life and it must have a purpose. Later James adopted a similar approach in purporting the idea of Pragmatism which means that everything has to have a practical application and reason.

Hume also distinguished between violent passions and calm passions. Violent passions for example are love and hate while calm passions are aesthetic and moral feelings.

FRENCH REVOLUTION

One of the greatest revolutions in the history of mankind is the French Revolution that took place in France in 1789. Throughout the 18th century, resentment increased in France against the nobles and the clergy, who lived lives of idleness and luxury. They paid no taxes at all while the peasants had to pay taxes to the church, to their local lord as well as the government. By the late 1780s the cost of the wars against England had left France bankrupt but except for the peasants still no one paid taxes. The result was a violent revolt against the government marking the end of monarchy and feudalism in France. It was one of the most important events in the history of mankind because it changed the outlook of man. It set an example for Europe and the rest of the world to follow. It had its impact on all the future developments of mankind, and ultimately the development of all disciplines including philosophy/psychology.

Denis Diderot

One of the important philosopher/psychologist of the era was Denis Diderot. He was French, born in 1713 AD and died in 1784 AD. Following the prevailing materialist point of view proposing that matter is dynamic and the movement of particles creates sensations and feelings in a body. It was similar to the viewpoint given by Thomas Hobbes. He postulated that thought and memory are the functions of the brain and man and animals possess memory. He was a follower of the Aristotelian tradition, believing that knowledge is gathered by observation.

Diderot said that knowledge and power come from observation and experimentation. He further proclaimed that the purpose of knowledge was not just to know the truth but it was to increase the power of man. Knowledge gave man the ability to understand things better and develop the power to judge things. It is only through observation and experimentation that man's thoughts and his conditions can be changed. Innate or inborn thoughts could not change the living conditions of man. By experimenting man can discover new techniques to make his life easy and comfortable. Therefore, his conditions could become better. This was later proved in the industrial revolution when research and development resulted in discoveries such as the steam engine which changed the history of man.

Auguste Comte

Another important thinker/philosopher/psychologist of the period was Auguste Comte, a French philosopher. He was born in 1789 AD, died in 1857 AD. He was educated in Paris and is considered as the founder of the school of philosophy known as positivism. Comte is also considered as the first Sociologist. He made the first contributions to what we now call the subject of Sociology laying its foundations. Sociology is the study of large groups of people. He sees the intellectual development of man covered by what is called the Law of the Three Stages—first, in which events were largely attributed to supernatural forces; second, in which natural phenomena are thought to result from ideas; and third, in which phenomena are explained by observation, hypotheses, and experimentation.

One of the important ideas of Comte was that, that there is no difference in the chemical elements of trees, animals and man. This implied that the laws that govern trees and animals are also applicable to man; animals and trees need certain elements from the nature to survive. Similarly man also needs certain essential elements from the nature. In other words, man is also an organism that may be controlled and manipulated like trees or animals.

Unlike David Hume who gave the idea of cause and effect relationship, Comte taught that we should not be too concerned about cause and effect relationships. He purported that we should gather information and then try to formulate connections between different pieces of information or facts gathered. He also said that scientists should avoid moral or ideological judgments which make their study biased. They should focus and concentrate only on gathering facts and collecting information. Collection of information is the only method by which we can understand, control and predict events.

Comte proposed that man's mind passed through three stages of growth and development:

- First stage

This was when man explained and understood events by referring to the super natural, gods and spirits. This meant that some supernatural forces or powers make things happen. This was the most primitive stage of development. As the bases of phenomenon were not found, a general explanation of attributing them to the supernatural was used.

- Second stage

This stage was when man explained events in mechanical terms. It was when man realized that nature and man have their own mechanical laws, which are responsible for events. The discovery of the laws being the basis of man and natural phenomenon was the stage when man inclined towards empiricism and gaining of knowledge by observation and through the senses.

- Third stage

The third stage was the recent stage. It was when man understood and explained events in a deterministic way. Determinism is to explain events in terms of a cause and effect relationship. This meant that when two events occur, one after the other, the first event would be the cause of the second event. This cause and effect relationship was also given by David Hume.

Comte was primarily a social reformer. His goal was a society in which individuals and nations could live in harmony and comfort. His system for achieving such a society is presented in his book, “the Course of Positive Philosophy.” In this work Comte analyzes the relation of social evolution and the stages of science. It is in this book that he gave the three stages of development of man’s mind.

The sciences themselves are classified on the basis of increasing complexity and decreasing generality of application in the ascending order: mathematics, astronomy, physics, chemistry, biology, and sociology. Each science depends at least in part on the science preceding it; hence all contribute to “sociology” a term that Comte himself originated. These are the major contributions of Auguste Comte.

GERMAN CONTRIBUTION**Wilhelm Liebniz**

The first German philosopher/psychologist in the present context was Wilhelm Leibniz. He was born in 1646AD and he died in 1716 AD.

One of the most important contributions of Wilhelm Leibniz is that the universe including human beings is made up of atoms. His theory was based on the preexisting belief of atoms forming the matter. Leibniz called these particles or atom as **Monads**.

Liebniz further proposed that Monads are spiritual in nature and they are permanent and indestructible. They have their own stages of growth and development. Liebniz said that objects are made up of lowest monads, animals of higher monads than objects and man is made of the highest monads of them all. We are born with these, and they develop with the passage of time.

Another contribution of Wilhelm Leibniz is that he proposed that the soul and the body exist and operate parallel to each other. This means that the body and the soul operate in the humans at the same time and complement each other in their functions. This view of parallelism of soul and body is termed as **psycho-physical parallelism**.

Immanuel Kant

Another great German philosopher/psychologist was Immanuel Kant who was born in 1724 AD and died in 1804 AD.

Kant was against introspection and believed that observation and empiricism can lead to knowledge. The important contribution of Kant in this regard is that he proposed that the human mind is active and it rearranges and catalogues information gathered by observation. This means that whenever an individual observes something, he stores the information in his mind. The mind performs the function of the storage house and also arranges the information for the individual. This may result in easy retrieval of the information and the information being associated with other pieces of information that are in the same category. Therefore, this combination of information results in formulation of ideas etc.

Kant proposed that the mind has an innate capacity to see unity in what is observed. This means that mind relates every observation and information to some other information and this is what was termed as unity. It finds different observations as similar because of the previously stored information.

Further, Kant proposed that mind has the capacity to give meaning to sensations and observation. The sensations received by the body are conveyed to the mind. Then the mind is responsible for interpreting these sensations and deciding how the person and the body have to react. Similarly for observation, the mind acquires all the information and tries to draw conclusions out of it. Therefore, the mind performs the function of an interpreter.

Kant's ideas are a mixture of Liebnisian and Lockean views. Liebniz proposed that in the sense both mind and body operate at the same time. Liebniz had proposed the concept of psycho-physical parallelism. On the other hand Kant's views were similar to Locke in terms that according to Kant there was not material existence of the mind and its operations. Kant further proposed that psychology could not become a science, since science deals in matter and mind is not material.

Friedrich Hegel

Another name belonging to the German epoch was that of Friedrich Hegel who was born in 1770AD and died in 1831AD.

Hegel taught that there is no conflict between mind or wisdom and nature or matter. He further proclaimed that there is a logical flow in nature, which can be discovered by logic and wisdom. This means that all the phenomenon of nature can be described in logical terms. It may have a cause and effect relationship or may otherwise be explained using simple methods of observational reasoning.

He postulated the view of Absolute idea. **Absolute idea** is the absolute truth and it is non-material. Hegel put forward the idea that objects and events can not be studied separately. This idea had the implication in his theory that if we want to study a person we must look into his family life, his political and religious ideas, his economic conditions etc. It is one of the most important features of Hegel's viewpoint. Hegel correctly and implicitly stated that the behavior of a person, his attitude and his actions are influenced by his environment. The kind of environment from which a person belongs to has to determine his own behavior. For example an individual living in a joint family system would have different attitude from one living in a separate family. He also purported that economic, political and social environment also influence the person, which can be understood by looking at the French revolution. The French peasants felt that they were being oppressed by the clergy men and the rulers. This made them revolt against both the church and the monarch.

Hegel proposed that objects and events affect each other and in turn get affected. Similarly human thought affects objects, and objects affect human thoughts. This means that humans tend to use their thoughts for the improvement or to make best use of the objects. On the other hand natural phenomenon related to the objects influence human minds and make humans develop new ideas and thoughts. In other words this conflict between objects and human thought leads to change, growth and development.

Hegel also proposed a theory of development of man's thought which states that development takes place in three stages. This theory is also based on the idea of the conflict between objects and thoughts. The three stages of development of thought are:

- The first stage is when man discovers some phenomenon. He tries to explain the phenomenon according to his own information. In other words, man discovers, generates an idea and calls it a thesis. This thesis is the basis of the thought or idea.
- Later when the idea has been proposed in the form of a thesis, further observation and interpretation results in the formation of its opposite or contradictory idea. This opposite or contradictory idea is called the anti-thesis
- Finally the two conflicting or contradictory ideas are merged together to form a new idea which is known as synthesis. This generates the explanation of the phenomenon.

In other words, there is first an explanation of the phenomenon. This explanation is then negated by another explanation. When both these explanations are combined it results in a final explanation which is called a **synthesis**.

As a whole these three steps by the development of a synthesis lead to growth and development. The synthesis ultimately also becomes a thesis and is then negated in the same manner as the original thesis. This process of negation of the synthesis as a thesis is called the **negation of negation**. It continues forever. Therefore, according to Hegel contradiction is basic mover of the entire universe, including man and ideas.

Old ideas generate new ideas, those are negated and new ideas are formed. This means that there are no permanent ideas in this world. Hegel also taught that we should look at the universe and see the logical connections between objects and ideas. These logical connections would explain various phenomena. This process is called the **dialectical process**. The dialectical process means that by looking at two things, i.e. the object and the ideas we can draw conclusions about them. These were the contribution of Friedrich Hegel.

INDUSTRIAL REVOLUTION

Perhaps the most important development in the last one thousand years was the Industrial Revolution of the late 18th and 19th centuries. This was the real beginning of our modern world. Its main features were:

- Hand to machine manufacture
- Home to factory production
- Natural power to mechanical power

It was also characterized by a movement of people from villages to new industrial cities and the rapid development of transport.

The steam engine was the heart of industrial revolution. The first really practical engine was invented by the Scotsman James Watt in about 1775. For the first time in history, people did not have to rely on human or animal muscle, wind or water, for power. Very quickly the steam engine was being used for many things other than powering textile machines. It was used to pump water from coal mines; to lift trucks of coal to the surface; to blow air into furnaces for making of iron; to grind clay for pottery, and to power new factories of all kinds. For over a hundred years, steam was the king of the industry.

Steam Engine being used for transportation



The rate, at which new inventions were made, accelerated. The industrial Revolution consisted, in some respects, of a chain reaction. The construction of machines required more iron; more iron required more coal; more coal required faster and more efficient transport; more transport required engineering skills of all kinds. The manufacture of larger quantities of textiles, for example, needed more chemicals; new chemicals needed more scientists; scientist needed more specialized education.

Large numbers of workers had to move to new towns from countryside: they needed transport, housing, water, sanitation, shops, entertainment, a police force and general organization. The increased amounts of trading led to the need for more services such as banking, the post and later transport systems.

The industrial revolution changed England, and then spread to France, then affected Germany, then Russia and America, then Japan and then the rest of the world. Machines replaced much of the manual labor, industry developed and flourished, means of communication became rapid, electricity was invented and used for commercial purposes and an industrial class emerged which replaced feudalism. New ideas and curiosity were encouraged, and man's outlook and his attitude changed.

The industrial revolution does a great deal to the modern world today. The effect of this revolution could be seen immediately on the whole outlook of man, and it ultimately affected all the future developments of mankind. Man's outlook became more empirical and more open towards new ideas and innovations.

RUSSIAN CONTRIBUTIONS

Ivan Sechenov



Ivan Sechenov

The first among the Russian contributors was Ivan Sechenov. He was born on 1st August, 1829 and he died on 2nd November, 1905. He taught at Moscow University. Ivan was physiologist, named by Ivan Pavlov as "The Father of Russian physiology." Sechenov authored major classic "Reflexes of the Brain" introducing electrophysiology and neurophysiology into laboratories and teaching of medicine. Sechenov's major interest was neurophysiology (the structure of the brain). He showed that brain activity is linked to electric currents and was the first to introduce electrophysiology. His work laid the foundations for the study of reflexes, animal and human behavior, and neuroscience.

Sechenov explained psychological functions in terms of physiological responses. This means that all psychological responses of the brain have some physiological reason or basis. In other words, when the brain acts in a certain manner, it is in response to certain physiological changes that have taken place.

Sechenov said that the mind and soul are the functions of the brain and that there is no duality between soul and the body. Therefore, he rejected the prevailing view of soul and the body being separate and accepted the Aristotelian point of view of unity of body and soul.

Sechenov concluded that all psychological responses are the result of sensory stimulation and that all psychological responses manifest themselves in behavioral forms. In other words, whenever there is a

change in the environment, it is received by the sensory organs of the body which convey it to the brain. The brain then reacts to these messages. This reaction of the brain is manifested in the form of the behavior of the person. For example when a person touches a hot surface, the sensory organs in his or her skin transmit the information to the brain which in turn sends back the signal to the body to withdraw away from the hot surface. Therefore, the behavior of the person is the response to the physiological change.

Sechenov also put forward the view that there are certain parts in the brain that augment and facilitate certain responses, and are certain other parts which inhibit certain responses. We now know this to be true. Sechenov's ideas deeply influenced the ideas of psychology and formed the basis of many new researches in the subject.

RUSSIAN CONTRIBUTIONS

Ivan Pavlov

Ivan Pavlov is one of the greatest psychologists of 20th century. His contributions to psychology formed the basis of many later discoveries in the field. Pavlov was born in Ryazan, Russia in 1849 and he died in 1936. His father was a man of church therefore Pavlov started off by studying religion. He later went on to study medicine. Initially he worked as a research associate at Leipzig, Germany, where later the first psychological laboratory was established. At a very young age, after working at Leipzig, Pavlov was appointed as a professor at the Imperial Institute of Experimental Medicine.

One of the greatest achievements of Ivan Pavlov was his research on digestive glands of human beings. When published, this research was regarded very highly in the academic circles. Ivan Pavlov has the honor of being the first and only psychologist who has ever received a Noble Prize. He was awarded the Noble Prize in Physiology and medicine in 1904 for his work on the digestive system. As the Soviet Revolution took place in 1917, the chances of any further research work being done by Pavlov became meek, as it was expected that the new government would not allow Pavlov to continue with the research. On the contrary, the new Soviet Government supported Pavlov. The government not only provided funds to Pavlov for his research, but also provided any necessary facilities that were needed to carry out the research.

One of the major contributions of Ivan Pavlov is that he began to see the linkage of physiology and psychology. This means that the physiology of a person, that is the way a person is made up, or the general structure of a person and his mind are linked up. They both influence each other. This finding of his was published in his book in 1923. This book was also highly regarded in the academic circles. This was the book in which Pavlov presented his ground breaking theory, and his most important contribution to the field of psychology; the concept of learning by conditioning. It has been elaborately explained in his book. It is actually the explanation of the link between psychology and physiology that Pavlov had discovered. Earlier Pavlov had studied the ideas put forward by Sechenov, another Russian psychologist, and was greatly impressed with them.

Pavlov conducted a series of experiments on animals and humans. His experiments of dogs resulted in the discovery of learning by conditioning. His concept of learning by conditioning was explained by him using the following basic terms:

a) Reflex

Reflex may be defined as an unlearned or an automatic response of the organism to a stimulus. For example, when a puff of air strikes the eye, the eye blinks; when a person touches something hot, he immediately withdraws his hand etc. In these examples, the puff of air and the hot object become the stimulus while the response is the blinking of the eye or withdrawing of the body. Importantly all these actions are involuntary and a natural reaction of the body towards stimuli. This reaction is what has been termed by Pavlov as reflex.

b) Unconditioned stimulus (UCS)

It is a stimulus that elicits a natural response. In other words, it is a stimulus which causes the body to respond to itself, although the body is not conditioned to it. For example, when a bell rings, a dog which is able to hear the sound of the bell pricks his ears in response to the bell. Therefore, the dog responds to an unconditioned stimulus. The dog has not learnt to respond to the stimulus in that manner.

c) Unconditioned response (UR)

It is a natural response of an organism to an unconditioned stimulus. For example, when a dog looks at food, its mouth starts to salivate. This means the stimulus that the dog has received from the environment, it is not conditioned, but the dog reacts in a certain manner to the unconditioned stimulus.

d) Conditioned stimulus (CS)

According to Pavlov, when we combine a neutral stimulus with an unconditioned stimulus, it evokes a different response. This response has been termed as Conditioned Response which is a result of the conditioned stimulus. The conditioned stimulus is when a dog is presented with the ringing of a bell along with food. This is expected to cause the effect of salivation in the dog's mouth. In other words, the stimulus of food has been conditioned using the stimulus of the ringing of bell.

e) Conditioned response (CR)

As the conditioned stimulus is given to the organism, it reacts in a certain manner, which is known as the conditioned response of the organism. In the previous example, a dog was presented with the stimulus of the ringing of a bell and that of food. This resulted in salivation in the mouth of the dog. But later, if the dog is presented with the stimulus of the bell alone, it is expected to salivate. This means that the response of the dog has been associated with the conditioned stimulus rather than the original stimulus of the food. The dog would give the same response as it gave to the stimulus of the food.

Based upon these basic elements, Pavlov put forward the idea of how animals and human beings learn. According to him, when an unconditioned stimulus and a conditioned stimulus are repeatedly presented together and they invoke an unconditioned response, it would later result in, that only the presentation of a conditioned stimulus evokes the same response as before.

In simple terms, considering the example given earlier, if ringing of a bell and food are presented together to a dog, and these lead to salivation, after repeated trials when the bell alone is rung, it evokes the response of salivation because the dog has learnt to expect food with the ringing of bell. This is how Pavlov showed by his experiments that animals and humans learn. Based upon his experiments he also formulated some principles of learning which are as follows:

a) Acquisition

According to Pavlov, learning in humans and animals takes place when the paired stimuli results in a response from the organism and the response is reinforced. That is if a dog is presented with food and ringing of bell at the same time, it results in learning of a certain response by the dog.

b) Extinction

If the conditioned response is not reinforced, the response disappears. This process is known as extinction of the conditioned response. For example if a dog is given food with the ringing of bell and later the dog is not given food with the ringing of bell, the dog would stop expecting food with it. This would result in disappearing of the conditioned response of salivation by the dog.

c) Spontaneous recovery

When the conditioned response of an organism disappears because the conditioned stimulus is not paired with the unconditioned stimulus, the process is extinction. The organism would not show the conditioned response as long as the conditioned stimulus is not reinforced, but once reinforcement is introduced, the extinguished conditioned response is quickly recovered. This means that when a dog is not given food with the ringing of bell, it stops expecting food with it. But as soon as the ringing of the bell is accompanied with the food, the dog again starts expecting food with the bell. This is known as spontaneous recovery.

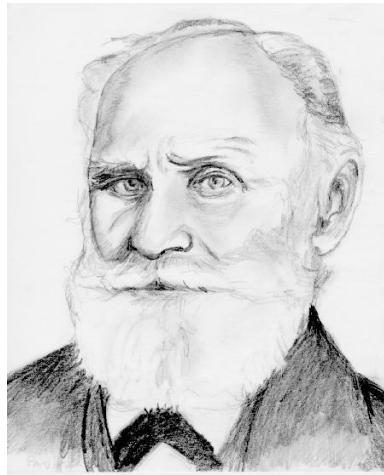
d) Generalization

According to Pavlov, when similar stimuli evoke a conditioned response, it is a case of generalization. This means the dog which shows the conditioned response of salivating on the ringing of bell, when presented with a similar stimulus of ringing; it may show the same conditioned response as before.

e) Discrimination

When a slightly different stimulus does not evoke a conditioned response it is a case of discrimination. This means that for example, the dog is given the stimulus of the ringing of a bell with food using a special type of bell. When it has learned a conditioned response, the type of bell is changed and a similar bell is used. This then does not result in the conditioned response (salivating) of the dog. In other words, the dog has discriminated between the two types of stimuli.

