

# General psychology for Postgraduate Students

**Based on the CCH Syllabus**  
Hour-wise distribution of Topics (20 Hours)

1. Introduction
2. History of the development of psychology
3. Branches of Psychology
4. Schools of Psychology
5. Concept of Mind - Mesmer
6. Concept of Mind - Hypnosis
7. Sigmund Freud
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9. Attention
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13. Memory
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15. Cognition, Ideation. Imagination
16. Emotion, Instinct & Sentiment
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18. Behavior
19. Methods of studying Behavior
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## **Introduction**

Psychology originated in man's curiosity about the nature of his activities and experience. The great thinkers believed in an invisible something in man as the cause of behavior and experience. This was name 'psyche', which means soul or mind. It was in the year 1590 that Croule used the term psychology, derived from two Greek words 'psyche' and "logos". Logos means a talk. Thus psychology means talk about the soul. But in modern times psychology is defined in a different way.

Psychology is as old as civilization. Historically psychology is the outgrowth of philosophy. It was the philosophers who turned their attention to the nature of human mind. Till the beginning of 19th century, Psychology had developed as a branch of philosophy; but in an attempt to be more scientific psychology has now become an independent science. The formal launching of psychology as a separate science occurred when Wilhelm Wundt, the famous psychologist, opened the first psychological institute at the university of Leipzig in Germany.

## **Definition of Psychology**

In ancient times psychology was defined as the science of soul, i.e. the nature and character of soul. Different answers were given, and all of them were vague, since it was difficult to say where the soul exists, or what exactly it is. In the absence of a clear and definite knowledge, it was unscientific to define psychology as the science of soul. .

Later psychology came to be defined as the science of Consciousness. (William J James). Psychology was to investigate our internal experience, i.e. Thoughts, sensation and feelings. In this sense, psychology deals with all aspects of man's conscious life such as ' knowing, feeling and willing. This definition was also rejected on the ground that conscious experience is strictly private and purely subjective. All internal processes are not conscious; there are unconscious processes also in our mind. The occurrence of dreams, disorders of personality and hypnotism prove this. Our aim should be to study the whole mind, and not merely the conscious part alone.

Another definition is that Psychology is the science of Behavior. (J.B.Watson, the founder of Behaviorist school of psychology). Behavior to Watson is purely a 'Stimulus-Response' affair. But according to modern psychology, behavior includes external behavior as well as internal experiences.

According to modern concept, psychology is the science of human behavior and experience. Psychology is often referred to as the biosocial science, Man is a biological and social organism. Social interaction is man's one of the most obvious traits, because it is fundamental to human existence. Behavior alone can be observed and studied. Psychology studies the behavior of the individual throughout the span of his life. It studies all aspects of cognitive activities like perception, intelligence, memory and forgetting, emotional activities

Psychology is considered as a Science, because it is the systematic study of human experience and behavior. The term no longer refers only to the study of the external world, but also to methods used in obtaining and interpreting available data. Science is aimed at an increased understanding of man and his universe, as well as betterment of man. Science systematizes common sense knowledge, which is not accurate. Scientific knowledge on the other hand is precise, complete and reliable. Psychology is a science, because it uses scientific \_ methods. Description, production and control are the three related stages in scientific procedure. By adopting scientific methods, psychology becomes an objective science, which aims at precision and validity.

Psychology as a science is empirical. It rests on experiment and observation, rather than opinion, argument or belief. . The advantage of experimental methods is repetition of experiments, control of conditions, verification results and measurement of results. But in -psychology, experimental method has some limitations due to the fact that human beings are the subjects of experiments. Psychologists also make use of descriptive approach, which includes naturalistic observation, use of surveys and clinical methods.

### **History of the development of Psychology**

Psychology is the study of human nature.

History: 3 stages in the development of psychology.

1. Primitive mysticism
2. Branch of philosophy
3. Natural science

#### **Primitive mysticism; - oldest concept**

Originated in man's consciousness to an inner spirit, a little man located somewhere in the body. A man within a man - the soul imprisoned in the body. which regulates man's nature, and behavior. In religions, the soul was recognized as a spiritual entity.

#### **Branch of philosophy**

Early Greek philosophers spoke of the psyche - the soul as the center of experience. The name psychology was then derived from the word psyche. Sometimes the word mind was used instead of soul. According to Plato mind was an assemblage of ideas. So psychology was referred to as the study of feeling and ideas.

Mind is a function of bodily processes,, Heart was supposed to activate all bodily processes and hence it was expressed that mind is located in the heart. Later Brain was explained as the activator of bodily functions, hence the seat of mind. Psychology was defined as the science of consciousness, i.e. whatever we are aware of. Unconscious experiences and facts of behavior was not included in the definition of psychology. Later, philosophers continued to theorize about the nature of human experiences and behavior.

In 1690, the Englishman John Locke in his 'Essay concerning Human Understanding' put forth the idea that human knowledge is acquired during life, not inherited or based as 'innate ideas'. This is only partially true.