This was the theory of learning presented by Pavlov. Some other contributions of Pavlov are also of significance in the field of psychology which shall be explained later.

RUSSIAN CONTRIBUTIONS

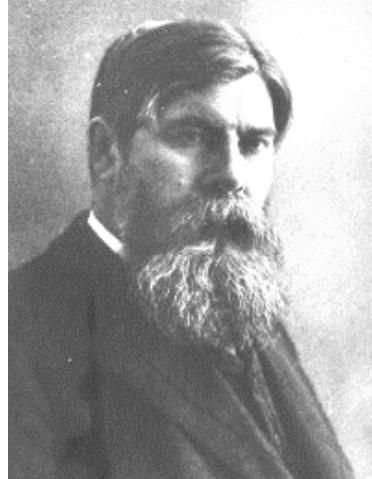
Ivan Pavlov (1849-1936)

Ivan Pavlov

Ivan Pavlov is one of the greatest psychologists of the 20th century whose ideas left a long lasting impact on the field. The importance of Pavlov's discoveries can be gauged from the fact that his theories, as they emerged from his experiments, are today applicable to a very large area of psychology, including:

- Animal/comparative psychology
- Child psychology
- Educational psychology
- Organizational psychology
- Industrial psychology
- Sport psychology
- Psychology of advertising
- Clinical/Abnormal psychology
- Psychotherapy

That is the magnanimity of the impact of Pavlov's discoveries on modern psychology.



Vladimir Bekhterev (1857-1927)

Vladimir Bekhterev

Another contributor from Russia whose name deserves to be mentioned is Vladimir Bekhterev. He was born in 1857 and died in 1927. He studied under Wilhelm Wundt, the psychologist who established the first psychological laboratory at Leipzig, Germany.

One of the major contributions of Bekhterev is his experiments on animals and humans using mild electric shocks. In other words, Bekhterev used electric shocks of low voltage which were not harmful, for humans and animals. He then noted the response of the organisms to the shocks. The idea behind this experiment was to trace the effect on learning. Bekhterev noted that shocks are associated with withdrawal reaction. Withdrawal reaction means that humans and animals tend to move away from the source of the stimulus. In other words, the action of the organism is to avoid the stimulus which was felt harmful by the body. It therefore moved away. This response was called Associative reflex by Bekhterev. He stated that associative reflex was learning which was similar to learning by conditioning as given by Pavlov.

Another contribution of Bekhterev is that he gave the idea of physical energy to explain the phenomenon of consciousness. He proposed that consciousness is a form of physical energy. The energy resulted in the person being aware of himself and his surroundings. He further stated that all higher psychological functions such as thinking and generation of ideas are the forms of expression of physical energy which represented the consciousness.

IMPACT OF PHYSICAL SCIENCES ON PSYCHOLOGY

As the thinking of man went through various phases of development, psychology also underwent developments. By the end of the 19th century and the beginning of the 20th century, the world and particularly Europe, had witnessed three earth-shaking events in the last two hundred years. The first one was the French revolution which had resulted in abolition of feudalism and monarchy, setting an example for Europe and the world to follow. This revolution had a great impact on thinking of man. On the other hand the industrial revolution of the 18th century was another ground breaking event of the same era. The Industrial revolution in England, Europe, America and Japan had replaced much of manual labor with machines. New towns were established. The third event was the Soviet Revolution in Russia. In Russia the Bolshevik party had overthrown the monarchy, ended feudalism and abolished the concept of private property. All means of production were nationalized and owned by the state meaning that Socialism was established in the state.

The impact of these three events was that the industrialization spread giving rise to an attitude of encouragement of new ideas, initiative and stress on research. Keeping this brief background in view, let us see what impact some physical sciences had on psychology by looking at the contributions of two scientists.

Charles Darwin

One of the most important scientists of the 19th century was Charles Darwin. He was born in 1809 in England. He got education there and undertook research in Botany, Zoology or Biology. Therefore, Darwin was basically a man of physical sciences rather than psychology but as we shall see, Darwin related his theories of physical sciences with psychology. Darwin died in 1882.

Charles Darwin traveled and conducted experiments in many parts of the world. He collected samples of plants and observed animals. He discovered that animals in one part of the world were different from other parts of the world, but in areas where the conditions were similar, the animals were also similar. He noted this particularly in tortoise. Based upon his extensive research and observation he proposed that man can be studied the same way as we can study animals.

One of the greatest contributions of Charles Darwin is that he put forward the view that life and survival in the world requires constant struggle and battle against hostile forces. He stated that only those organisms survive who can fight the battle and win while weak organisms perish. This is the law of the nature. This law is called "Survival of the Fittest" which was given by Darwin in an article written by him. Relating it to psychology, Darwin said that psychology is a study of tactics of organism for survival and emotions are an important factor for survival of the organisms. This means that organisms use their emotions to accomplish the task of fighting against the hostile environment and forces.

For example, when an animal shows its teeth to a predator in anger, the predator is scared. The animal is actually expressing its emotions. The emotions may merely to scare the enemy. On the other hand, when an animal screams or cries, it is actually calling others for help. Therefore, according to Darwin, this is how organisms use emotions to survive in the battle of nature. Darwin was able to relate the battle for survival in the nature with the psychology of the organism. This reflects his aim of discovering the link between physiology and psychology.

Another contribution of Charles Darwin is he put forward the view that environment plays a dominant role in determining the psychology of a person. This means that the environment, in which a person lives, influences his thinking, his imagination, the way he behaves and his overall personality. This proposition of Darwin gave rise to the nature versus nurture controversy; which means that it is quite uncertain that whether it is the nature that shapes the thinking and behavior of a human being or it is the

bringing up that shapes it. Therefore, man's thinking is either a product of the environment that he lives in, or the training that is imparted onto him. It was later proved that there was a lot of truth in what Darwin proclaimed.

Gustav Fechner

Another scientist belonging to the world of physical sciences whose thinking had an impact on the development of psychology was Gustav Fechner. He was a German physicist, who was born in 1801 and died in 1887.

Fechner is known for devising ways of measuring psychological experiences in physical terms, called psycho-physics methods. Psycho-physics methods are methods in which Fechner proposed to measure what a person was experiencing psychologically. The measurement was in physical terms using laws of physics. This was one of the most important contributions of Fechner, apart from other noteworthy contributions.

In order to explain the relationship between psychological experiences and their physical measurement, Fechner proposed the concept of "Sensory Threshold". According to Fechner, sensory threshold is the minimum stimulation required by a sense organ to register a stimulus. This means that, to which intensity of the stimulus the sensory organs of body would be able to acknowledge the existence of that stimulus. For example at which level of volume, a human ear would be able to detect sound.

Fechner went on to identify the "Absolute threshold" which is a stimulus value that evokes a response 50% of the times. This means that when a stimulus is given repeatedly for 100 times, if it evokes a response 50 times, that is the absolute threshold.

Fechner also identified the "Differential threshold" which is the stimulus value where one stimulus is regarded as different from another stimulus 50% of the time. This means that when two similar stimuli are given repeatedly 100 times, the difference is noted 50 times. This is the differential threshold. Fechner also devised the method of measuring the absolute threshold; it is called the method of minimal changes.

Because of these contributions, particularly because of his inventions of methods of measuring psychological experience in physical terms he has been called the father of psychophysics.

STRUCTURALIST SCHOOL OF PSYCHOLOGY

Before the arrival of the Structuralists, psychology was already being considered as the study of consciousness. This meant that the entire scope of psychology encompasses the study of man's consciousness. The distinguishing feature of the Structuralists was that they added further to the definition of psychology being the study of consciousness; psychology to them was concerned with the study of the structure of consciousness. Therefore, Structuralists are philosophers/psychologists who defined psychology as the study of consciousness. Further, Structuralists also tried to solve the enigma of a definition of consciousness. It was imperative to give a definition of consciousness in order to substantiate the view point of psychology being the study of structure of consciousness. Therefore, Structuralists put forward the view that consciousness has a definite structure and it can be defined in terms of its structure. The concept of definite structure was given by this school named Structuralists.

The structuralist school has many followers, but two of the very important names who belong to the Structuralist school of thought are Wilhelm Wundt and Edward Bradford Titchner.

Wilhelm Wundt

Wilhelm Wundt was born in 1832 and died in 1920. Thinking of man evolved with the passage of time as his surroundings change. Earth shaking events like the industrial revolution had caused man to shift towards empiricism. As a result of the work of Russians, Sechenov and Pavlov on discovering laws of learning by conditioning, through experimentation; the contributions of Darwin discovering the relationship between psychology and physical sciences; and Fechner discovering physical ways to measure psychological experiences, psychology was defined as the study of consciousness. Psychology had finally ceased to be a merely speculative science and was gradually becoming an experimental science based on facts and logical conclusions which were drawn through carefully conducted experiments and profound observations.

But most of the credit goes to Wilhelm Wundt who recognized that psychologists must adopt a scientific outlook and adopt experimentation as the methodology, if psychology is to expand and flourish. As mentioned earlier, by this time, events like the French revolution and the Industrial revolution had changed the outlook of man. Man had become more logical in his approach and tried to find reasons for everything. Therefore, based on these grounds, Wundt based his proposition that since speculation could not be the mode of scientific investigation any more; therefore, psychology also has to adopt the new mode of investigation if it has to become a science.

Wilhelm Wundt is known for establishing the first psychology laboratory at Leipzig, Germany, in the year 1879. This was one of the greatest leaps in the transition of speculative outlook to the scientific outlook, facilitated by Wundt.

Wundt defined psychology as the study of consciousness. He further argued, that if consciousness exists, which actually does, then it must have a structure. To elaborate his viewpoint further, he went on to explain the structure of consciousness. According to him, consciousness could be studied by three things:

- Experimentation:

Experimentation was the most important mode of scientific investigation which according to Wundt was the need of hour for psychology to develop. Psychologists therefore, needed to conduct experiments which revealed the true nature of consciousness. In this regard, Pavlov was known for his experiments that he conducted on dogs to discover the process of learning.

- Introspection:

Although Wundt believed that psychologists should adopt a scientific outlook, he did not reject introspection as a method of gaining knowledge, because he regarded introspection as a mean of looking into and understanding the structure of consciousness.

- Looking at the past history of man that has shaped his consciousness:

Another method of studying the structure of consciousness is by looking at the past history of man. Darwin was the first one to give rise to the nature versus nurture controversy. According to him, it was the environment that shaped the thinking of man, or the way he is brought up. Therefore, according to Wundt, looking into the past of individuals gave insight into the consciousness of the individuals.

Wundt himself also conducted some experiments and based upon them he proposed that consciousness is a process which has three compartments:

- Ideas
- Feelings
- Emotions

He went on to say that the compartment of feelings can be divided as follows:

- Pleasant/unpleasant
- Relaxed/tense
- Calm/excited

Wundt also outlined the abnormal states of consciousness. He then went on to elaborate hallucinations, hypnotic states and dreams. According to him, all of these abnormal activities of the consciousness are caused due to the break down of attention.

Because of his elaboration of various parts of consciousness, he is classified as a structuralist today. He is regarded as one of the greatest psychologists of the year and holds a high position in the history of psychology.

Edward Bradford Titchner

Edward Bradford Titchner was born in 1867 and died in 1927. He was an English man and pupil of Wundt. He studied in Germany, and worked all his life in America.

Contributions of Titchner to psychology can be gauged from three things that he tried to do, are:

- Contents of consciousness

This means that Titchner explained what consciousness is actually composed of. He then went on to elaborate the contents of consciousness.

- Combination of these contents

The second contribution of Titchner is that he described the combination of contents of consciousness which means that, which contents get together to result in an activity.

- Connections between the contents

The third contribution of Titchner is that he explained the connection between the contents of consciousness which means that consciousness is a product of contents being related with each other and working together.

Unlike Wundt, who gave three methods to study consciousness, the subject matter of psychology, Titchner argued that since the only way psychology could be studied was introspection which he defined as systematic and controlled self observation.

This is where he carried forward the view of his teacher, although he did not emphatically propose experimentation as the way of understanding consciousness. Titchner went on to say that introspection is a special method of gaining knowledge and understanding consciousness and not everyone could introspect. This made him train subjects to introspect.

Wilhelm Wundt, who was a teacher of Titchner, tried to establish a scientific outlook of psychology. But there was a flaw in Titchner's ideas, which was that he took psychology back to the realm of speculation and moved away from the modern empirical approach.

Wundt is also regarded as a Structuralist because he also emphasized on psychology being the study of consciousness and explained the structure of consciousness and described the content of consciousness.

FUNCTIONALISM

Various schools of thoughts have emerged in psychology in the last two to three hundred years. These schools differed from one another on the basis of what they reckoned as the subject matter of psychology and how they explained it. One of the early major schools in the development of psychology is the functionalist school.

Like the Structuralist school, Functionalists also defined psychology as the study of consciousness but instead of explaining the structure of consciousness and describing its content, Functionalists focused on, as the name implies, the functioning of consciousness. There are two branches of functionalists:

- American functionalists; those who were on the American continent.
- European functionalists; those who were on the European continent.

American Functionalists

American functionalists are philosophers/psychologists who practiced on the American continent and considered psychology as the study of consciousness, focusing on functions of consciousness.

William James

William James was born in 1842 and he died in 1910. He was an American philosopher, brother of the novelist Henry James. In 1872 he joined the Harvard faculty as lecturer of anatomy and physiology, after 1880 worked in the department of psychology and philosophy, continued teaching until 1907. In 1890 he published his brilliant and epoch-making book *Principles of Psychology*, in which the seeds of his philosophy are already discernible. James's fascinating style and his broad culture and cosmopolitan outlook made him the most influential American thinker of his era.

James is considered the founder of the sort of thinking called functionalism. The basic question that was raised by James when he purported his theory was that "what is the purpose of consciousness?" Therefore unlike the Structuralists who emphasized on explaining the structure and the parts of consciousness, James came up with a completely new point of view. He focused on why we need consciousness. This need is the function that the consciousness performs, therefore his theories focused on explanation of the functions of consciousness and he is known as the founder of functionalist school.

William James put forward the view that consciousness is not epiphenomena, means that consciousness cannot be considered as something whose functions or working cannot be explained. Consciousness has to have certain set patterns of functions and it shall always work according to those patterns. Therefore, if we consider consciousness to be an "epiphenomena" it would be wrong. Consciousness needs to be studied and understood in order to explain its functions.

Explaining the function of consciousness, James put forward the view that consciousness creates adjustment between the organism and the environment. This means that the organism needs to adjust and adapt its environment in order to survive. This adaptation process is carried out with the help of consciousness. Consciousness helps the organism to understand the environment and cope with the changes in it.

James was also of the view that not just consciousness but all human psychological functions have a definite purpose. For example, fear in an animal creates movement in the body; laughter reduces tension etc. Therefore, the importance of all these psychological functions as well as consciousness is due to their

functions. If these functions are disturbed, the organism cannot survive. Therefore, instead of focusing on the structure of the consciousness, scientists should focus on the functions.

His view was based upon his philosophy of pragmatism which means that the validity of an idea is tested by its consequences. In other words, when we need to assay how valid an idea is we need to look at the consequences of the application of idea. If the consequences are as expected, the idea is correct, if not, the idea is wrong. Adopting a pragmatic approach, James was able to give the idea of the functions of consciousness being more important.

William James is also known for his theory of emotions, now called James-Lange theory of emotions. According to this theory, emotions are the consequences of perceptions of bodily changes. For example, a person feels angry because he strikes something. The perception that is generated by this event results in generation of certain responses which are emotions. In this case the emotion would be anger.

He also emphasized that repetition is most important for learning and it creates habits. Therefore, we can develop habits by repeating certain acts. In other words, if we want to develop a habit of something, we need to perform the thing again and again or repeatedly. Ultimately it would become a habit. These were some of the contributions of William James.

John Dewey

The other prominent American functionalist was a philosopher, psychologist and above all an educationist, John Dewey, born in 1859 and died in 1952. He taught at the universities of Minnesota, Michigan and Chicago and at Columbia from 1904 until his retirement in 1930.

Since John Dewey was an educationist, his theories focused on the field of education. Dewey put forward the view that education, particularly of children, should be based upon the needs of the children. This means that children of different ages have different needs. The education system should concentrate on understanding those needs and should adjust itself to meet the needs. In other words, while forming an education system, the needs have to be focused upon. For further understanding, children have different educational needs during his or her developmental stages. These needs need to be focused upon. This was one of the greatest contributions of John Dewey. His point of view had a great impact on educational practices in the States and globally.

EUROPEAN FUNCTIONALISTS

David Katz

The first of the European functionalists was David Katz. He taught psychology at Stockholm, Sweden, for a number of years. In order to develop theory of functions of consciousness, Katz experimented upon how we see colors. He showed through his experiments that the perception of colors remains constant in different lights. This means that if someone is asked about a color in one kind of light, his or her answer would be the same in another kind of light. But in reality, colors change because of different lights. David Katz showed that human subjects see them as before. This he called the “phenomenon of color constancy.” Katz purported that color constancy is a function of the consciousness which makes the person perceive a color in the same way as before. Therefore, Katz also focused on explaining the functions of consciousness and hence included in the functionalist school of thought.

Edgar Rubin

The other European functionalist was Edgar Rubin who taught at Copenhagen, Holland. Rubin showed by his experiments on perception, that human beings see shapes in terms of figure and ground. This is not just limited to the sense of vision but also on other senses. For example, in case of the sense of vision, sky is the ground and clouds are the figures. When we look at the clouds, we acknowledge their existence because they exist in a background of the blue sky. Further, when we look at a tree, the sky again serves as the background while the tree is the figure in the background. In case of other senses, the sense of hearing also depicts this phenomenon. When we listen to a song, the music being played is the ground and voice of the singer is the figure. Therefore, Edgar Rubin also focused on how the consciousness functions rather than the structure of the consciousness.

Jean Piaget

The third European functionalist was Jean Piaget who worked at Geneva and Zurich, Switzerland. Piaget is famous for his theory of how children's minds develop.

He postulated the concept of Schemata. According to him, Schemata is a construct or an idea in the mind of children that how the world is, and how the world functions. In other words, it is what the children perceive about the world around them. They think about how everything occurs, how things go about and how they function. Of all this they make up explanations which according to Piaget is a Schemata.

Schemata develop over the time by two processes:

- Assimilation
- Accommodation

Here, assimilation is the absorption of new and different information about the world and accommodation according to Piaget is the expanding, stretching and changing of schemata to absorb new information about the world. This means that when a child is exposed to various happenings of the world he absorbs information from the happenings. This information, collection or absorption process is called assimilation. On the other hand, the information is a subject to constant change. As the child grows, he is exposed to more and more information which requires constant refurbishing of the previously gathered information. This process is called accommodation.

Another contribution of Jean Piaget is that he elaborated how children develop. According to him development takes place in four stages:

- The sensory-motor stage

This is the first stage of development when children learn using their sensations. For example a child touches a hot object and is hurt, this would create awareness in his or her mind that touching hot objects is harmful. Therefore, the child learns by using the sensations. Further all sensations like hot, cold, rough, smooth shall result in learning.

- The pre-operational stage

This is the second stage when the child for the first time, discovers rules and principles of how things work. In other words, the child has the primary or initial information about the working of the things that he sees around him. It is above from learning just through senses.

- The concrete operational stage

This is the third stage when his reason and logic develops and he learns by reasoning. This stage combines the information gathered from the previous two stages and the child is able to develop his own explanation of the things.

- The formal operational stage

This is the most developed and the last stage of development where the child is able to learn by abstraction. In other words, the child is able to draw conclusions about working of things, and phenomena using his own ability to associate ideas, perceive, think, and explain the happenings.

Jean Piaget therefore studied psychological functions in terms of learning and in terms of development. This means that he focused on how learning and development takes place. In other words, he also focused on the functions rather than structure of psychological phenomena. He is therefore included in the functionalist school as a European functionalist

BEHAVIORISM

One of the greatest developments in the history of mankind is the industrial revolution of the 18th century. It marked the advent of a completely new era of thinking and approach towards gaining knowledge. A rational approach was adopted and the ancient speculative methods given by the Greeks were rejected. The industrial revolution had a deep impact on the development of human thoughts; therefore the discipline of psychology was also bound to be impacted.

The path of this influence on psychology is easily traceable. As industry developed and manual labor was shifted to machine labor, there were a number of changes in society and human behavior. New towns were established, close to the factories; housing shifted from huge farm houses to small houses; labor working hours and habits changed; dependence on modes of living changed as well. One of the impacts of the industrial revolution was that, as the production shifted from manual labor to factories, the production increased rapidly. Therefore, new markets were sought and it became imperative to predict and control human behavior, in order to sell more. Another aspect of this development was that the attention of researchers now shifted towards these workers aiming at getting maximum productivity from the industrial labor. This productivity was based on human behavior and the result was that, the need to study human behavior arose. As mentioned earlier, man had become more rational in his approach and had disposed of speculation as a means of gaining knowledge. This made him focus on concrete facts and adopt scientific approach in his study. Psychologists started analyzing, predicting and controlling human behavior since it was visible while consciousness was not. It gave birth to the school of thought now called the Behaviorist School.

Edward Lee Thorndike

Edward Lee Thorndike was an American behaviorist philosopher/psychologist, who was born in 1874 and died in 1949. After completing his studies Thorndike moved to Harvard University, where William James had set up his psychological laboratory. Thorndike had read James and was impressed with his work on functions of consciousness. He set up his lab at Harvard, working with chicks but later transferred to James' house where he did his experiments on cats which are his most famous experiments. He devised the "puzzle box" which he used for these experiments.

Based upon his experiments he formulated what he called "laws of learning," or how learning takes place. In other words, Thorndike made efforts to learn how the process of learning actually takes place. Before we look at those laws, first let us have a look at the concept of learning that Thorndike proposed. He said that learning takes place by stimulus-response connections rather than by association; according to him learning takes place by two ways which he called laws of learning. The laws are as follows:

i. Law of effect

The law of effect states that all responses that followed by satisfaction are stamped into an individual and he learns those responses. This means that any act that is performed by an individual, when it is reinforced by a reward that brings satisfaction to the performer, the act becomes learnt.

For example, if an animal such as a cat is rewarded with food if it performs a certain act, the act shall be learnt by the cat. This is what Thorndike concluded through his experiments.

ii. Law of exercise

The law of exercise states that responses that are repeated are also stamped in and become learnt. This law does not focus on the reinforcement through satisfaction but states that when the individual keeps on performing a certain act, the act is learnt. In other words, the exercise that is constantly performed by an individual is learnt by him or her.

The law of effect given by Thorndike is similar to Pavlov's law of conditioning by reinforcement and the second law, i.e. law of exercise is similar to James's theory of habit formation due to repetition.

As mentioned earlier, Thorndike devised the puzzle box for his experiments. The puzzle box was a box with a door operated through a lever in it. A string with a ring was attached with the lever, which released the door of the box, when pulled. The box was big enough to accommodate a cat. Thorndike used cats for his experiments. As the cat was trapped in the box, it tried hard to escape. The only escape possible was through the door which opened by pulling the string attached to the lever. As the cat pulled the string with its paw, the door of the box opened and it escaped. When the cat was put into the box a number of times, it learnt to use the string to escape. Therefore, based on this observation, Thorndike came up with his laws of learning.

Thorndike also emphasized on a concept important to learning, which he called the "Recency effect." He saw in his experiments on cats that the last act in the series of acts by the cats, which is reinforced, is learnt quickly. For example if a cat is rewarded for the last act which it performs in a series of acts, the last one shall be learnt by the cat. Therefore, as the name implies, the law relates to the most recent act performed by the subject which is learnt by it.

Thorndike performed further experiments to substantiate his laws of learning. This further experimentation and observation lead him to repeal the law of exercise, and modify the law of effect. He then proposed the "law of belongingness" to explain animal learning.

iii. Law of belongingness

The law of belongingness states that only relevant responses that "belong" to the learning situation are learnt. For example, the moving of paws by the cat in the puzzle box is learnt but not pricking of ears.

Thorndike could be classified as a behaviorist because he explained learning as a psychological function in behavioristic, observational terms. He did try to look into consciousness but restricted his studies to the behavior of animals and used comparative psychology to explain human behavior and learning.

BEHAVIORISM

Albert Weiss

Albert Weiss was an early behaviorist who was born in 1879 and died in 1931. He was born in Germany but he came to America when he was very young. He studied and worked for the rest of his life in America, therefore he is considered to be an American behaviorist.

The era of the behaviorists was the time when man had adopted a rational approach towards gaining of knowledge and speculation was no more considered as a means for it. This was the time after the industrial revolution which changed the outlook of mankind completely. Writing on psychology, Weiss asserted that anything that cannot be studied with the methods of natural sciences should not be a part of psychology. In other words, anything that is based on mere speculation and cannot be substantiated by concrete evidences should not be a part of psychological study. In other words psychology should concern itself only with observable concrete facts and not with elements, structure or functions of consciousness because these variables are not directly observable. As the Functionalists and Structuralists before the behaviorists had been trying to develop theories about the structure and functions of consciousness, Weiss rejected their approach. To him their methods of explaining phenomena were based on speculative studies.

Weiss further stated that psychologists only pretend when they regard introspection as a method of scientific data collection. This was the method adopted by the schools before the Behaviorists.

One of the important arguments of Weiss is that there are no mental forces apart from physiological forces which are reducible to physical forces. In other words, all mental forces can be studied using a physiological approach and not considering them to be extraordinary forces which cannot be studied through ordinary scientific methods of inquiry.

Another contribution of Albert Weiss is that he also noted the impact of social forces on a person. He said that every person's behavior is impacted by social forces. This means that the social environment, in which an individual lives, influences his or her behavior and thinking. Therefore, he regarded human beings as a product of biological and social factors. He stated that humans are biological and social in nature and psychology is a bio-social science which focuses on relating the biological processes of learning and human behavior with the social environment that is responsible for them.

Edwin Holt

Edwin Holt was another early behaviorist who was born in 1873 and died in 1946. He was at two of the top universities in America; Harvard and at Princeton. He agreed with the contemporary point of view prevailing on the American continent that psychology should concern itself only with directly observable facts and data. The speculative methods of learning and exploring were rejected by him like all other behaviorists. Therefore, he also declared psychology be a scientific discipline which was based on rationality. Only the facts that could be substantiated should be considered in psychology.

Holt further proposed that psychology should concern itself with behavior, therefore he is also considered as a behaviorist. According to him, behavior is the result of two factors:

i. Learning

Learning takes place when an organism is exposed to internal or external stimulation, e.g. internal stimulation may be hunger, thirst etc. while external stimulation may be heat, coldness etc. Organism behaves in response to these stimuli.

ii. Canalization

Further, behavior is also the result of canalization which is what we learn in our childhood. Childhood experiences influence and produce behavior and in any study of psychology we must not ignore those childhood experiences.

Walter Hunter

The third early behaviorist was Walter Hunter, born in 1889 and died in 1953. He proclaimed that he started with dealing in psychology of experience and shifted to psychology of behavior.

He proposed, agreeing with his contemporary psychologists, that psychology should concern itself with observation of behavior of humans and should not concern itself with the problems of consciousness. He said that Wundt was partly correct when he studied consciousness as the subject matter of psychology because consciousness is merely a name used to describe concrete objects in the environment. In other words, a person's consciousness mostly comprises of objects in his environment, which is a view point similar to the one given by Weiss. Environment plays a dominant role in determining a person's behavior and his habits. The prime example relevant here is the impact of the industrial revolution. The example could be related to the behavior of the psychologists themselves. As the environment of mankind changed from speculation to rationality and factualism, psychologists also shifted towards scientific outlook. The need was to have the greatest productivity from the labor force, which was of course related to the study of behavior. Therefore, psychologists shifted towards the study of behavior. The point remains, that the environment and social circumstances have a profound impact on the behavior of the individuals which psychology tends to identify and study.

Hunter chose experimental method as his method of investigation and he is credited with the development of temporal maze for his experiments. Temporal maze was used to conduct experiments in which an animal was allowed to find its way around the maze to the food. When the animal had become familiar with the maze, it would take much less time to reach the food and thus Hunter drew his conclusions based on these observations. He conducted experiments on delayed reaction time of animals for which he is known for. He is also considered as a behaviorist because of his scientific outlook and his emphasis on behavioral approach towards psychology.

BEHAVIORISM

J.B. Watson (1878-1958)

J.B.Watson

J.B. Watson is regarded as the founder of the school of behaviorism. He was born in 1878 and died in 1958. He began as a student of philosophy at the University of Chicago, but later turned to psychology. He taught for a number of years at Johns Hopkins University at Baltimore USA, where he set up his animal laboratories. Later he shifted to the corporate world and offered advice to industry relating to advertising and marketing.

Watson taught that psychology should ignore consciousness and concentrate on concrete facts: psychology. This was one of the founding principles of the behaviorists' approach. He further said that psychologists must discard all reference to consciousness and must only look at behavior of animals and man. Because of his stress on behavior to the neglect of consciousness, he called himself a behaviorist. He was the first one to proclaim himself as a behaviorist. His methodology revolutionized the subject of psychology giving a new outlook to it. As consciousness was no more regarded as the concrete method of gaining knowledge, therefore, psychology focused merely on factual evidences and observable phenomena after the advent of this school. A measure of how seriously his appeal was taken by his professional colleagues is that he was elected as the President of American Psychological Association.

In one of his books, entitled "Behavior," he enumerated what behaviorism is all about in psychology. As the functionalists and the structuralists had defined psychology as the study of consciousness, Watson defined, as opposed to them, psychology as the science of behavior. Behavior of animals and humans was in his view what needed to be studied for an understanding of psychology.

Furthermore, Watson asserted that psychologists should use only objective, experimental methods and should not use introspection as a method. He said that the aim of the study of psychology should be to provide prediction and control of behavior. This is the basic aim of behaviorism. Behaviorists tend to develop methods and techniques to control and predict human behavior in order to get the most out of them. Behaviorism emerged in times when the industrial revolution took place. At that moment in the history of mankind, the focus was on increasing the productivity of workforce.

According to Watsonian behaviorism, behavior can be studied in terms of stimulus-response patterns. This means, that a stimulus is received by organism and it responds. For example, when someone touches a hot object, he immediately withdraws his hand from the object. In other words, the hotness of the object serves as the stimulus while the withdrawing action of the individual is his or her response to the stimulus. Watson therefore stated that there is nothing mysterious in this action and reaction and all of it could be explained in simple physiological terms.

Watson denied the value of introspection as data for psychology but said that a “verbal report,” may be obtained from the subject after the experiment. For example, if an individual is placed in a series of experiments, he may then be asked about the feelings and the emotions that he faced during the experiments. It is different from introspection in the sense that here the report is based on the circumstances that have been artificially created for the experiment. Therefore, verbal report, in view of Watson may be a source of information for psychologists, but he clearly denied the introspection as a means.

One of the important contributions of Watson is that in his opinion, thinking is nothing but “implicit behavior.” For example, when an individual manipulates images in his mind, thinking takes place. The individual relates these images together forming an explanation for the phenomenon that he is trying to study. Therefore thinking is also a kind of behavior. Watson agreed with the viewpoint of Ivan Pavlov about learning and said that we learn according to the laws of conditioning as given by Pavlov.

Watson suggested that memory and images are nothing but sensory activities in the brain. This again refers to the study of behaviorism as a physiological phenomenon rather than a mysterious one. He said that the sensory activities of the brain can be classified as “molecular behavior.”

Watson further proclaimed that by controlling the environment of an organism we could control and predict its behavior. This is known as environmentalism, that organism is affected by its environment. It is similar to the idea of Tabula Rasa given by John Locke. According to Locke, the mind of a new born baby is like a clean slate which is written upon by the surrounding environment. Watson’s contribution to psychology was one of the major developments in the study of psychology.

NEO-BEHAVIOURISTS

Neo-Behaviourists are psychologists who adopted the line of thinking and methodology of Watson, but were born or worked after Watson. Watsonian behaviourism gave a new direction to the science of psychology. The old method of introspection and speculation as a means of information for psychology was rejected and a more scientific outlook was adopted. Only concrete facts were considered which were observable. Therefore, behaviourism became very much as the heart of psychological thought. Neo-behaviourists followed the Watsonian line of thinking although they were born after Watson.

Clark Hull

The first neo-behaviourist was Clark Hull who was born in 1884 and died in 1952. He was an engineer and a mathematician but later turned into a psychologist. He taught at the University of Wisconsin. Hull attended Koffka's lecture on Gestalt psychology at Wisconsin University and was impressed with the Gestalt School. He had also read Pavlov's English translation of "Conditioned Reflexes," and liked it very much. His explanation of human behaviour therefore reflects both the Gestalt and the Pavlovian points of view.

Since Clark Hull was basically a mathematician, he aimed at expressing his views in mathematical terms very precisely. He gave a mathematical equation which explained his view point. The equation is as follows:

$$SER = D \times V \times K \times SHR$$

Where:

SER, is behaviour

D, is drive, our need within

V, is Valence or stimulus intensity

K, is incentive, motivation

SHR is habit

Therefore, according to Hull, behaviour is dependent upon drive, valance, incentive and habit. Since Hull was a behaviourist he tried to simplify behaviour and according to him, as a person acts in a certain manner or behaves in a certain manner, the driving forces behind it are D, V, K and SHR. Drive according to Hull is the need inside a person. A person may want to achieve a certain goal, reach a target or perhaps want to have some possession for him. All these things constitute the drive inside the person are expressed as D in Hull's equation.

V is the intensity of the stimulus that governs certain behaviour. In other words, it is how strongly the stimulus is registered by the sense organs of the body.

K is the incentive or the motivation. It is the target or the reward that the individual or the subject aims at. It serves as the incentive for the subject to behave in a certain manner which would allow him to reach the reward.

The last component of Hull's equation of behaviour is SHR, which is the habit that a person develops. Behaviourists had given the explanations for why habits are developed. Hull carried forward their ideas and said that habits also serve in determining how a person behaves.

In simple terms behaviour is the result of many factors that include D: drive, V: attraction or repulsion, K: motivation and habit. As it can be seen, his theory rests mainly on looking at performance, on observing overall overt behaviour and that is why he is classified as a behaviourist.

Edward Tolman

Edward Tolman was another American, who was born in 1886 and died in 1961. He studied at Harvard and was impressed by William James and Watson. Tolman believed that psychology is a science of behaviour and psychologists should concentrate on the study of behaviour only and in addition to it he said that behaviour has a “purpose.” That is why he is also called a “purposive behaviourist.”

He defined behaviour in a precise equation that is:

$$B = f(S, A)$$

Where:

B is behaviour

f is the function of

S is situation variables

A is antecedent variables

This means that behaviour is a function of situational variables and antecedent variables.

A situational variable is any variable that is a part of the situation/environment that affects a subject's behaviour in a way, for example the hot or cold weather.

An antecedent variable is a variable that is a part of the subject such as age, gender etc. and it impacts its behaviour. Therefore, his explanation of behaviour was very precise. Because of his theory of explanation of behaviour, Tolman is classified as a neo-behaviourist.

Edwin Gutherie

Edwin Gutherie was also a prominent neo-behaviourist who was born in 1886 and died in 1960.

Unlike his contemporary psychologists, Gutherie was less an experimentalist and more an observer. Based upon his observations, he put forward the view that behaviour can be predicted and controlled by the “law of recency,” given by Thorndike, which states that “the last act is most likely to be repeated.” Therefore, behaviourism to Gutherie is repetition of the “last act.” Thorndike proposed his law of recency based on experiments that he conducted on cats. Therefore, the basis of Gutherie’s thoughts resides in experimentalism.

Gutherie had also read Freud and was impressed by his method of treatment of mental disorders. Based upon his behaviourist outlook, Gutherie developed a theory of neurosis in his book “The Psychology of Human Conflict” and because of this he may be regarded as one of the first behaviourist psychotherapists. He explained neurosis to be caused due to conflict of responses.

NEO-BEHAVIORISTS

B.F. Skinner

One of the most prominent psychologists, who was impressed by Watsonian behaviourism on the one hand and Pavlovian conditioning on the other was another American B.F. Skinner, born in the year 1904 and died in 1990. He worked at Harvard University and carried on his experiments on animals, writing many books and articles. His main research work is now known by the title of Instrumental or Operant Conditioning.

Working on white rats and pigeons, in specially devised cages, known as Skinner boxes he observed how animals learn. He therefore adopted an experimental method of learning. He also purported the idea of learning by conditioning but his conditioning was different from that of Pavlov. Later Pavlov's conditioning came to be known as classical conditioning while Skinner's conditioning was called instrumental or operant conditioning.

One of the contributions of B.F. Skinner is that he distinguished between positive reinforcement and negative reinforcement, where positive reinforcement is when a response is positively rewarded and negative reinforcement is when a response is negatively rewarded or punished. In other words, if a subject, who is hungry, is rewarded on its act with food, the reinforcement is positive. On the other hand, if a subject is punished on his or her act but being beaten up or being subjected to some kind of torture, or even a less sever punishment such as denial of food, the reinforcement given to him according to Skinner is negative reinforcement.

According to Skinner, learning takes place by four schedules of reinforcement:

- i. Fixed ratio schedule
- ii. Variable ratio schedule
- iii. Fixed interval schedule
- iv. Variable interval schedule

Reinforcement is given to the subjects according to these scales. Fixed ratio is, when reinforcement is given after a fixed number of responses. Variable ratio is when reinforcement is given after variable number of responses. Fixed interval is reinforcement is given after a fixed time period. Variable interval is when reinforcement is given after a variable time interval.

Based upon his experiments he proposed in his famous book: "Beyond Freedom and Dignity" that change in whole society is necessary for the betterment.

Karl Lashley

An important contributor to the behaviourist school is Karl Lashley, born in 1890 and died in 1958. He was a pupil of Watson. Adopting from Watson, he proposed that psychology is a science of behaviour and behaviour is the result of activity of the cerebral cortex, a part of the brain. This is one of his greatest contributions in psychology which lead to the development of two principles given by Lashley himself.

- i. Principle of equi-potentiality:

According to Lashley, one part of the cortex is the same as another part. Therefore, even if one part is cut off, the brain activity still takes place. In other words, both parts of the cortex have equal potential to make the brain work properly.

ii. Principle of mass action:

He also proposed that the more the cortex in mass, the better the learning and called it the “principle of mass action.” So Lashley showed that behaviour and more precisely learning is a function of the activity of the cortex.

Donald Hebb

Donald Hebb was a Canadian psychologist, who showed that, when a part of the human brain was removed accidentally, it did not affect a person's IQ. It is similar to Lashley's principle of equi-potentiality which stated that if one part of the cortex is removed, the brain continues to function as with the full cortex.

Harvey Harlow

Another psychologist Harvey Harlow, of University of Wisconsin showed that curiosity, exploration and manipulation effect animal learning. This meant that if a subject is curious about certain phenomenon, it would have a different learning pattern as compared to other subjects. Further, exploration and manipulation also affect learning.

Hobart Mowrer

Hobart Mowrer at the University of Illinois showed that factors such as hope and disappointment influence learning.

Behaviourism slowly had introduced such mentalistic concepts as curiosity, hope, disappointment, etc. So behaviourism slowly moved away from dealing with purely observational data and started looking into psychological factors.