Many philosophers tried to explain the nature of mind and body relationship-  
e.g. : Wilhelm Leibniz- Harmony between mind and body is predetermined by God.

#### **Separate Natural Science**

Psychology did not exist as a separate scientific discipline, until the end of 19th Century. Modern Psychology has its origin in Wilhelm Wundt's laboratory of experimental psychology established in Leibniz in 1879.

Psychology emerged out of two traditions: Philosophy and Natural science. Many basic concepts of psychology trace their origin back to philosophy. Development of other natural sciences like physics, and,

later biological sciences also influenced the growth and development of psychology as a natural science.

### **Wilhelm Wundt (1839-1920)**

He was a medical graduate, teacher in philosophy. His interests turned towards research in .physiology, particularly sense perceptions led to interests in psychology.

### **William James (1842-1910)**

Began as a medical student. He wrote the book - Principles of Psychology.

He was interested in analyzing how the mind functioned rather than observing its .

Wundt was not impressed by James. He commented, "It is literature, it is beautiful but it is psychology."

However &both played a major role shaping the direction of psychology as a discipline.

He emphasized the importance of making careful observation and asking proper questions.

## **MODERN PSYCHOLOGY**

Definition -Psychology is the Science of behavior in relation with the environment.

Behavior may vary according to different factors:

1. Childhood, adulthood, old age
2. Conscious and unconscious Behavior
3. Normal and Abnormal behavior
4. Subjective and Objective behavior

Behavior-may be

- 1.Expressed / Social/ Outward
- 2 Intrapsychic (Unconscious processes)
- 3.Biological

### **Branches of psychology**

1. Theoretical or Pure Psychology
2. Practical or Applied Psychology

### **Theoretical Psychology**

- 1.Physiological - Studies the physiological basis of behavior.
- 2.Psychology of Cognition - deals with mental activities and processes like perception, thinking, understanding, reasoning etc.
3. Abnormal psychology- Studies the causes, types and development of abnormal behavior
4. Differential psychology- Studies the individual differences in behavior pattern, components of differentiation.
5. Parapsychology - Studies the basis of supernatural things or activities, superstitions, extra sensory perceptions etc.
- 6 Soc/a/ psychology- dynamics of group behavior- influence of culture, propaganda. etc.
7. Animal psychology

### **Applied Psychology**

1. Child psychology: Developmental changes in behavior and attitudes with age.

2. Educational psychology :

Problems of education

Age level education

Methods of teaching

Detection of subnormal individuals etc

3. Industrial and Business psychology:

Setup of the building, institution and other arrangement

Selection of personnel for various jobs

Problems of occupational set up

#### 4. Criminal Psychology:

Criminal behavior, causes and types.  
Types of punishments  
Rehabilitation

#### 5. Psychology of war

Selection of personnel for battlefield  
Problems and counseling.

#### 6. Psychometrics:

Developing various psychological tools for assessment techniques.

#### 7. Counseling psychology :

Problematic Cases  
Scientific assessment of a person  
Positive and negative counseling

#### 8. Clinical psychology:

Final word for other branches of psychology  
Diagnosis  
Treatment methods  
Psychotherapy  
Rehabilitation  
Research methods

### Schools of Psychology

**1. Structuralism** - Established by Wilhelm Wundt, German physiologist in 1879. It is concerned with structure of mind and conscious activities and components of mental processes.

Just as chemical compounds are built from chemical elements, complex mental experiences are built up from simple mental states. Evolves laws for the formation of consciousness and behavior.

Method of study is introspection under controlled conditions.

Main topic is the study of sensation.

Follower — Titchener

Structural elements of conscious experience were analyzed - sensation, feelings, images.

#### **2. Functionalism (1900)**

This school originated as a reaction against structuralism. Instead of concentrating on the structure of consciousness, these psychologists gave importance to the study of the functions of human mind. They studied the way the individuals used mental experiences in adjusting to the environment. The leaders of the school were William James, James R. Angell and John Dewey.

Naturally they concentrated their attention on learning processes.

Introspection and observation were the methods of study.

#### **3. Behaviourism**

Originated with J.B. Watson, an American psychologist in 1912. Behaviorists were skeptical but the emphasis on consciousness\* Psychology is the science of behavior and he emphasized the objective and experimental method. Behavior could be primarily observed. It eliminated the subjectivity of the studies of consciousness. Behaviorists emphasized the role of physiology in behavior and contributed much on conditioned responses.

Exponents- Pavlov, Dashiell

Method - Experimentation and Observation

Main topic - Stimulus - Response

Introspective data are subjective, evident only to the experimenting individual.

Conscious experience is private, hence cannot be studied scientifically. Psychology should deal with what is

public, Man should be studied as an object in nature.

#### **4. Gestalt Psychology**

German word for 'organized whole'. School of thought that proposes behavior can only be fully understood in terms of the 'whole' aspect and that breaking down of behavior into smaller units detracts from their appreciation. Emphasis is given to the whole person or situation. A piece meal analysis of the situation (Reductionism) only identifies the smaller components of the complex event.