GESTALT PSYCHOLOGY

There were two major trends in psychology at the end of the nineteenth century and the beginning of the 20th century. In Europe, Wundt's structuralist psychology was the major influence, and in America behaviorist psychology was the dominant trend. In 1912 three German psychologists located in and around Frankfurt, Germany, independently of each other had come to the conclusion that in the past psychologists had overlooked the linkage between consciousness and behavior. Therefore these psychologists started to concert efforts to develop a system of psychology that took into view the unity of human beings. These efforts laid the foundation of a new look called Gestalt psychology, the purpose of which was to avoid piecemeal study of psychology and to present a holistic view. In other words, the Gestalt psychology adopted both the behaviorist's views and the structuralists' views. Gestalt is a German word meaning patterns. The structuralists were focusing on the consciousness as the key element in the study of psychology while the behaviorists were focusing on the prediction and control of behavior. The group of students and researchers related to this concept developed the Gestalt School.

Max Wertheimer

Max Wertheimer belonged to the Gestalt school of psychology. He was born in 1880 and died in 1943. He studied at the universities of Prague, Berlin. His original researches, while he was a professor at Frankfurt and Berlin, placed him in the forefront of contemporary psychology. Wertheimer came to the United States in 1933, shortly before the Nazis seized power in Germany. Wertheimer's discovery (1910–12) of the phi-phenomenon (concerning the illusion of motion) gave rise to the influential school of Gestalt psychology. His early experiments, in collaboration with Wolfgang Köhler and Kurt Koffka, introduced a new approach (macroscopic as opposed to microscopic) to the study of psychological problems. In the latter part of his life he directed much of his attention to the problem of learning; this research resulted in a book, posthumously published, called *Productive Thinking*.

One of the greatest contributions of Wertheimer is that he showed by his experiments that if two lines are shown to a subject and the time period of exposure between these two lines is small, the subject sees these two lines as one line moving from its position to the position of the other line. Wertheimer called this phenomenon "Apparent movement" or phi-phenomenon. Therefore, according to Wertheimer, Phi-phenomenon or apparent movement is when we see one image move from one place to another, when physically there is no movement. In case of the lines shown by Wertheimer, the horizontal or the vertical lines did not move at all, but instead, one line appeared after the other. The interval between the disappearance and the appearance of the other line was so short that to the subjects it appeared that the lines were moving from their positions into the other positions. The greatest impact of this discovery can be seen in its application in the movie camera. When a movie is being played on a cinema screen it is actually the phi-phenomenon which is working. The images of the movie are all still images captured by the camera but the interval between the movements of the images is so short that the characters of the movie seem as moving to the observer. Television is another example where the image is created by a small dot which moves across the screen and the characters appear to be moving.

Wertheimer explained this phi-phenomenon as being due to a tendency on the part of human mind to fill in the gaps. For further explanation, when the line which was perceived by the observer as moving is analyzed, we see that the movement from the horizontal to the vertical or vice versa, has been developed by the observer's brain, while there is no movement at all. Therefore human mind has the tendency to develop something to fill into the gap. Based upon this tendency, Wertheimer discovered many factors which help human beings to perceive things in patterns or Gestalts. He called these factors, the factors of organization. They are factors that help us to perceive in patterns or Gestalts. Some of these factors are:

- **Similarity**

If you see many dots and small lines, you see dots as one group, pattern, gestalt etc. and lines as another group. This is similarity leading to gestalts or patterns based on groups.

- **Proximity**

If you see many dots close to each other, and then some dots separated, you see the closely located dots as one group of gestalt. This is nearness or proximity leading to gestalt.

- **Closure**

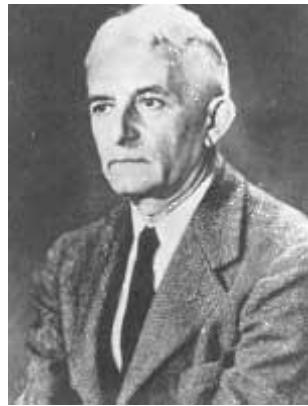
If a part of a familiar shape is missing we tend to fill it up, and see the shape as whole, this is closure leading to gestalt. For example, if one of the corners of a star is missing, we tend to fill in the missing part by ourselves and perceive the star as its complete shape. Therefore closure also results in gestalt.

These are factors that are in the stimulus field that help us to perceive gestalts. There are some subjective factors also that help in this whole perception. For example, mental set, or set is a subjective factor that helps perceptual organization. Mental set or set can be explained with the help of the following examples: if a person is taking a walk in a garden, and before he came here, he was warned by his friend that there were snakes in the garden; his mental set would be to see snakes in the garden. Therefore, he is likely to confuse a twig with a snake and be afraid of it. This is an example of mental set.

Habit or familiarity is another factor that leads to perceptual organization. For example, if a person is familiar with certain objects he may be able to formulate a gestalt very quickly. Same is the case with habit. Wertheimer, through his observation and experimentation discovered those factors that influence perception.

Wertheimer also tried to discover what is creative thinking or problem solving thinking. Creative thinking or problem solving thinking had become a subject of interest for psychologists at the turn of the century since creative thinking was the key to development as newer fields of study were explored by mankind. He observed young children and adults in his quest to determine what is creative or problem solving thinking and how it takes place. He also interviewed one of the greatest minds of the 20th century, Albert Einstein, to see how he produced his Theory of Relativity. Based upon these observations, Wertheimer noted various operations related to creative or problem solving thinking. He said we should avoid a piecemeal approach, not let our biases affect our thinking and should not blindly follow our habits. In other words, he said that we should ensure that our dispositions do not affect our thinking and we are able to concentrate on discovering new rather than analyzing new from the already existing point of views. That is how we can become productive, creative thinkers.

Wertheimer is known as a Gestalt psychologist because he tried to determine the patterns of perception that an individual follows.

GESTALT PSYCHOLOGY

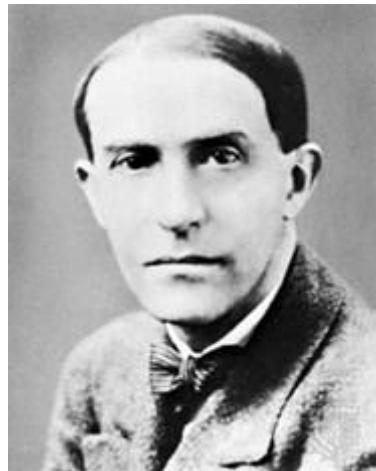
Wolfgang Kohler (1880-1943)

Wolfgang Kohler

Wolfgang Kohler was born in 1880 and he died in 1943. He was a German but is known mostly as an American psychologist because he worked in America. From 1913 to 1920 he was director of a research station at Tenerife, Germany. Later he served as both professor of psychology and director of the Psychology Institute, Berlin. He came to the United States in 1934, where he became professor of psychology at Swarthmore College. Kohler is best known for his experiments with problem-solving in apes at Tenerife and the influence of his writings in the founding of the school of Gestalt psychology. His writings include *Gestalt Psychology* and *The Mentality of Apes*.

Kohler's main contribution in the Gestalt School is his discovery of learning by insight. He conducted experiments on monkey and saw that monkeys were able to solve their problems through insight. He saw that monkeys were able to attach sticks together to reach far off objects which they thought was food. They would also pile up boxes to reach high places if they wanted to. Kohler concluded that learning takes place by insight. Monkeys thought about what to do first and then performed the action. Based on this observation, Kohler concluded trial and error as a method of learning.

Kohler also postulated the concept of isomorphism which means that there is kind of a mental map of the objects in environment, and this mental map helps in learning by insight. This means that in the mind of individuals, there is a map which according to him is the explanation of the things around him. In other words, the map is the individual's perception about the world around him. This concept was called isomorphism by Kohler. These were some of the contributions of Wolfgang Kohler.



Kurt Koffka (1886-1941)

Kurt Koffka

The other prominent contributor in the Gestalt school was Kurt Koffka who was born in 1886 and died in 1941. He was an American psychologist but was born in Germany. Before settling permanently in the United States in 1928 as a professor at Smith, he taught at Cornell and at the Univ. of Wisconsin. With Max Wertheimer and Wolfgang Köhler he is credited with developing the theories that gave rise to the school of Gestalt psychology. His book *Growth of the Mind* (1924) was considered responsible for awakening much interest in Gestalt concepts.

Koffka's concept of field theory was an important concept of the Gestalt school. He distinguished between the geographical field and the field of experience. Geographical field is the actual environment while the field of experience is the mindset of the observer. Humans react to the field of experience and not to the geographical field. The geographical field is the actual field which represents the real world around. The field of experience represents the experiences or the dispositions of the person who experiences the field. For example, if a person goes for a walk in the garden and he knows that there have been witnesses of snakes in that garden, he is quite likely to confuse a twig with a snake. This means that the person has actually considered only the field of experience and ignored the geographical field or the reality. This is what Koffka tried to explain. In his views, an individual tends to ignore the geographical field in face of the field of experience which dominates his understanding or perceptions. The field of experience in the above example may have been established by someone telling the person that there are snakes in the garden or some previous incidents of snake sighting that the person might have heard of. These were some of the contributions of Kurt Koffka.

Productive or Problem Solving Thinking:

Mihály Csíkszentmihályi

Productive thinking or problem solving thinking and learning by insight has been explained very thoroughly by two psychologists, one in America and the other in the European Continent. Mihály Csíkszentmihályi, born in 1934, is a psychology professor at Claremont Graduate University in Claremont, California and is the former head of the department of psychology at the University of Chicago. He is noted for his work in the study of happiness, creativity, subjective well-being, and fun, but is best known as the architect of the notion of flow and for his years of research and writing on the topic. He is the author of many books and over 120 articles or book chapters. He interviewed and studied over two thousand creative people and discovered some common elements in them. Some of those were; smart and naïve, playful and disciplined,

humble and proud, having great physical energy etc. Martin Seligman, former president of the American Psychological Association, described Csikszentmihalyi as the world's leading researcher on positive psychology. He is one of the most widely cited psychologists today, in a variety of fields related to psychology and business.

Edward De Bono

The European who is famous in this regard is Edward De Bono (born in May 19, 1933) who was at Cambridge University and developed his theory of Lateral Thinking which is akin to creative or problem solving thinking. He developed some exercises to inculcate lateral thinking. Some of his exercises are, “question” “rotate,” discover “dominant idea” etc. Edward de Bono is a psychologist and physician. De Bono writes prolifically on subjects of lateral thinking, a concept he is believed to have pioneered. De Bono is also a consultant who has worked with companies such as Coca-cola and Ericsson. In 1979 he co-founded the School of Thinking with Dr Michael Hewitt-Gleeson.

GESTALT SCHOOL AND DYNAMIC PSYCHOLOGY

Kurt Lewin

Kurt Lewin was born in 1890 and died in 1947. He worked and taught with other prominent Gestalt psychologists in Berlin until 1932, when he immigrated to USA and joined the University of Iowa. Later, Lewin set up the Research Centre for Group Dynamics at the Massachusetts Institute of Technology.

One of the contributions of Kurt Lewin is his theory which he called the Field Theory. The field theory concept was also given by another Gestalt psychologist by the name of Kurt Koffka, but, Lewin's theory was different from the one given by Koffka. According to Lewin's theory, the field, or the environment around the individual has many attractions which may be positive or negative. The positive attractions may be to achieve a goal in life or to help some one in trouble. On the other hand, negative attraction may be to take undue advantage of someone in trouble. These attractions may also be called positive or negative opportunities. According to Lewin's theory, because of these positive and negative opportunities, conflicts arise in the mind of individuals who have the chance to avail either of the two opportunities. Often both the opportunities may result in significant good for the individual while the negative one may offer more value. Therefore, the conflict arises in the mind of the individual whether to go for the positive opportunity with lesser good and satisfaction through doing the right thing, or to go for the negative opportunity.

Lewin is a prominent Gestalt psychologist for his contribution in discovering the kinds of mental conflicts that result in frustration and are responsible for a number of problems in people's lives. He proposed three kinds of conflicts that a person may be faced with:

i. The approach-approach conflict

The approach-approach conflict is a sort of conflict in which an individual is faced with the challenge of liking between two things. He may only be able to approach one at time and the choice creates the conflict. While choosing one of the options he foregoes the other one and the approach-approach conflict comes up.

ii. Approach-avoidance conflict

The approach-avoidance conflict refers to when the individual is faced with the choice of avoiding something or approaching something. This is the simplest of the three conflicts and the most common one, where something attractive might have to be avoided because of an ethical reason. For example making money through gambling is although attractive but avoiding it or approaching it presents a conflict to the mind, since it is not ethically correct in our society to make money through gambling.

iii. Avoidance-avoidance conflict

Avoidance-avoidance conflict refers to the conflict which arises because the individual faces the challenge of which thing to avoid out of the options which all need to be avoided. For example, if a sick person has to take bitter medicine, he would certainly want to avoid it. But on the other hand, he is left with the other choice of accepting the sickness, which he would again want to avoid. Therefore, the avoidance-avoidance conflict refers to the condition in which the mind has a conflict because of two things which need to be avoided.

The other important contribution that came out of Lewin's work at University of Iowa is his theory of leadership; and the measurement of leadership phenomenon. He recognized three different styles of leaders:

i. Authoritarian

As the name implies, an authoritarian leader is the one who intends to make use of his authority to carry out the decision making process. He likes little sharing of his power and depends more on his own instincts and thoughts.

ii. Democratic

A democratic leader is the one who believes in considering the thoughts and opinions of others for decision making. He lets others share their thoughts and make decisions based upon consensus.

iii. Laissez-faire

A laissez-faire leader is the one who is willing to delegate power and authority to others for making decisions. He lets others decide on some matters and leads more from the back seat.

Although Lewin started as a Gestalt psychologist in Germany but after migrating to the USA he became more involved in group dynamics and there he set up a center which provided some very important contributions in the field of group dynamics. Group dynamics is the study of behavior of individuals in groups and the behavior of groups as a whole.

DYNAMIC PSYCHOLOGY

Dynamic Psychology is also called Hormic Psychology. The main proponent of this point of view was a British psychologist William McDougal, who taught at Oxford University and later shifted to America, teaching at Harvard and the Duke Universities.

William McDougall

William McDougall was born in 1871 and died in 1938. He agreed with the American Behaviorist School that psychology is the science of behavior, and that it should employ objective methods for research and observation. He did not reject the value of introspection, for he thought that only observation of behavior would give us a mechanistic view of psychology.

According to McDougall, behavior is the result of “internal strivings” or “urge to live,” or hormone. This “horme” or the urge to live expresses itself in various forms and kinds of behavior. In other words, all organisms try to survive against the environment. They battle with the environment in order to be able to defend themselves against the hostilities of the environment and strive to survive. Because of his explanation of behavior in terms of “horme”, his point of view is called the “hormic” view point. He taught that organisms show goal-seeking behavior and that behavior can be explained in terms of internal drives, instincts or propensities. He identified at least 18 different kinds of propensities. The list included:

1. Propensity of curiosity
2. Propensity of sex
3. Propensity of disgust
4. Fear
5. Food seeking
6. Protection

7. Anger
8. Appeal
9. Constructive
10. Acquisitive
11. Laughter
12. Comfort
13. Sleep
14. Migratory
15. Submissive
16. Gregarious
17. Self-assertive
18. Coughing, sneezing

According to McDougal, behavior is due to these propensities, which are the dynamic forces behind all behavior and all of them put together can be shown to belong to the urge to live or hormone.

HISTORICO-EVOLUTIONARY PSYCHOLOGY

There were two current philosophies and practices of psychology during the early and till the middle of the 20th century; Behaviorism and Functionalism. The Historico-Evolutionary or Soviet Psychology tried to adopt a different approach and methodology. As the name implies, the contributors in the Historico-Evolutionary Psychology tried to see how consciousness in humans developed, what exact role it played in different historical stages of man's development and how it impacts behavior. In other words, these psychologists looked at the historical evolution of consciousness. They focused on how, in the past, man has been able to develop his power to think and understand and what role has his consciousness played in this regard. For further explanation, because this group looked at the historical evolution of man's mental functions and its relationship with behavior, that is why this point of view is called the Historico-Evolutionary Psychology.

Leon Vygotsky

The first amongst the Historico-Evolutionary psychologists was Leon Vygotsky who was born in 1896 and died in 1934. The Soviet revolution had taken place in 1917 and therefore Vygotsky was the first truly Soviet psychologist.

Vygotsky was impressed by Sechenov and Pavlov and believed that man's consciousness came into being as a result of his development or evolution, and man's higher mental functions, i.e. consciousness developed as a result of collective labor. So man became different from animals in some fundamental and basic ways. In other words, as man went through the process of evolution, his mental functions also went through the same process. This resulted in the development of the higher mental functions, such as that of thinking and understanding. As the Historico-Evolutionary psychologists focused on the development of consciousness, Vygotsky proposed that the higher mental function of consciousness also developed through the process of evolution.

Vygotsky taught that behaviorists, and structuralists and functionalists divide man into parts; some try to study his behavior and others his consciousness, whereas man is a unity. Therefore, he emphasized on the fact that the structure and the functions of the consciousness cannot be separated. They both complement each other and exist for and because of each other.

In Vygotsky's view, man's development is a function of biological evolution and a function of historico-cultural evolution. The body develops and so does the mind; man's behavior and his consciousness is a mixture of these two developments. Historico-cultural evolution can be seen in the form of man's thoughts, determination, ideas etc. Man uses language and mathematical symbols and these are the tools of his developed consciousness. On the other hand, animals are unable to use language and symbols to express their thoughts. They have not reached the point of evolution which man has reached. Therefore, this further substantiates the fact that consciousness and higher mental functions are a result of the evolutionary process which man had undergone over the past.

He showed that environment effects man, but then in turn man also effects the environment. In other words, as proposed by previous psychologists such as Darwin, environment has an impact on man, but according to Vygotsky, in turn man tries to change the environment in his own way, moulds it and thereby uses it to fulfill his needs. For example, man has over the last one hundred years, developed various methods and techniques to make the best out of the opportunities available in the environment. In other words, it is not just the environment that affects man, but man in turn also influences the environment. This is how consciousness functions and separates man from animals. So Vygotsky said that behavior and consciousness can not be studied separately. Since consciousness is impacted by the environment, and the

behavior is dictated by consciousness. Further, that the human mental functions are radically different from functions of lower animals. And this difference is due to man's development of consciousness which is the result of the historical evolution of man. These were some of the contributions of Leon Vygotsky because of which he is known as a Historico-Evolutionary psychologist.

Sergei Rubenstein

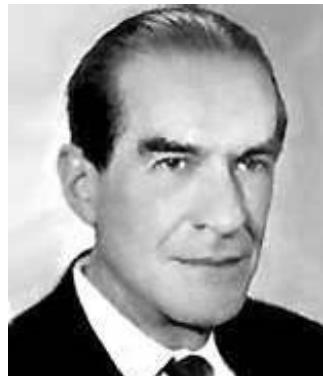
The other prominent name in the Historico-Evolutionary Psychology during the Soviet era was that of Sergei Rubenstein, who was born in 1889 and died in 1960.

He criticized those who wanted to establish the science of psychology on the basis of only stimulus and response. He thought such people ignore the important role of internal conditions. Same stimulus may result in different reactions in different people, and at different times. For example, a person who is already in a state of anger might perceive a stimulus of somebody staring at him in a different manner as compared to the one who is normal. Therefore, Rubenstein rightly pointed out the importance of internal conditions apart from the external stimulus and response relationships. Such an approach was established by the behaviorist psychologists who considered behavior as the result of stimulus and response process.

Rubenstein went on to say that such psychologist ignore the importance of man's development and assume humans to be like machines. These machines, once presented with the stimulus would always respond in the predetermined manner. The soul purpose of the behaviorists was to determine methods to control and predict human behavior since this school emerged at the advent of the industrial revolution. Therefore, the approach of the behaviorists to consider only external factors in determining human behavior was criticized by Rubenstein.

Rubenstein also showed that external factors effect psyche and then in turn psyche also affects external factors in the environment. This was similar to what Vygotsky had said. Vygotsky had stated that the environment impacts man and man in turn impacts the environment.

Therefore, according to Rubenstein, man's psychology can be understood as a dialectical process, it effects and gets affected. He argued that consciousness originates as a result of sensitivity to certain stimuli. As can be seen, Rubenstein tried to discover how and why consciousness came into being and rejected purely behaviorist view point. These were the main contributions of the Sergei Rubenstein, because of which he is regarded as a Historico-Evolutionary psychologist. He focused on the development of consciousness in the history of mankind rather than concentrating on the stimulus and response relationships purported by the behaviorists.

HISTORICO-EVOLUTIONARY PSYCHOLOGY

Alexei Leontiev (1904-1979)

Alexei Leontiev

Alexei Leontiev was born in 1904 and he died in 1979. He worked with Vygotsky from 1924 to 1930, collaborating on the development of a new school in psychology as a response to behaviorism and the focus on stimulus-response mechanism as explanation for human behavior. Leontiev left Vygotsky's group in Moscow in 1931. He continued to work with Vygotsky for some time but, eventually, there was a split, although they continued to communicate with one another on scientific matters. Leontiev returned to Moscow in 1950 as Head of the Psychology Department at the Faculty of Philosophy of Moscow State University. In 1966, Leontiev became the first ever Dean of the newly established Faculty of Psychology at the Moscow State University, where he worked until his death in 1979. He died of a heart attack.

Leontiev also tried to look at how consciousness developed in human beings. Therefore, he is also included among the Historico-Evolutionary psychologists. Historico-Evolutionary Psychology tried to see how consciousness in humans developed, what exact role it played in different historical stages of man's development and how it impacts behavior.

To answer these questions related to the development of consciousness of man, Leontiev put forward the view that consciousness is a product of sensitivity to symbolic stimuli. When the body receives stimuli from the environment, it reacts to them. Leontiev classified these stimuli into two categories. The first category was of the ordinary stimuli which were, for example, touching something hot, seeing something coming towards you etc. Humans tend to respond to these stimuli. Leontiev classified another kind of stimuli which he called the symbolic stimuli. The symbolic stimuli were related to the ordinary stimuli but they represented something different. For example, the ringing of bell might be considered as dangerous. This means that the bell is a symbolic stimulus which symbolizes danger. Another example of a symbolic stimulus is that when a person hears about food, his or her mouth starts to water. Therefore, hearing about food represents a symbolic stimulus.

A parallel explanation could be seen between the concept of learning by conditioning given by Pavlov and the explanation of development of consciousness given by Leontiev. According to Leontiev we learn these symbolic stimuli by conditioning. Pavlov conducted experiments on dogs. He associated the ringing of a bell with food. When the dog was given food, a bell was rung. The food caused the dog to salivate. Later it was seen that the dog had started to expect food with the ringing of the bell as it salivated every time the bell was rung, even though food was not presented to it. The response of the dog was said to be a conditioned response. Similarly, Leontiev said that man also learns these symbolic stimuli through

conditioning. As a person finds that whenever any danger appeared a bell is rung, he starts to associate the ringing of a bell with the danger. Therefore, the ringing of the bell serves as the symbolic stimulus for him. Only hearing the bell would make him alert, and this response of his would be a conditioned response to the symbolic stimulus. This is how man learnt these through conditioning according to Leontiev.

Leontiev also showed by pointing toward various stages of man's development that man learnt by conditioning according to a set pattern. The order of learning is as follows:

- i. Man first learnt lower order things and functions
- ii. And later the higher functions

This means that in the development of man's consciousness, the first step was to learn the lower order things, which means the basic functions of the body such as eating, drinking etc. These represented the basic needs of a person. Later the development of the higher order functions took place, which actually differentiated man from animals. These higher order functions include functions of consciousness such as thinking, contemplating, understanding, ability to communicate, etc. This is the reason for man being different from animals. In other words, Leontiev showed that we do not inherit our mental functions and faculties but learn them by conditioning during our growth and development.

K.M Bykov

Another prominent Soviet psychologist was K.M Bykov, born in 1886 and died in 1959. His quest was the same as other Historico-evolutionary psychologists i.e. to discover how consciousness developed and the various milestones in the development of consciousness.

Bykov pointed out that in the historical development of man the sensory signal system changed into verbal system. First man reacted to sensations later he learnt by conditioning to react to words also. In other words, the initial stage in development of the consciousness was that man started to acknowledge the sensory stimuli. These stimuli caused him to react. As pointed out by Leontiev, this was the stage when the lower order functions started to develop. Man started to respond to stimuli such as temperature etc. Later, when man's consciousness further developed, he was able to understand and interpret things. According to Leontiev this was the stage when higher order functions developed. Therefore, Bykov points out the development of verbal communication and man's ability to respond to verbal stimulus as a milestone in the development of consciousness.

Bykov also showed that we come to have verbally conditioned responses. This means that when we hear a bad news, we respond to it accordingly. Humans tend to respond in the same manner to bad news. Therefore, humans are conditioned to the verbal stimuli. His contribution of showing how sensory conditioning develops into verbal conditioning was a major contribution to that overall Historico-Evolutionary psychology.

SCIENTIFIC LOOK AT MENTAL DISORDERS

Man viewed and explained mental illness and diseases differently in various phases of past history. Starting from the ancient epoch, up to the present, mental disorders have been attributed to different things such as soul, mind, etc. As man's thinking went through various phases of development, explanation of mental disorders also underwent evolution.

The ancient man thought that there was a "soul" inside the body of a person which was regarded as a person within a person. This soul was responsible for a number of things including some mental symptoms and diseases. In other words, the explanation of mental diseases according to the ancient man was that mental diseases are caused by the abnormal activities of the soul. When the soul is disturbed, it causes mental symptoms to appear.

The ancient man also thought that dreams were the result of soul's activities. According to him, soul escaped a person's body when he slept and performed certain acts for him. These acts manifested in the form of dreams.

The ancients also thought that a "mad" person was one who did not take interest in himself and happenings around him. They thought that "mad" people live in world of their own, and "see" things that are not present, and are involved in "spiritual experiences."

According to the ancient Greeks and Romans mentally ill people were possessed by spirits. Initially this idea was held but later as the Greek and Roman civilizations flourished and developed their explanations of mental disorders and illnesses were also reformed. They saw that mental symptoms are due to medical problems and not spiritual in nature.

Some people regarded mentally ill people above normal people and thought they could foretell future. Various decisions were referred to mentally ill people and they were held in high esteem, by these people.

Later in time, mad or mentally ill were regarded as witches and wizards, and instead of treating them they were tortured and some were burnt to death. This practice was prevalent up to the 14th and the 15th century when man had become much civilized as compared to the ancient man.

In the ancient times, some people also regarded "mad" or mentally sick as possessed by evil spirits and tried various means of ridding them of these possessions. Such measures included physical torture, beating, bleeding and burning alive. One of such measures which were used by the ancient Egyptian civilization was trepanning. It was the process of drilling a hole in the skull of the mentally ill person to allow the evil or bad spirit to escape.

As mentioned earlier, from 13th to 14th century the practice of torturing and killing mentally ill people prevailed. This was mainly because mentally ill people were thought to be witches or wizards or possessed by the devil. Many women and men were burnt alive for this reason. Even up to the fifteenth century mentally sick people were considered to be possessed by evil spirits and were very cruelly treated. They were treated the same as thieves, robbers, and beggars. They were chained, hand-cuffed and imprisoned.

As a result of the French Revolution and the beginning of the end of feudalism, many people had moved to the cities because villages could not sustain them. There was not much food available and in search of it they shifted. Further, as a result of the Industrial Revolution many people sought jobs in the industries and therefore migrated to where they were set up. It resulted in creating of small industrial cities where huge workforce of the industry dwelled. Furthermore, because of these mass migrations, existing cities and industrial towns became crowded. In these populous cities, petty crime, unemployment and begging became rampant. Those found guilty of such crimes were held and kept alongside those who were considered mentally ill. This was one of the problems of the industrial revolution and the French revolution. Although

the outlook of mankind had changed and had become more rational, the problem of dealing with crimes and mentally ill people became a daunting challenge. The need therefore arose to separate criminals and group such people together and find a common solution for such social problems. The solution was to label them mentally sick and put them in asylums and institutions specially made for such people. These institutions were not meant to separate the mentally ill people from the society but their main aim was to help these people recover. That is why Paris and Lyons, in France, and Bristol and Norwich in England established asylums or institutions to house such people.

In other words, the purpose of these places was to “discipline” and “cure” the inmates. And the way to “cure” them was to put them to work. Thus the criminal and the mentally ill were treated alike, put at the same place and work was suggested as the main “cure” of their problems.

Putting the blame on individuals of the social changes and upheavals such as disappearance of feudalism and the beginning of industrialization is termed scapegoating. Thus mentally sick people became the scapegoats of problem arising from the end of feudalism and the problems of industrialization.

In the middle and end of the 18th century, as the outlook of man became more scientific and rational, mental illness was beginning to be regarded as nervous diseases. This marked the beginning of a scientific outlook towards mental diseases.

SCIENTIFIC LOOK AT MENTAL ILLNESS

From ancient times, up to the middle of the 18th century, various explanations were given for mental illness; for example according to the ancient man, mental illness was caused due to the malfunctioning of the soul which was regarded as a person within a person. In middle ages, mental illness was thought to be caused by evil spirits and mentally ill people were also considered to be possessed by the devil.

However, in the middle and end of the 18th century, as the outlook of man became more scientific and rational, mental illness began to be regarded as nervous disease. This marked the beginning of a scientific outlook towards mental diseases.

Let us go forward now. In the late 18th century in France, there was a wide spread increase in certain mental diseases. Soon they were diagnosed and regarded as nervous diseases. In 1790 laws were made that separation of patients suffering from nervous diseases is required, from those suffering from other diseases. They were also separated from other criminals, thieves and robbers etc. Earlier, mentally ill people were kept alongside criminals in prison. That was the beginning of the scientific outlook at mental disorders in Europe, which soon spread throughout the continent.

Philippe Pinel

In 1792 a French physician Philippe Pinel, born 1745, died 1826, took a big step forward by taking measures that led to freeing mentally sick people from chains from their feet and hand cuffs. After moving to Paris in 1778, he was appointed (1793) as a director of a hospital. His book is based on observations in the hospital, advocated humane treatment of mentally ill persons, and then called the insane, and a more empirical study of mental disease. He further contributed to the development of psychiatry through his establishment of the practice of keeping well-documented psychiatric case. Therefore, Pinel is regarded as the pioneer in helping society recognize the fact that mental symptoms are a kind of disease, and people suffering from such disorders should be treated as sick and not considered to be possessed by evil spirits, demons or the devil.

Sameul Tuke

The same kind of role was played by Sameul Tuke. Tuke was born on July 31, 1784 and died on October 14, 1857. He was born at York, England. He greatly advanced the cause of improving the condition of the insane. His two sons were also active in humanitarian concerns.

He also freed mental patients from their chains and started to treat them as sick rather than possessed by spirits, demons or the devil. By the late 19th century science had progressed so much that mental diseases were regarded as belonging in the realm of diseases and a medical point of view toward their diagnosis and treatment was adopted.

Franz Mesmer

During the same time mental diseases or insanity was being treated by a method called Mesmerism. Mesmerism was based upon a method invented by a German physician Franz Mesmer who was born in 1734 and died in 1815. He studied in Vienna. His interest in “animal magnetism” developed into a system of treatment through hypnotism that was called mesmerism. It seems now that Mesmer was actually treating psychological illness, but an unsympathetic medical and scientific community caused him to be expelled first from Vienna, and in 1778 from Paris. He retired to his native Austria and to obscurity.

According to Mesmer, people have a force that he called "animal magnetism," and when the balance of animal magnetism gets upset in the body, people get mad or insane. Mesmer thought that animal magnetism can be restored and in order to restore the upset balance Mesmer would touch the insane. By this he thought he restored the balance of animal magnetism, so helping people to get well. Soon Mesmer's idea and therapy became popular. People from different parts of the country came for treatment. When the number of people increased, Mesmer used trees, bath tubs etc. to cater them all. He would dip his body into the bath tub and people would then put their hands into the water to have their animal magnetism restored. Gradually it was found that there was no such thing as animal magnetism and that he had no power to restore animal magnetism. Mesmer fell into bad repute before he died. A British surgeon James Braid took up the basic spirit of the idea.

James Braid

James Braid was a Scottish neurosurgeon who coined the term and invented the procedure known as hypnotism. He was born in 1795 and died on March 25, 1860, at Fife. Educated at the University of Edinburgh, Braid practiced in Scotland for a short time, and then moved to Manchester, England, where he lived for the rest of his life. Braid became interested in mesmerism in 1841, when he observed demonstrations given by a traveling mesmerist named Charles Lafontaine. In this book he coined the words hypnotism, hypnotize, and hypnotist, which remain in use. Braid thought of hypnotism as producing a "nervous sleep" which differed from ordinary sleep. The most efficient way to produce it was through visual fixation on a small bright object held eighteen inches above and in front of the eyes. Braid regarded the physiological condition underlying hypnotism to be the over-exercising of the eye muscles through the straining of attention. Braid treated many people using hypnotism.

Jean Charcot

Jean Charcot was a French neurologist who was born in 1825 and died in 1893. He developed in Paris the greatest clinician of his time for the diseases of nervous system. He made many important observations on these diseases. He wrote an article in one of the prestigious medical journal showing that hypnotism can be used to treat hysteria. Charcot's insight into the nature of hysteria is credited by Sigmund Freud, his pupil, as having contributed to the early psychoanalytic formulations on the subject.

Bernheim

Bernheim was a French physician and neurologist who was born in 1840 and died in 1919. He received his education in his native town and at the University of Strasbourg, where he was graduated as doctor of medicine. The same year he became a lecturer at the university and established himself as physician in the city. He had an influence on Sigmund Freud who visited him in 1889. Bernheim is also known as an antagonist of his contemporary and fellow neurologist Jean Charcot. He showed that hypnotism can not treat hysteria only but also other mental diseases.

So by the beginning of the 20th century mental diseases were seen as a part of medical diseases and procedures were tested and adopted to treat them in a scientific manner. After World War II, ICD and DSM came into being.

SIGMUND FREUD AND THE PSYCHOANALYTIC MOVEMENT

Sigmund Freud (1856-1939)

Sigmund Freud

Sigmund Freud was an Austrian psychiatrist who was born in 1856 and died in 1939. He worked at Vienna and later in England. He is the inventor of psycho-analysis as a method of treatment. Born in Moravia, he lived most of his life in Vienna, receiving his medical degree from the Univ. of Vienna in 1881.

Freud was a doctor, writer, researcher and a professor. When Freud graduated from the medical school and started doing research that was the time when hypnotism was a prevalent method of treatment of mental disorders. He was impressed with works of Charcot, using hypnotism. Working with Joseph Breuer he saw the advantages and disadvantages of hypnotism as a method of treatment.

His medical career began with an apprenticeship under J. M. Charcot in Paris, and soon after his return to Vienna he began his famous collaboration with Josef Breuer on the use of hypnosis in the treatment of hysteria.

Based upon his practice, he formulated the concept of unconscious mind and its role in creating mental diseases. Freud discovered the unconscious functions of mind which according to him were responsible for mental diseases.

Freud also thought that the parts of the mind play a dominant role in creating mental diseases. He gave the parts of mind as follows:

Id

The Id is the irrational and emotional part of the mind. At birth a baby's mind is all Id – want, want, want. The Id is the primitive mind. It contains all the basic needs and feelings. And it has only one rule--the "pleasure principle": "I want it and I want it all now".

Ego

The Ego functions with the rational part of the mind. The Ego develops out of growing awareness that you can't always get what you want. The Ego relates to the real world and operates via the "reality principle". The Ego realizes the need for compromise and negotiates between the Id and the Superego. The Ego's job

is to get the Id's pleasures but to be reasonable and bear the long-term consequences in mind. The Ego denies both instant gratification and pious delaying of gratification.

The Superego

The Superego is the last part of the mind to develop. It might be called the moral part of the mind. The Superego becomes an embodiment of parental and societal values. It stores and enforces rules. It constantly strives for perfection, even though this perfection/ideal may be quite far from reality or possibility. Its power to enforce rules comes from its ability to create anxiety.

The Superego has two subsystems: Ego Ideal and Conscience. The Ego Ideal provides rules for good behavior, and standards of excellence towards which the Ego must strive. The Ego ideal is basically what the child's parents approve of or value. The Conscience is the rules about what constitutes bad behavior. The Conscience is basically all those things that the child feels his or her parents will disapprove or punish.

According to Freud, all human beings develop psychologically and during this process they pass through different stages of psycho-sexual development. He said that the unconsciousness expresses itself in mental symptoms, dreams and psychopathology of everyday life. He developed the theory of psycho-pathology of everyday life. Slips of tongue, slips of memory etc. are representative of psychopathology of everyday life.

He developed the theory of interpretation of dreams. He explained dream work in terms of: Manifest Contents; Latent Content, Displacement, Condensation, Symbolism etc.

SIGMUND FREUD AND PSYCHOANALYTICAL MOVEMENT

Sigmund Freud formulated a theory of defense mechanisms. Some of them include denial, repression, regression and projection. The id, the ego, and the superego formulate the model that Freud used to describe the components of human personality. The ego, tempered by the superego, is that conscious part that acts as mediator between the instinctual drives of the unconscious id and the social environment.

According to Freud, the ego has developed what he calls defense mechanisms, to cover for the wild demands of the id, which would rarely be socially acceptable. All of the defenses can be described as a combination of denial or repression with different ways of rationalization.

When we rationalize, we are distorting the facts to make the event or our own impulses less threatening; that is, diluting the anxiety to a manageable level. We often come to believe our own distortions, or excuses, or even lies.

Repression

The unconscious purpose of repression operates in a person who is not able to recall a threatening situation or may completely forget that a disliked person ever was a part of his/her life. Phobias can be examples of repression because the person has an unreasonable fear but may have no idea how it originated.

Denial

Denial is characterized by having a conscious awareness at some level, but simply denies the reality of the experience by pretending it is not there. An example: a person who faints at a horrible real-life occurrence, such as the death of a loved one. Or, that same person might intellectually know that a person has died but refuses to "accept it" while she may still wait for the usual time the person came back from work.

On a lighter note, a student may refuse to pick up her final grade from a difficult class because she knows it is not an acceptable grade. She simply denies the reality of the grade. As a defense mechanism, denial becomes more difficult to maintain as one matures. Its use requires much energy and the mind looks at other possibilities of defense.

Regression

Regression involves a movement back in developmental time to when a person felt safe and secure. Often, that is childhood. For example, person who has suffered a difficult divorce or death of a spouse may want to revisit the home of his/her childhood – those tender years before pain overruled all other feelings.

Projection

Projection is attributing your own unacceptable impulses to someone else. The impulses are still judged unacceptable but they belong to someone else, not you. At that point you are free to criticize that person for having such terrible impulses. The final result is that you no longer feel threatened and you can maintain your self-esteem by ignoring an objectionable aspect of yourself.

These were some examples of defenses that a person develops. Based upon his observations, Freud also developed a theory of neurosis. According to his theory:

$$\text{Neurosis} = \text{Predisposition} + \text{trauma}$$

Which means that Neurosis is the result of a predisposition which is inclination or a tilt toward something, and trauma which is a sudden shock resulting from, for example, an unexpected incident.

Based upon his experience he formulated his method of treatment of mental disorders which is called psychoanalysis. The procedure of psychoanalysis includes:

- Free association
- Interpretation of dreams
- Interpretation of psychopathology of everyday life
- Analysis of resistance
- Analysis of transference

Freud also wrote extensively on ancient religions, social psychology and other topics.

Anna Freud

Anna Freud was born on December 3, 1895 and she died on October 9, 1982. She was the sixth and last child of Sigmund and Martha Freud. Born in Vienna, she followed the path of her father and contributed to the newly born field of psychoanalysis.

Her field of specialization was Child Psychology. As such, the formation of the fields of child psychoanalysis and child developmental psychology can be attributed to Anna Freud. Her main contribution in this field was the Identification with aggressor among the children who dominates the rest of the children.

Anna Freud furthermore developed different techniques of assessment and treatment of children disorders, thereby contributing to our understanding of anxiety and depression as significant problems among children.

Heinz Hartmann

Heinz Hartmann was born in 1894 at Vienna, Austria and he died in 1970. He was a psychiatrist and psychoanalyst. He is considered one of the founders and principal representatives of ego psychology. Hartmann was born to a family known for producing writers and academics. His own father was a professor of history, and his mother was a pianist and sculptor. Hartmann's interest was in Freudian theories.

He chose to enter into analysis with Freud and was noted as a shining star amongst analysts of his generation. His work marked the development of the theoretical movement known as Ego-psychology. He elaborated the functions of ego. He stated that Ego integrates and coordinates tendencies in humans.

Ernst Kris

Being a follower of Freud, Ernst Kris further elaborated the role of ego. According to him Ego controls regression.

CARL JUNG AND ANALYTICAL PSYCHOLOGY**Carl Gustav Jung (1870-1961)****Carl Gustav Jung**

Carl Gustav Jung was born in Switzerland in 1870. Jung wanted to study archaeology at university, but his family was too poor to send him further than Basel, where they did not teach this subject, so instead Jung studied medicine at the University of Basel. Towards the end of studies here he decided to specialize in psychiatric medicine. He later worked in a psychiatric hospital in Zurich.

Following World War I, Jung became a worldwide traveler. He visited Northern Africa shortly after, then New Mexico and Kenya in the mid-1920s. In 1938, he delivered lectures on Psychology and Religion, at Yale University. During this period of his life Jung visited India. His experience in India led him to become fascinated and deeply involved in Eastern philosophies and religions, helping him to come up with key concepts of his ideology, including integrating spirituality into everyday life and appreciation of the unconscious.

Jung was impressed with Freud; he met Freud, worked and delivered lectures with him, but disagreed and developed his own theoretical framework and method of treatment, called Analytical Psychology. Jung died in 1961 in Zurich, Switzerland.

Like Freud, Jung also divided the mind into conscious and unconscious parts, but according to him unconscious has different layers.

- The upper layer is the personal unconscious.
- And the deeper layer is the collective unconscious.

The personal unconscious has repressed materials, and the collective unconscious has experiences of forefathers and generations in the form of archetypes. The collective unconscious could be thought of as the DNA of the human psyche. Just as all humans share a common physical heritage and predisposition towards specific physical forms (like having two legs, a heart, etc.) so do all humans have a common psychological predisposition. However, unlike the quantifiable information that composes DNA, the collective unconscious is composed of archetypes.

In contrast to the objective material world, the subjective realm of archetypes can not be fully understood through quantitative modes of research. Instead it can be revealed more fully through an examination of the symbolic communications of the human psyche in art, dreams, religion, myth, and the themes of human relational/behavioral patterns. Devoting his life to the task of exploring and understanding the collective

unconscious, Jung theorized that certain symbolic themes exist in every individual. These themes, according to Jung, are called archetypes.

Some archetypes given by Jung are:

- Anima (woman in man) and Animus (man in woman)
- Shadow

Jung identified the **anima** as being the unconscious feminine component of men and the **animus** as the unconscious masculine component in women. However, this is rarely taken as a literal definition; in modern era many Jungian practitioners believe that every person has both an anima and an animus. Jung stated that the anima and animus act as guides to the unconscious unified self.

The **shadow** is an unconscious complex that is defined as the repressed and suppressed aspects of the conscious self. There are constructive and destructive types of shadow. On the destructive side, it often represents everything that the conscious person does not wish to acknowledge within themselves. For instance, someone who identifies as being kind has a shadow that is harsh or unkind. Conversely, an individual who is brutal has a kind shadow. The shadow of persons who are convinced that they are ugly appears to be beautiful. On the constructive side, the shadow may represent hidden positive influences. So a total personality is the result of personal unconscious and collective unconscious with the influence and impact of all the archetypes.

Based upon his experiments, observations and clinical practice, he formulated his personality theory. He stated that personality has two types:

- Introvert
- Extrovert

The extrovert orientation "finds meaning outside the self", in the surrounding world, whereas the introvert is introspective and finds it within.

He also theorized that personality has four functions:

- Sensory function
- Thinking function
- Emoting function
- And intuiting function

The sensory function refers to the rational part of the personality, where logic plays the dominant part. Emoting functions refers to the emotional part of the consciousness. The intuiting function refers to the ability to foresee things.

Therefore, according to Jung, there are eight personality types, depending upon introversion or extroversion and the four functions of each type namely:

- 1) Introverted Sensory
- 2) Introverted Thinking
- 3) Introverted Emoting
- 4) Introverted Intuiting
- 5) Extroverted Sensory
- 6) Extroverted Thinking
- 7) Extroverted Emoting

8) Extroverted Intuiting

These were some of the contributions of Carl Jung.

JUNG'S ANALYTICAL PSYCHOLOGY

Carl Gustav Jung (1870-1961)

Carl Gustav Jung

Carl Gustav Jung developed an elaborate theory of dreams and dream interpretation. Jung proposed that the average dream is similar in structure to a drama; Jung maintained that however some dreams could be too short or fragmented to fit into this structure. Unlike Freud, Jung believed that the manifest dream (the dream as remembered) contains the actual meaning of the dream – the dream is therefore not distorted or disguised in any way. It is a message or natural expression of the unconscious. Therefore, interpretation should be based upon a series of dreams rather than a single dream. The usual practice was to interpret each dream separately, irrespective of what was in the following dream. In Jung's view, dreams show wishes, desires, conflicts and even give warning about future. He said that a dream is difficult to interpret and understand since it is expressed in its own unique language of symbols. In order to interpret a dream, Jung used the process of **amplification**. In essence, amplification involves elaborating a dream image in order to determine its significance through direct and indirect association. This is achieved by gaining an insight into the dreamer's personal associations with the image (direct association), in order to discover the feelings evoked by a particular dream image or symbol. The meaning and significance of a particular word or image can vary greatly between individuals depending on the effect it has had on his/her life. The cultural significance of the image, as well as drawing parallels from the symbolism contained in folklore, history, fairytales, religion, mythology, rituals etc.

As mentioned earlier, Jung believed that a series of dreams is much easier to interpret than a single dream. This is due to the fact that significant images will be repeated and the basic ideas and themes behind the dreams can be recognized more easily. A series of dreams usually indicates a complex conflict. Jungian dream interpretation also places a great deal of importance on the conscious situation of the dreamer. The dream is not an isolated event and cannot be detached from the dreamer's everyday life.

Jung developed a system of psycho-therapy based upon his theory of analytical psychology. According to Jung psychotherapy is not healing but helping to develop. He rejected free association and adopted dialogue, discussion and full confession.

The steps involved in Jungian therapy are:

- Reading (for some)
- Collaboration with the therapist
- Focusing on the situation at present
- Making any insight concrete and finding a way to put it into practice.

He also used interpretations of dreams in his method. He further took into view the positive side neurosis. Jung also stressed the importance of religion in life. He stated that to cure is to make a person symptom free, but the aim of psychotherapy is individuation.

ALFRED ADLER AND INDIVIDUAL PSYCHOLOGY

Alfred Adler (1870-1937)

Alfred Adler

Alfred Adler was born in the suburbs of Vienna, Austria, on February 7, 1870 and died in 1937. He received a medical degree from the University of Vienna in 1895. He began his medical career as an ophthalmologist, but he soon switched to general practice. He then turned to psychiatry, and in 1907 was invited to join Freud's discussion group. After writing papers on organic inferiority, which were quite compatible with Freud's views, he wrote, first, a paper concerning an aggression instinct, which Freud did not approve of, and then a paper on children's feelings of inferiority, which suggested that Freud's sexual notions be taken more metaphorically than literally.

Although Freud named Adler the president of the Viennese Analytic Society and the co-editor of the organization's newsletter, but Adler didn't stop his criticism. A debate between Adler's and Freud's supporters was arranged, but it resulted in the resigning of Adler with nine other members of the organization, to form the Society for Free Psychoanalysis in 1911. This organization became The Society for Individual Psychology in the following year. He died of a heart attack on May 28, 1937.

Individual psychology refers to the idea that we should see people as wholes rather than parts. The word individual means literally "un-divided." Second, instead of talking about a person's personality, with the traditional sense of internal traits, structures, dynamics, conflicts, and so on, Adler preferred to talk about lifestyle. Life style refers to how you live your life, how you handle problems and interpersonal relations.

Alfred Adler postulates a single "drive" or motivating force behind all our behavior and experience. He called that motivating force "striving for perfection". It is the desire we all have to fulfill our potentials, to come closer and closer to our ideal. It is very similar to the more popular idea of self-actualization. Further, according to Adler the concept of "organic inferiority" is one of the most important factors in human psychology. He thought that because of organic inferiority a person develops "striving for superiority."

This striving for superiority leads to:

- Compensation
- Over compensation

Compensation means striving to overcome. Since we all have problems, short-comings, inferiorities of one sort or another, Adler felt, earlier in his writings that our personalities could be accounted for by the ways in which we do -- or don't -- compensate or overcome those problems. One way to compensate inferiority

feelings or complex is to become aggressive. The person develops a drive to aggression but also has social interest. As a result of compensation for inferiority, drive to aggression and social interest a person develops a style of life. A person's mental diseases can also be understood as his style of life.

Adler also stated that as a result of organic inferiority, a person develops feelings of inferiority. He may also develop inferiority complex. Adler says it's a matter of being overwhelmed by our inferiority. If you are moving along, doing well, feeling competent, you can afford to think of others. If you are not thinking of others, if life is getting the best of you, then your attentions become increasingly focused on yourself. Obviously, everyone suffers from inferiority in one form or another. For example, Adler began his theoretical work considering organic inferiority that is, the fact that each of us has weaker, as well as stronger parts of our anatomy or physiology.

Adler noted that many people respond to these organic inferiorities with compensation. They make up for their deficiencies in some way: The inferior organ can be strengthened and even become stronger than it is in others; or other organs can be overdeveloped to take up the slack which is overcompensation.

Sadly, there are also many people who cannot handle their difficulties, and led lives of quiet despair. If you are overwhelmed by the forces of inferiority -- whether it is your body hurting, the people around you holding you in contempt, or just the general difficulties of growing up -- you develop an inferiority complex.

The Adlerian therapy consists of:

- A good human relationship between patient and doctor
- Direct conversation
- Dream interpretation
- Analysis of childhood memories
- Likes and dislikes of heroes
- Body of languages sitting, walking, talking etc.

In other words, Adler believed in considering a number of factors when examining an individual for the disorders he or she has developed. To him these disorders may have their roots in childhood or the environment in which the person is living.

NEO-FREUDIANS

Harry Stack Sullivan

Harry Stack Sullivan was born in 1894 and died in 1949. He was born in United States, Washington D.C., worked there. He was a physician by training and later became a psychiatrist. Sullivan is considered one of the prominent Neo-Freudians because of the similarities between his and Sigmund Freud's theories.

Sullivan was impressed by Freud and Ruth Benedict, the anthropologist, so his point of view reflects these influences. He put forward the view that a baby feels euphoria because his mother feeds and protects him, and the baby wants that state to last for the longer time. The mother may convey insecurity by empathy in him if she is tense herself. So a person's psyche is the result of interpersonal relationships, the beginning of which is the relationship of an infant and a mother. Sullivan says that because of interpersonal relationships, the concept of self develops. He defined three types of self:

- "Good me"
- "Bad me"
- "Not me"

The good me is everything we like about ourselves. It represents the part of us we share with others and that we often choose to focus on, because it doesn't produce anxiety. The bad me represents those aspects of the self that are considered negative and are therefore hidden from others and possibly even from the self. The anxiety that we feel is often a result of recognition of the bad part of ourselves, such as when we recall an embarrassing moment or experience guilt from a past action.

The final part of us, called the not-me, represents all those things that are so anxiety provoking that we can not even consider them a part of us. Doing so would definitely create anxiety which we spend our lives trying to avoid. The not-me is kept out of awareness by pushing it deep into the unconscious.

He put forward the view that because of our interpersonal relationships we come to have three types of experiences:

- Prototaxic experience
- Parataxic experience
- Syntaxic experience

Prototaxic Experience refers to the first kind of experience the infant has and the order or arrangement in which it occurs. Parataxic experiences are felt as concomitant, not recognized as connected in an orderly way. The child cannot yet relate them to one another or make logical distinctions among them. What is experienced is assumed to be the 'natural' way of such occurrences, without reflection and comparison. Since no connections or relations are established, there is no logical movement of 'thought' from one idea to the next. The parataxic mode is not a step by step process. Experience is undergone as momentary, unconnected states of being.

The child gradually learns the 'consensually validated' meaning of language - in the widest sense of language. These meanings have been acquired from group activities, interpersonal activities, and social experience. Consensually validated symbol activity involves an appeal to principles which are accepted as true by the hearer. And when this happens, the youngster has acquired or learned the syntaxes mode of experience.

Sullivan stated that there are about seven stages of human development:

1. Infancy
From birth to about age one, the child begins the process of developing, but Sullivan did not emphasize as much on the younger years as Freud did.
2. The childhood period
This is from infancy to 8 years. In this the child needs supervision, guidance is dependant. The development of speech and improved communication is the key in this stage.
3. The juvenile era

The main focus as a juvenile is the need for playmates and the beginning of healthy socialization

4. Pre-adolescence; 8 to 12 years

During this stage, the child's ability to form a close relationship with a peer is the major focus. This relationship will later assist the child feeling worthy and likable. Without this ability, forming the intimate relationships in late adolescence and adulthood will be difficult.

5. Early adolescence

This is from 13 to 18 years and this is when peers and teachers influence him. The onset of puberty changes this need for friendship to a need for sexual expression. Self worth will often become synonymous with sexual attractiveness and acceptance by opposite sex peers.

6. Adolescence

Stresses and storms of sexuality begin to dominate in this period. The need for friendship and need for sexual expression get combined during late adolescence. In this stage a long term relationship becomes the primary focus. Conflicts between parental control and self-expression are commonplace.

7. Maturity

This is when a person becomes a responsible citizen. The struggles of adulthood include financial security, career, and family. With success during previous stages, especially those in the adolescent years, adult relationships and much needed socialization become easier to attain. Without a solid background, interpersonal conflicts that result in anxiety become more commonplace.

Sullivan's therapy mainly related to schizophrenia and he discovered that interview was an important tool of psychotherapy. He used empathy as another tool of psychotherapy.

Karen Horney

Karen Horney was born in 1885 and died in 1952. She was an American psychoanalyst and is classified as a Neo-Freudian. Horney was a pioneering theorist in personality, psychoanalysis, and feminine psychology.

She got training in psychoanalysis and practiced it for a number of years; in 1937 she broke off from the orthodox system and established her own theory and practiced it.

She disagreed with Freud on his emphasis on sexuality as the main driving force of human behaviour. She put forward the view that parental roles can produce basic anxiety in a child and that is one of the main driving forces in a person. The child sees the world as hostile, and he feels helpless. Childhood's basic anxiety appears in later adult life, turning a person into a neurotic. As a result of anxiety the child becomes aggressive to overcome helplessness and anxiety. His reactions to anxiety and aggression may take the form of:

- Disguised hostility
- Temper tantrums
- Withdrawal

She calls these reactions neurotic trends. Disguised hostility is the first neurotic trend. Most children facing parental indifference use this strategy. They often have a fear of helplessness and abandonment, or what Horney referred to as basic anxiety.

Horney's second neurotic trend is aggression, also called the moving-against solution. Here, children's first reaction to parental indifference is anger, or basic hostility.

The final neurotic trend is withdrawal, often labeled the moving-away-from or resigning solution. When neither aggression nor disguised hostility eliminates the parental indifference, Horney recognized that children attempt to solve the problem by becoming self-sufficient. This represents the neurotic trend of withdrawal.

NEO-FREUDIANS

Karen Horney

She was an American psychoanalyst and is classified as a Neo-Freudian. Horney was a pioneering theorist in personality, psychoanalysis, and feminine psychology.

Karen Horney offered a list of ten neurotic needs which are:

1. Need for approval
2. Need for domination
3. Confine life
4. Independence
5. Perfection
6. Power
7. Exploiting others
8. Prestige
9. Ambition
10. Admiration

These needs lead to neurotic trends.

Neurotic trends appear as three kinds in social dealing:

i. Movement towards

Some children who feel a great deal of anxiety and helplessness move toward people in order to seek help and acceptance. They are striving to feel worthy and can believe the only way to gain this, through the acceptance of others. These people have an intense need to be liked, involved, to be important, and appreciated. So they will often fall in love quickly or feel an artificial but very strong attachment to people, even they may not know well. Their attempts to make that person love them create a clinginess and neediness and it often results in the other person leaving the relationship.

ii. Movement away

The final possible consequence of a neurotic household is a personality style filled with a social behaviour and an almost indifferent to others. If they don't get involved with others, they can't be injured by them. While it protects them from emotional pain of relationships, it also keeps away all positive aspects of relationships. It leaves them feeling alone and empty.

iii. Movement against

Another way to deal with insecurities and anxiety is to try to force your power onto others in hopes of feeling good about yourself. Those with this personality style come across as bossy, demanding, selfish, and even cruel. Once again, relationships appear doomed from the beginning.

The idealized image of the self is an attempt by a person to integrate his personality. Horney distinguishes between situational neurosis and character neurosis. Her method of treatment was to discover the neurotic needs, the movement away, movement towards, and movement against plus bring it to the attention of the person.

Erich Fromm

Erich Fromm is another psychoanalyst who was trained in classical Freudian mode but later developed his own theory and system. Born in 1900 and died in 1980, he worked and practiced in Chicago and New York, U.S.A. In his famous book "Escape from Freedom" written in 1941 he proclaimed his break from Freud and classical psychoanalysis.

Fromm asserted in the book that man has become free, but he longs to become dependent, and longs to belong; this is man's dilemma. It means that although man has become free, he has experienced freedom from the terms/requisites of the society, yet the internal desire to be affiliated with someone still exists. In other words, man wants to be related to a group which becomes his identity. This forms the basis of a society. Further, this craving to belong may also be to have affection from someone.

Fromm said that this need for freedom and dependence creates orientations. Orientations are relatively prominent forms in which we spend our energy. He identified five orientations:

i. Receptive orientation

Receptive orientation is represented in a submissive and meek attitude. This means that man tends to accept what is being enforced upon him in order to satisfy his desire to belong to someone or some group.

ii. Exploitative orientation

Exploitative orientation means to be aggressive and using others for own purposes. This orientation entails that a person makes use of others for achieving his personal motives, which may not be in other person's interest.

iii. Hoarding orientation

Hoarding orientation is represented in distrust for others and rigidity shown by a person. In other words, a person who feels that he cannot trust others tends to keep everything with himself. He also becomes rigid in his approach not letting anything change his dispositions.

iv. Marketing orientation

Marketing orientation is represented when the person adopts socially approved ways of behaviour and dealing with others and sells himself. In other words the person behaves in a manner which is liked by others. Therefore, he markets himself in front of others.

v. Productive Orientation

Productive orientation is the healthy way of life. This is the way of life where the individual realizes his full potential.

The first four are neurotic orientations. In later life Fromm became more of a social philosopher than a psychoanalyst and wrote and delivered lectures on his view of psychology and society.

ERIKSON and MORENO**Erik Erikson**

Erik Erikson was born in 1902 and he died in 1994. His contribution to psychology particularly relates to how he portrayed the psychological development of a person. Erikson was not formally educated like the vast majority of his psychodynamic colleagues. Although his parents pushed him for medical school, Erikson saw himself as an artist and spent his youth wandering through Europe living the artist's life. Later impressed with the psychoanalytical school, he started developing his own theories of personality development.

He was influenced by Freud's description of psycho-sexual development but he thought that the development of a person should be viewed as psychosocial development rather than psycho-sexual development. This means that the development of a person is greatly influenced by the social environment in which he lives rather than the influence of sexual development from which he goes through.

Erikson further asserted that the development of a person continues throughout his life. In other words, whatever the stage of life is, may be infancy or adulthood, a person goes through series of changes caused by the environment. He thought that each developmental stage requires a person to make new adjustments and develop new patterns of social interaction.

According to Erikson, in this developmental journey a person passes through eight stages.

The eight stages are:

i. Trust vs. Mistrust

In first year of life, the child is suspicious, fearful. From birth to one year, children begin to learn the ability to trust others based upon the consistency of their caregiver(s). If trust develops successfully, the child gains confidence and security in the world around him and is able to feel secure even when threatened. Unsuccessful completion of this stage can result in an inability to trust, and therefore a sense of fear about the inconsistent world. It may result in anxiety, heightened insecurities, and an over feeling of mistrust in the world around them.

ii. Autonomy vs. Shame and Doubt.

From the age of one to three years, children begin to assert their independence, by walking away from their mother, picking which toy to play with, and making choices about what they like to wear, to eat, etc. If children in this stage are encouraged and supported in their increased independence, they become more confident and secure in their own ability to survive in the world. If children are criticized, overly controlled, or not given the opportunity to assert themselves, they begin to feel inadequate in their ability to survive, and may then become overly dependent upon others, lack self-esteem, and feel a sense of shame or doubt in their own abilities.

iii. Initiative vs. Guilt

About age three to six, children assert themselves more frequently. They begin to plan activities, make up games, and initiate activities with others. If this opportunity is given, children develop a sense of initiative and feel secure in their ability to lead others and make decisions. Conversely, if this tendency is suppressed, either through criticism or control, children develop a sense of guilt. They may feel like a nuisance to others and will therefore remain followers, lacking in self-initiative.

iv. Industry vs. Inferiority

From six years to puberty, children begin to develop a sense of pride in their accomplishments. They initiate projects, see them through to completion, and feel good about what they have achieved. During this time, teachers play an increased role in the child's development. If children are encouraged and reinforced for their initiative, they begin to feel industrious and feel confident in their ability to achieve goals. If this initiative is not encouraged, and is restricted by parents or teacher, then the child begins to feel inferior, doubting his own abilities and therefore he may not reach his potential.

v. Identity vs. Role Confusion

During adolescence, the transition from childhood to adulthood is most important. Children are becoming more independent, and begin to look at the future in terms of career, relationships, families, housing, etc. During this period, they explore possibilities and begin to form their own identity based upon the outcome of their explorations. This sense of 'who they are' can be hindered, which results in a sense of confusion about themselves and their role in the world.

vi. Intimacy vs. Isolation

Going through the young adulthood we begin to share ourselves more intimately with others. We explore relationships leading toward longer commitments with someone other than a family member. Successful completion can lead to comfortable relationships, a sense of commitment, safety, and care within a relationship. Avoiding intimacy, fearing commitment and relationships can lead to isolation, loneliness, and sometimes depression.

vii. Generativity vs. Self absorption

During middle adulthood, we establish our careers, settle down within a relationship, begin our own families and develop a sense of being a part of the bigger picture. We give back to society through raising our children, being productive at work, and becoming involved in community activities and organizations. By failing to achieve these objectives, we become stagnant and feel unproductive.

viii. Integrity vs. Despair

As we grow older and become senior citizens, we tend to slow down our productivity, and explore life as a retired person. It is the time when we contemplate our accomplishments and are able to develop integrity if we see ourselves as leading a successful life. If we see our lives as unproductive, we feel guilt about our pasts, or feel that we did not accomplish our life goals; we become dissatisfied with life and develop despair often leading to depression and hopelessness.

The first four stages relate to development of the child and the last four with development of the adult. Erikson believed that depending upon each stage of development a person must be viewed and understood differently

J.L. Moreno

Dr. Jacob Levy Moreno was born on 18 May 1889 and he died on 14 May 1974. He was a leading psychiatrist, theorist and educator. He is the founder of Psychodrama, Sociometry and one of the pioneers of Group Psychotherapy. He studied medicine, mathematics, and philosophy at the University of Vienna, becoming an M.D. in 1917.

He was inspired by Freud but severely criticized his theory and method, because he thought Freud gave so much emphasis on individual's life and ignored group influences on him. He also thought that Freud ignored behavior and concentrated on thoughts. He was of the view that mental disease was due to lack of spontaneity. And that the mental disease was a reflection of man's social and familial relationships. He thought it could be relieved/cured by increasing spontaneity in a person and by providing a person an opportunity where he could relive his familial and social situation.

Moreno developed the technique of “Psychodrama” to achieve those two purposes. Psychodrama consists of:

Stage

It is the setup in which the analysis is performed.

A director

The psychiatrist acts as the director who conducts the drama.

Protagonist

The protagonist is the central character around which the drama revolves.

Audience

Audiences are the people who witness the drama.

Role playing

Role playing refers to the performance of various acts in the drama.

Role reversal

Role reversal refers to the exchange of roles between characters of the play. Each character plays the role of another so that he may get familiar with the intricacies of the other role.

All of the techniques and processes of psychodrama demand creativity from the protagonist. Creativity increases spontaneity leading to mental health. Moreno also developed a number of techniques to measure group phenomena. This he called “Sociometry.” Group phenomenon or sociometry refers to the behavior of individual in group situations and overall behavior of the group. Sociometry had very profound effect on such modern subjects as Organizational Behavior and Human Resource Management.

HUMANISTIC PSYCHOLOGY

Humanistic psychology is a branch of psychology that developed from behaviorism. Humanistic psychologists thought that the behaviorists ignored the humanistic view of people, their needs, aspirations, hopes, fears, and focused only on behavior. In other words, the human and emotional element was ignored and only the apparent behavioral patterns were studied. They also thought that psychoanalysts put too much emphasis on unconscious motivations and they neglect "humanity" of man. Therefore, humanistic psychologists focused on such human sentiments as joy, contentment, kindness, ecstasy and generosity.

Abraham Maslow

Abraham Maslow was born in 1908 and he died in 1970. He was born in New York and he did PhD in 1934 from Wisconsin University. Maslow is famous for his theory of motivation, called the Hierarchy of Needs.

Maslow's primary contribution to psychology is his Hierarchy of Human Needs. Maslow contended that humans have a number of needs that are instinctual, and are innate. Maslow assumed our needs are arranged in a hierarchy in terms of their potency. Although all needs are instinctive, some are more powerful than others. The lower the need is in hierarchy, the more powerful it is. The higher the need is in hierarchy, the weaker and more distinctly human it is. The lower, or basic, needs in the hierarchy are similar to those possessed by non-human animals, but only humans possess the higher needs.

Those needs or motives are:

i. Physiological needs

At the bottom of the hierarchy are physiological needs, including the biological requirements for food, water, air, and sleep.

ii. Safety needs

Once the physiological needs are met, an individual can concentrate on the second level, the need for safety and security. Here included the needs for structure, order, security, and predictability.

iii. Need for belongingness

The third level is the need for love and belonging. Included here are the needs for friends and companions, a supportive family, identification with a group, and an intimate relationship.

iv. Esteem Needs

The fourth level is the esteem needs. This group of needs requires both recognition from other people that results in feelings of prestige, acceptance, status, and self-esteem that results in feelings of adequacy, competence, and confidence. Lack of satisfaction of the esteem needs results in discouragement and feelings of inferiority.

v. Need for Self Actualization

Finally, self-actualization sits at the apex of the original pyramid of needs. Self actualization needs refer to the need of achieving one's true potential.

Carl Rogers

The other prominent humanistic psychologist was Carl Rogers who was born near Chicago, U.S.A., in 1902 and died in 1987. His education started from the second grade, because he had already read before kindergarten. He got his PhD in educational psychology from New York in 1931 and worked at Ohio State and University of Chicago. He was offered a full professorship at Ohio State in 1940. In 1942, he wrote his first book, *Counseling and Psychotherapy*. Then, in 1945, he was invited to set up a counseling center at the University of Chicago. It was while working there in 1951 that he published his major work, *Client-Centered Therapy*, wherein he outlines his basic theory.



Carl Rogers (1902-1987)

In 1961 in his book entitled "On Becoming a Person" he regarded self actualization as the greatest drive in human personality. He called it the highest level of mental health. According to Carl Rogers, a psychologically healthy person:

- Has openness to experience
- Fully lives the moment
- Has a sense of freedom
- And is highly creative

Based upon his humanistic theory and point of view he developed his system of psychotherapy called Theory of Client Centered Therapy. According to this theory, the person has the capacity to rid himself of his problems. Method of Client Centered Therapy includes reflection in affective terms.

Positive Psychology

Humanistic Psychology has given rise to a subject called the Positive Psychology in 21st century. Positive psychology is the scientific study of human happiness. The history of psychology as a science shows that the field has been primarily dedicated to address mental illness rather than mental wellness. Its research programs and application models have dealt mainly with how people are wrong rather than how they are right. The need to correct this bias was anticipated in psychological writings as early as those of the American psychologist and philosopher William James. In his 1902 book, *The Varieties of Religious Experience*, James argues that happiness is a chief concern of human life and those who pursue it should be regarded as "healthy-minded." Several humanistic psychologists—such as Abraham Maslow, Carl Rogers, and Erich Fromm—developed successful theories and practices that involved human happiness despite there being a lack of solid empirical evidence behind their work. However, it is the pioneering research of Martin Seligman, Ed Diener, Mihaly Csikszentmihalyi, Christopher Peterson, Don Clifton, and many others that promise to put the study of human happiness onto a firm scientific foundation and add some positivity to the predominantly negative discipline of psychology.

MODERN TRENDS IN PSYCHOLOGICAL TREATMENT

Methods of psychological treatment have been varied throughout the history and have evolved with the passage of time. As psychology moved from the science of speculation, perceived by great philosophers such as Socrates, to the scientific study of human behavior, methods of treating psychological diseases also have been adapted with the changing outlook. Different schools of psychology focused on different aspects of psychological problems and all developed their own techniques and methods to get rid of these problems.

Nowadays, according to the universally accepted standards, we can roughly divide mental diseases into two broad categories:

- Less severe ones: Neurosis
- More severe ones; Psychosis

It would be interesting to note that over the world, there are two manuals available for classification of diseases, namely:

- International Classification of Diseases (ICD)
- Diagnostic and Statistical Manual (DSM)

The former has been developed by the World Health Organization while the latter has been developed by the American Psychiatrist Association. Psychologists from all over the world got together to develop these manuals. These list all the known mental diseases up to date.

Moving towards the treatment of mental diseases, depending upon the nature of disease and the extent of severity, two categories of treatments have emerged:

- a) Psychological approaches or methods of treatment
- b) Biological approaches or methods of treatment

The psychological method of treatment is the approach in which the patient is not treated with medicines. Instead, the patient in this approach is treated with the help of psychological treatment, which means the psychologists try to find the root cause of the disease and then try to treat the patient by just listening and talking about the problem or disease. In other words, the psychologist focuses on discovering the root cause of the problem that the patient faces and tries to eliminate the problem through just talking to the patient, making him change his attitude etc. In this technique, no medicine is given to the patient. It involves methods such as psychotherapy. Methods such as group therapy, family therapy, etc. are also a part of this mode of treatment.

In the biological approach, the patient is treated not only by listening and discussing the problem but also through medicines. The psychiatrist advises/recommends some medicines. Usually the psychiatrist advises medicines which help the patient to relax himself. In other words, biological approach focuses not only on solving the patient's problem through talking and discussing; it also involves use of medicine for the treatment of mental diseases.

Let us delve deep into the two approaches towards the treatment of mental diseases.

a) Psychological Approaches

As mentioned earlier, the psychological approach focuses on treatment of mental diseases by allowing the patient to vent out what is creating the problem. It does not involve the use of medicine.

Psychological approach may be divided into:

- Psychodynamic methodologies
- Behavioral methodologies
- Cognitive methodologies
- Humanistic methodologies
- And Group methodologies of treatment

Let us take a look at some of them:

The **Psychodynamic methodologies** are based upon the assumption that psychological problems and diseases are caused by unconscious impulses and unresolved past conflicts. So Psychodynamic psychotherapists try to discover those unconscious motivations and help the patient resolve his past conflicts. Some times patient doesn't know the actual cause of his disease and thus gets mentally disturbed, but some times the patient knows that he or she had some unresolved past conflicts or some bad memories which are now disturbing him. So the Psychodynamic psychotherapists have to find the reason if the patient don't know or is unable to relate his past with his present problem.

Viewpoints of some famous psychologists are important to be noted in this regards. These include Freud's, Adler's, Jung's or Horney's viewpoints. Sigmund Freud gave the concept of unconscious and motivations; Alfred Adler gave the concept of inferiority feelings which are caused due to organic inferiority and may result in inferiority complex; Jung gave the concept of collective unconscious; Karen Horney related some neurotic needs which every individual strives for. Therefore, psychodynamic methodologies have evolved over time with the contributions of many great psychologists.

Another approach is called **Behavioral approach** to treat mental diseases. This approach stems from the behavioral school of psychology. It is based upon Pavlovian concept of conditioning.

In this regard, "Systematic Desensitization" is a method developed by Joseph Wolpe which is used to treat some mental disorders. This method involves exposure of certain elements to the individual which may be causing fear etc. For example, gradual exposure of snake to removes fear of snakes.

The third method that is employed in this category of treatment of mild mental diseases is what is termed as **Cognitive therapy**. Cognitive therapy is based upon the assumption that mental problems are caused by faulty thinking. The therapist corrects this faulty thinking, relieving the symptoms of the patient. The patient in this kind of thinking assumes that he is not good, or he cannot do something good, feels unconfident and feels that he/she is not being taking cared of. So the therapist try to remove this kind of thinking, from the patient's mind to make him feel confident and being cared of. Albert Ellis used Rational Emotive Behavior Therapy (REBT) under this method of treatment.

MODERN TRENDS IN PSYCHOLOGICAL TREATMENT

The psychological method of treatment is an approach in which the patient is not treated with medicines. Psychological approach may be divided into:

- Psychodynamic methodologies
- Behavioral methodologies
- Cognitive methodologies
- Humanistic methodologies
- Group methodologies of treatment

The first three methodologies have already been discussed. The fourth approach in psychological methods is the **Humanistic approach**. As you remember Carl Rogers was one of its practitioners. Humanistic therapists view themselves more as guides than therapists. The assumption is that a person has the potential to get well but he just needs the way to be shown to mental health. Client Centred therapy is one such method of humanistic method of treatment.

Treatment of less severe forms of mental diseases may also be done in groups. Where this approach is adopted, it is called **Group therapy**. It may take the form of a group of people taking part in a drama, as in psychodrama, a technique developed by J.L. Moreno. Or a group may discuss their problems together. One specialized form of group therapy is called Family therapy, where the focus may be the family of the client or the patient.

Group therapy is a form of psychotherapy in which the therapist has regular meetings with a small group of individuals. The purpose of group therapy is to assist each of these individual in his or her emotional development and assist him to solve his or her personal problem. People may choose group therapy for several reasons which include reasons such as group therapy being cheaper than individual therapies since the cost is divided among group members. Another reason may be that group therapy allows interaction with other people giving more insights into how people solve their problems effectively and a chance to learn from these. In addition, group members receive support from others in the group.

Family therapy is a form of psychotherapy that involves all the members of a nuclear or extended family. It may be conducted by a pair of therapists which often may be a man and a woman. This is usually done when problems related to gender roles in the family are creating trouble. Some types of family therapies are based on behavioral or psychodynamic principles while most of the others are based on family systems theory. Family system theory regards the entire family as the unit of treatment, and emphasizes such vital factors as relationships and communication patterns among members of the family. The purpose of family therapy is to identify and treat family problems that cause upheavals in the family life.

Comparing all these methods together, a research undertaken recently, involving one hundred and eighty six thousand people who undertook psychotherapy, it was revealed that Cognitive therapy had a success rate of 95%: Behavioral therapy had a success rate of 85% followed by Psychodynamic methods having a success rate of 80% and so on.

b) Biological Approaches

Now let us look at some other methods that we include in biological approaches to treat disorders they deal with more severe kinds of mental illnesses. One noticeable fact in this regard is, as pointed out earlier, that these methods are employed for more severe and chronic cases of mental disorders.

The first major mode of treatment in biological approach is **Drug therapy**. This is control of mental disorders through drugs.

Some such drugs include:

- i. Anti-psychotic drugs: Drugs which are used for severe cases of psychosis.
- ii. Anti-depressant drugs: Drugs which are used to relax the patient.
- iii. Anti-anxiety drugs: Drugs which are used to help anxiety.

Another method apart from prescribing drugs is called **Electroconvulsive therapy** or ECT in short. In this method, mild shocks are given to the head of the patient to help him rid his mental disease. Usually a shock of 70 to 150 volts is administered to the head of a severely sick patient. Scientists and psychiatrists are still unable to understand the phenomenon behind the success of ECT.

The third method in this category is **Psycho-surgery**. This method involves surgically removing a part of the brain. This method is very rarely used today and only as a last resort. These are the three major methods of treatment using the biological model.

ANTI-PSYCHIATRY MOVEMENT

Anti-psychiatry refers to approaches which fundamentally challenge the theory or practice of mainstream psychiatry in general and biological psychiatry in particular. Anti-psychiatric criticisms of mainstream psychiatry include that it uses medical concepts and tools inappropriately, that it treats patients against their will or inappropriately dominates other approaches to mental health, that its medical and ethical integrity are compromised by its financial and professional links with pharmaceutical companies, and that it uses a system of categorical diagnosis that is stigmatizing and is perceived by too many of its patients as demeaning and controlling.

A significant minority of mental health professionals and academics profess anti-psychiatry views, and even some psychiatrists hold such views in regard to mainstream (biological) psychiatry. Psychiatrists generally view anti-psychiatry as a fringe movement with little or no scientific validity, although it is difficult to quantify the proportion of the general public or professionals involved, or the range of views held.

D.L. Rosenhan

Anti-psychiatry movement can be understood by looking at an experiment undertaken by an American psychologist D.L. Rosenhan. The experiment was that, three women and five men who were perfectly normal and most of them were well educated, entered in 12 mental institutions of different places in U.S.A. They posed as mental patients saying that they hear voices, but apart from this, offered completely correct information about themselves. These “patients” remained in hospitals for 19 days on the average. Based upon the experiences of these posing patients, Rosenhan concluded that:

- It is impossible to distinguish between normal people and patients according to the rules and procedures of mental hospitals.
- Mental hospitals leave extremely negative effects on inmates.
- Mental hospitals treat patients without pity and with cruelty.
- That the overall environment of mental hospitals needs great improvement.

Further, research showed in this context that up to 80% patients released from mental hospitals went back and are re-admitted.

So a realization arose among psychologists that the methods of treatment being used by psychiatrists were inadequate and inappropriate for the treatment of mental disorders. Some psychologists and psychiatrists rejected these methods, and that is why their approach is called Anti-Psychiatry.

R.D. Laing

R.D. Laing was a British psychiatrist, who was born in 1927 and died in 1989. Laing wrote extensively on mental illness and particularly the experience of psychosis. He is being noted for his views, influenced by existential philosophy, on the causes and treatment of mental illness, which went against the psychiatric orthodoxy of the time by taking the expressions or communications of the individual patient or client as representing valid descriptions of live experience or reality rather than focusing on symptoms of some separate or underlying disorder. He is often associated with the anti-psychiatry movement, although like many of his contemporaries also critics of psychiatry, he himself rejected this label. He made a significant contribution to the ethics of psychology.

His book “The Divided Self” appeared in 1959 and is considered to represent the basic view of anti-psychiatry movement. Laing used the existential philosophy to understand and explain the concept of mental illness, thereby trying to look at schizophrenia from the patient’s point of view. He was against labeling mental diseases, because he thought that from the patient’s view, he is not suffering from a disease. In his opinion labeling was used to control people. In other words, in his own view no patient was sick. All that he was suffering from was labeled on him by the people who are treating him. Therefore, Laing suggested that the patient’s point of view should be kept in mind while treating mental diseases.

In his view the cause of mental disease was division in the self and the therapy suggested by Laing is known as “**Metanoia**.” Metanoia means a change in the mind. This could be achieved in various ways such as arts, discussions, seminars, etc. He established a place called Kingsley Hall where activities such as seminars, discussions, dance, yoga, painting, stitching were carried out to create and achieve metanoia.

Aaron Esterson

Another prominent psychologist in anti-psychiatry movement was Aaron Esterson who was born in 1923 and died in 1982.

Esterson focused on family therapy and showed that the family picks up a person and then labels that person “mad.” This is called **scapegoating**. In his book he relates the case of a young girl who was thought by her parents to be mentally sick but in reality she was healthy. Therefore Esterson showed that madness or schizophrenia is an expression of scapegoating of the family. His method of treatment was to expose the mechanisms of scapegoating to the patient and make the patient realize that he or she was not sick but was just being called sick. In that way the patient would be able to deal with any future labeling upon him.

PSYCHOLOGY IN THE THIRD WORLD

Third world countries are considered those regions and countries that gained independence and self-rule after World War II. Some of these countries were under the direct occupation of the European countries and America; some others were under the control of other occupying forces. These countries included Pakistan and India, most of the countries in Africa, some in the Far East as Vietnam and Indonesia, and the biggest of them all was China. Where the II World War brought numerous sufferings to mankind, it also resulted in freeing most of these regions and countries from the curse of modern slavery or colonialism.



Frantz Fanon (1925-1961)

Frantz Fanon

Post World War II psychologists have asked themselves a question if being colonized by a foreign power, it influences the psyche of the people of the region? Frantz Fanon was one of such psychologists. Fanon worked in Algeria as a psychiatrist. Algeria is a country in South American continent which was previously a colony of France. With reference to psychology in the Third World, Fanon is a prominent contributor.

Frantz Fanon was a black African who was educated in France, specialized in psychiatry and joined a hospital in Algeria. Frantz Fanon's relatively short life yielded two potent and influential statements of anti-colonial revolutionary thought, *Black Skin White Masks* (1952) and *The Wretched of the Earth* (1961), which have made Fanon a prominent contributor to postcolonial studies.

Fanon was born in 1925, in a middle-class family, in French colony of Martinique. He left Martinique in 1943, when he volunteered to fight with the Free French in World War II and he remained in France after the war to study medicine and psychiatry on scholarship in Lyon. Here he began writing political essays and plays, and he married a Frenchwoman. Before he left France, based on his lectures and experiences in Lyon, Fanon had already published his first analysis of the effects of racism and colonization, "Black Skin, White Masks" (BSWM), originally titled "An Essay for the Disalienation of Blacks". Fanon died in 1961.

He tried to look at mental diseases and also at the struggle of the colonized people of Algeria. As a result of his practice and observation he came to have some interesting ideas which are included in his two famous books. His books are available worldwide and have been translated into Urdu as well.

He put forward the view that as a result of occupation, a region or country comes to have two types of people:

- The colonizer
- The colonized

Both the colonizer and the colonized have different psyches. Colonizer is the aggressor who tends to dominate the colonized. The colonized on the other hand is obviously meek and receptive towards the colonizer who tends to impose him. Another important aspect of the colonizer, colonized relationship is that the colonizer considers himself superior and the colonized inferior. This means that the practices, views and beliefs of the colonizer are supported as superior by him while the colonized also accepts this. Further the colonizer also considers his culture superior and the colonized agrees.

As a result of this division of superiority-inferiority, people feel anger and rage. This anger and rage is expressed in various forms such as political turmoil, protests against the rulers etc. The rage is significant because it is not directed against the real culprit, the colonizer, but against each other. The colonizer uses this tool to keep a hold on the colonized. In other word, in order to ease his survival the colonizer facilitates the flow of this rage against the colonized, by dividing and directing it against religious sects, tribal belongingness, language and other cultural differences.

When the colonized adopts the ways of thinking of the colonizer, this adoption in Fanon's view is called the "**Colonial Mentality**". Colonial mentality is considering the culture, language and the general way of life of the colonizer as superior and considering these of the colonized as inferior.

Fanon put forward the view that mental disease is the result of rage of the colonized on one hand and the adoption of colonial mentality on the other hand. He saw in his practice that when some of his mental patients started to fight or take part in the struggle to free Algeria from the French control, they started to rid themselves of their diseases also, so his suggested method of treatment was to make his patients conscious of their rage and their acceptance of colonial mentality and prepare them to wage a battle against the colonial powers. An important thing to note in this regard is that the battle may not be fought with guns only, but also in schools and colleges by advancing in education; in hospitals by advancing in research and developing new medicine etc.; and in games and sports also.

PSYCHOLOGY IN THE THIRD WORLD**CHINA AND PAKISTAN**

As mentioned in earlier lectures, third world countries are those regions and countries that gained independence and self-rule after World War II. These countries were either under the occupation of America or the European countries. Few of these were also under the occupation of other forces. For example, countries such as Pakistan, India, most of the countries in Africa, some in the Far East as Vietnam and Indonesia, and the biggest of them all was China, are included in the list of third world countries. The Second World War brought numerous sufferings to mankind. Millions of human lives were lost, but this great disaster in the history of mankind also resulted in freeing most of these regions and countries from the curse of modern slavery or colonialism. Following is a review of psychology in some of the third world countries.

Psychology in China

China became free from foreign domination in 1949, under the leadership of Mao-Tze-Tung, who was a leader of the Chinese Communist Party. Before the revolution of 1949 China was under the influence of American psychologists. Peking University offered the first course in psychology in the first decade of the 20th century related to American psychologist's view point. The books of American psychologists notably, William James and John Dewey were translated into Chinese and became a part of the Chinese courses of psychology. James is considered the founder of the functionalism. William James put forward the view that consciousness is not epiphenomena, which means that consciousness cannot be considered as something whose functions or working cannot be explained.

John Dewey was an educationist who put forward the view that education, particularly of children, should be based upon the needs of the children. This means that children of different ages have different needs. The education system should concentrate on understanding those needs and should adjust itself to meet the needs. John Dewey also delivered lectures at various places in China during 1919 and 1920.

Another American psychologist named Sailor, who had been educated at Teachers College Columbia University, delivered lectures in China. After the revolution of 1949 in China, Sailor came to Pakistan and delivered lectures in Lahore and other places. So psychology in China before 1949 could be called functionalist psychology. It also carried the influence of behaviorism and psychoanalysis.

When the Communist party gained control of the country in 1949, they recognized psychology as an important field of study. Psychology was recognized as a separate science in 1950 in China. In 1956 a commission was established to prepare a plan for the progress of psychology in China. As a result of recommendations of the commission and other sources, three branches of psychology gained permanence in China. They were:

- Clinical Psychology
- Psychology of work and labor
- Educational Psychology

In **Clinical Psychology** research was undertaken in diagnostics and treatment of mental disorders, particularly schizophrenia and manic depressive psychosis. Chinese psychologists developed what they called "Speedy Synthetic Method" for treatment of mental disorders.

In the realm of **Psychology of Work or Labor**, manual labor was declared to be superior as compared to mental labor. Chinese psychologists discovered ways by which efficiency of manual labor could be increased.

In the field of **Educational Psychology** the highest resource and efforts were diverted. Educational psychologists looked into ways and means of improving student's moral and ethical behavior. They started manual labor classes for students.

Chinese psychologists also did research on the developmental stages of growth in children and found out the best age for schooling etc. These were the main features of the developments of psychology in China after the revolution of 1949.

Psychology in Pakistan

Pakistan became an independent country in 1947. At the time of partition there were only two departments offering master's degree in psychology. One at Dacca, East Pakistan, now Bangladesh and the other was Government College Lahore, affiliated with Punjab University where master's classes were being held. Later, RajShahi University in East Pakistan/Bangladesh started offering masters degree and then Punjab University also set up the Applied Psychology Department. Later post graduate departments were also opened at Peshawar University, Karachi University and other colleges in Punjab.

The main specializations taught at these institutions were:

- Psychodynamics, particularly the Freudian/Jungian approaches
- Social Psychology
- Clinical Psychology
- Experimental and General Psychology
- Psychological Measurement

Still later a National Institute of Psychology was set up at Islamabad, which undertook research in the areas of developmental psychology, forensic psychology, psychological measurement, etc. The NIP was later merged with Islamabad University.

Graduates from these institutions have been employed in the armed forces, the labor departments, education departments, public service commissions in the public sector, and in private sector, in advertising and marketing organizations and organizations undertaking research. Most prominent educational institutions now offer master's and post master's courses and degrees. Many graduates from these institutes are engaged in private practice and consultation.

PSYCHOLOGY IN THE 21st CENTURY

We will now touch upon two relatively modern areas of psychology; the first is organizational psychology and industrial psychology. It may be defined as the application of psychological principles and techniques to business and industrial problems. For example, psychology may be used in the selection of personnel or development of training programs for the employees which may enhance their productivity, make them more efficient and hence result in betterment of the organization.

In other words, industrial and organizational psychology are two new branches of psychology which aim at improving overall performance of industrial and organizational workforce in order to improve the productivity of the organization as a whole. Industrial psychology in particular, deals with labor force that works in factories etc., while organizational psychology deals with psychology of members of any organization, may it be an educational institute or a team. Some areas which are studied under the umbrella of organizational/industrial psychology include:

- Organizational design

Organizational design studies how to deal with the design of organization which meets the requirements and needs. For example, an organization may be tall or flat, i.e. having greater layers of management or lesser layers of management.

- Organizational culture

Organizational culture studies how to deal with the culture within the organization. Every organization has its own set of values which are expected to be followed by every member of the organization. These values determine the overall productivity of the employees. Organization culture deals with the principles that govern such cultural practices. It sets out guidelines to develop, maintain and reform (if needed) the organizational culture.

- Globalization

Globalization refers to a phenomenon which is often misperceived to be quite recent. Globalization means the world becoming one global village where distances present no more a hurdle to communication, trade, mobility of factors, exchange of ideas etc. An important aspect of globalization is that it allows mobility of workforce to move from one part of the globe to another. This mobility of workforce has had a significant impact on the working of organizations which has become more diversified in terms of labor force composition. A modern organization may employ a workforce comprising of members from various countries other than its origin. Therefore, globalization also plays a significant role in determining industrial psychology.

- Diversity

Diversity refers to the workforce of an organization comprising of individuals with different characteristics and traits which may differ to a great extent. Modern organizations, in order to survive in harsh competition need to diversify their workforce. Therefore, diversity studies shape a vital part of industrial psychology studies.

- Personality related factors in organizations

Personality related factors in organizations refer to factors such as motivation of the employee or attitude of the employee towards the organization and his work. Therefore, organizations need to concentrate on such factors which are now a part of industrial and organizational psychology. A motivated employee, for instance, would be more productive and would be more useful for the organization.

- Leadership

Leadership styles are also studied under industrial and organizational psychology. Leadership is an important determinant of overall productivity of the organization, team or group. Therefore, organizations tend to determine the best possible leadership styles for their managers.

- Stress and Fatigue

Stress management is another area under the umbrella of industrial and organizational psychology. American organizations spend a huge amount of money on stress management of their employees. Many productive employees lose their productivity because of work stress. Therefore, psychologists need to determine ways and means to help these people with stress management. Stress results into fatigue for the employees which need to be handled before it mars the productivity of the employees. The best way to do it, is to help the employees manage their work stress.

- Selection and Training

Selection and training are also a part of industrial and organizational psychology. Psychologists are hired to determine the personality characteristics of the employee and find the best fit for the organization who would suit the needs and requirements of the work being assigned to him and would be productive for the organization. Further, training, such as, to manage stress, diversity training, etc. are also areas under study in industrial and organizational psychology which help the employee to be more productive.

Another more recent expansion of the subject of psychology is Environmental Psychology. Environmental psychology focuses on human interaction with environment. It deals in how humans effect environment and how in turn environment affects human psychology. It includes such topics as

- Personal Space

Personal Space is the region surrounding each person, or that area which a person considers his domain or territory. Often if entered by another being without this being desired, it makes them feel uncomfortable. The amount of space a being (person, plant, animal) needs falls into two categories, immediate individual physical space (determined by imagined boundaries), and the space an individual considers theirs to live in (often called habitat). These are dependent on many things, such as growth needs, habits, courtships, etc

- Territoriality

Territories may be held by an individual, a mated pair, or a group which are then defended by them from intrusion of outsiders. Territoriality is only expected to emerge where there is a focused resource that provides enough for the individual or group, within a boundary that is small enough to be defended without the expenditure of too much effort.

- Environment toxins

Environment toxins are things which are harmful for the environment in which humans live and therefore, in turn harm human beings as well. For example, noise pollution may be a cause of fatigue. Temperature changes which are caused due to human beings, such as that explained by global warming are also studied under this topic.

Organizational psychology, Industrial psychology and Environmental Psychology are some of the new areas where modern psychology is growing and expanding.

PSYCHOLOGY IN THE 21ST CENTURY

Now let us look at two of the recently developed areas of psychology, namely:

- Consumer psychology
- Health psychology

Consumer Psychology

Consumer Psychology emerged as a separate field of psychology only in the 20th century. It studies the psychology of a person as a consumer, which all of us are. Every individual among us is a consumer in one way or another. A consumer in marketing terms is the one who purchases a certain good and uses it. We all purchase and use some goods which are available in the market therefore we all fall under this category.

Consumer psychology looks at the behavior of a person as a consumer and focuses on person's consumer choice behavior. In other words, this branch of psychology deals with studying the purchase behavior and habits of individuals as consumers. For example, an old aged consumer is more likely to purchase medicine, while a young consumer may be spending more on food items etc. Therefore, the aim of consumer psychology is to determine these patterns of behaviors of individuals, looking at them as consumers. It has become an important field.

For further explanation, consumer psychology looks at how a consumer's behavior is effected by:

- Cultural factors

Cultural factors are those factors which impact the consumer behavior of individuals and are derived from the culture of the individual. For example, in a Muslim country like Pakistan, food chains such as McDonald's have to use only halal items in their products. Therefore, the culture, influenced by the religion, has had an impact on the consumer's behavior, who would not eat anything which is not halal. Cultural factors are important in many ways for the organizations to survive and are studied under the umbrella of consumer psychology.
- Sub-cultural factors

Sub-cultural factors are factors which are derived from smaller cultures within the large cultures. For example, the purchase behavior of Sindhi's would be different from Punjabi's as these two provinces have their own cultures. These cultures in turn also influence the purchase behavior of individuals and need to be studied under consumer psychology.

Consumer psychology also looks at the influence of social groups and familial factors effecting consumer behavior. Social groups refer to the societal factors in which the individual lives; the society often dictates the behavior of the individuals and therefore plays a vital role in determining his consumer behavior as well.

Familial factors on the other hand refer to the factors which are derived from individual's family.

Consumer psychology then studies the individual determinants of consumer choice behavior, such as:

- Personal factors

These are personal traits of the individual such as personality etc.
- Involvement factors

Involvement factors refer to the involvement of the individual in the purchase decision of a good. For example in the purchase of a television, the involvement would be greater than in that of a low cost good.

- Memory factors

Memory factors refer to how much the individual retains of a particular advertisement. Therefore, these also play a vital role in determining consumer behavior.

- Evaluation factors

Evaluation factors refer to the individual's perception of the product. In other words, how the individual evaluates the product and appraises it.

- Post purchase behavior

- It also looks at Post purchase behavior. Post purchase behavior refers to the individual's behavior after he or she has made the purchase.

All these areas are studied under consumer psychology. It has become an important branch of psychology since all marketing techniques which aim at identifying the consumer's wants and needs are based upon consumer behavior understanding.

Health Psychology

Health Psychology is another recently developed area of psychology. It is devoted to psychological influences on what is health, how people stay healthy, why they become sick and how they respond in illness. It looks at various systems of the body such as:

- Cardiovascular system

It is the system of circulation of blood.

- Nervous system

It is the system of the nerves and the brain responsible for all the functions of the body.

- Endocrine system

It is the system of glands in the body.

- Digestive system

It is the system of digestion of food.

- Renal system

It is the excretory system of the body.

- Reproductive system

It is the system of procreation in human beings.

Health psychology identifies health behavior and prevention of diseases. It looks at stress, its causes and management. Stress results in fatigue and many such diseases. Therefore, health psychology focuses on discovering ways and means to reduce and manage stress.

Health psychology also studies pain and its management. In other words, it helps the patients manage their pain and become healthy more quickly.

Health psychology looks at chronic illness and its management. It deals with cases of terminally ill and their management. Terminally ill people could be made to survive for a longer period of time using techniques of health psychology.

PSYCHOLOGY IN THE 21ST CENTURY

Let us now have a glance at two other recently developed areas of psychology:

- Sports Psychology
- Positive Psychology

Sports Psychology

Sports psychology is the application of psychological principles to sports and exercises. It emerged as a separate applied science in third and fourth decade of the 20th century. It looks at such factors as:

- Motivation in sports

It refers to the motivation level of the player. In other words, how much motivated the player is about the task he is performing.

- Personality factors

Personality factors are the factors which are a part of the personality of an individual and have an impact on the performance of the sportsman.

- Attention and arousal factors

These are factors referring to how much attention does the player needs or what makes him motivated towards certain achievements.

- Anxiety and mood factors

Anxiety and mood factors also influence performance in sports and are studied under sports psychology.

Since sports has become a billion dollar business world wide and a lot of interest of psychologists has been aroused in sports psychology.

Positive Psychology

Another area that has been developed recently is the area of positive psychology. The aim of positive psychology is to use psychological methodology to discover and use factors that individuals, groups and organizations use to thrive. Positive psychology looks at such variables as:

- Optimism
- Hope
- Happiness or Subjective well being
- Emotional Intelligence
- Self Efficacy

In other words, positive psychology is the scientific study of human happiness. The history of psychology as a science shows that the field has been primarily dedicated to addressing mental illness rather than mental wellness. Its research programs and application models have dealt mainly with how people are wrong rather than how they are right. The need to correct this bias was anticipated in psychological writings as early as

those of the American psychologist and philosopher William James. Several humanistic psychologists—such as Abraham Maslow, Carl Rogers, and Erich Fromm—developed successful theories and practices that involved human happiness despite there being a lack of solid empirical evidence behind their work. However, it is the pioneering research of Martin Seligman, Ed Diener, Mihaly Csikszentmihalyi, Christopher Peterson, Don Clifton, and many others that promise to put the study of human happiness onto a firm scientific foundation and add some positivity to the predominantly negative discipline of psychology.

Positive psychology can be delineating into three overlapping areas of research:

- i. Research into the **Pleasant Life** or the "life of enjoyment" examines how people optimally experience, forecast, and saver the positive feelings and emotions that are part of normal and healthy living (e.g. relationships, hobbies, interests, entertainment, etc.).
- ii. The study of the **Good Life** or the "life of engagement" investigates the beneficial affects of immersion, absorption, and flow that individuals feel when optimally engaged with their primary activities. These states are experienced when there is a positive match between a person's strength and the task they are doing, i.e. when they feel confident that they can accomplish the tasks they are facing.
- iii. Inquiry into the **Meaningful Life** or "life of affiliation" questions how individuals derive a positive sense of well-being, belonging, meaning, and purpose from being part of and contributing back to something larger and more permanent than themselves (e.g. nature, social groups, organizations, movements, traditions, belief systems).

The development of the Character Strengths and Virtues (CSV) handbook represents the first attempt on the part of the research community to identify and classify the positive psychological traits of human beings. Much like the Diagnostic and Statistical Manual of Mental Disorders (DSM) of general psychology, the CSV provides a theoretical framework to assist in developing practical applications for positive psychology.

Practical applications of positive psychology include helping individuals and organizations in correctly identifying their strengths and use them to increase and sustain their respective levels of happiness. Therapists, counselors, coaches, and various other psychological professional can use the new methods and techniques to build and broaden the lives of individuals who are not necessarily suffering from mental illness or disorder.