Whole is greater than the sum of all the parts

Exponents: Max Weirtheimer, Kurt Koffka, Wolfgang Kohler

They argued that perceptual experience is the result of active synthesis, based on a number of basic principles.

Humans are programmed to identify objects by properties that are not produced from a detailed description of each of their parts. Objects possesses what are sometimes called 'emergent properties'

e.g. Orchestra

#### **5. Psychoanalysis**

Founded by Sigmund Freud in 1900. According to him, psychological disorders originate from unconscious mental processes. Mind has 3 parts- the unconscious, the preconscious and the conscious. 90% of mind is composed of the unconscious ~ which is the seat of repression and instincts.

Mental make up of the person cannot be understood by the methods of introspection and laboratory experimentation, but by psycho analysis and dream analysis. He developed the method called Free Association Technique

Other exponents

Alfred Adler

Can Justav Jung

They were associated with Freud, but later departed from him, because of the overemphasis given for sex instinct by Freud. They developed independent ideas, and thus originated individual psychology and Analytic psychology.

#### **6. Humanistic Psychology**

Some psychologists believed that the complexity and uniqueness of man could not be studied by Freudian or behaviorist method. They gave more importance to human experience. Man is considered a subjective animal having motives for development and to become perfect, which are more important than sex power etc

Humanistic psychology will be the major force in the 1s' or 2nd decades of 21st Century because man will slowly come to realize that the origin of bliss or happiness is in himself, and so he will turn to himself for truth, beauty, happiness, success and achievement.

Major exponents: Gordon W Allport, Can Rogers, Abraham Maslow

### **CONCEPT OF MIND Mesmer's concept of Human Mind**

Frauz Mesmer (1734- 1830) was an Austrian physician who developed the doctrine of Animal magnetism, later called Mesmerism. He lived in an era of widespread superstitions and relative ignorance even among the upper classes, and complete ignorance among poor classes. People believed in black magic, influence of planets and advocated the intensive use of leeches and bleeding as universal remedies. Mesmer appears to be a man of good education and culture, with of course erroneous convictions and mystical beliefs. He first studied Divinity and took his Ph.D. He then studied Law and got a Doctorate. And a third Doctorate in Medicine.

Mesmer's concept of animal magnetism is contained in his doctorate thesis in Medicine. (His conclusion was that there is a universal fluid permeating in all beings; it is in a perpetual state of influx and reflex. This

serves as a medium through which all co-existing objects continuously interact. It is through this fluid that the planets influence human beings.

One day Mesmer got an opportunity to witness a remarkable cure effected through the application of a magnet. He was also impressed by the sight of cures effected by a healer, solely through the touch of his hands. He arrived at the notion that the universal fluid manifests itself in living organisms, particularly in man, in a way analogous to the manner in which physical magnetism manifests itself in natural magnets according to this analogy, there are like and unlike magnetic poles, which can be transmitted, induced, changed, destroyed or reimposed. Health depends upon proper distribution and balance of this vital fluid. Mesmer attributed to physical magnets powerful animal magnetism. He also believed that some human beings are like physical magnets in that they are powerful sources of animal magnetism, and can influence objects and other human beings.

Since illness is the result of an inadequate distribution or lack of animal magnetism, a cure can be effected by altering the inadequate distribution through they use of powerful sources of animal magnetism.

The ideas of Mesmer were misinterpreted by his fater students. It came to be known as Mesmerism. There is no explanation as to how this departure from the original teaching happened. One development was the discovery of artificial somnambulism, a spectacular nervous condition that was supposedly brought about by the use of animal magnetism. It produced in many individuals all kinds of unusual and paranormal faculties. Animal magnetism became associated with various physical and Para physical forces. For example, it was used to explain table tilting and turning during spiritualistic exercises. In the hands of mesmerists, animal magnetism remained a biological entity, which could account for anything unusual. To Mesmer, animal magnetism was a concept, which explained illness and it was a rational way of cure. For the mesmerists, animal magnetism became an occult agent used primarily to bring about somnambulistic state and other extra medical effects. Mesmer himself saw this unfortunate development during his own lifetime, but he could not do anything to stop it.

Mesmer's theory of animal magnetism is not a scientifically valid concept. Actually Mesmer saw the cure of illness by some unknown principle or agent, and he thought that it was animal magnetism, in the light of his knowledge at that time. The main surviving influence of Mesmer is the late recognition of hypnosis as a psychotherapeutic agent.

### **Hypnotism**

Mesmer discovered that susceptible subjects whom he magnetized responded to his suggestions and were unresponsive to the surroundings. The subjects in the state of artificial somnambulism could see and read the inner state of bodily organs. This fact was recognized by Jarnes Braid in 1841. and called it Hypnotism. Thus hypnotism was the term originally used by Braid to denote what was otherwise called nervous sleep. Hypnotism proper began as a consequence of his attempts to elucidate the true nature of mesmeric phenomena.

Braid's chief scientific contribution was the isolation from mesmeric phenomena of that component which he called hypnotism After 40 years; Charcot introduced the next important development in hypnotism. He asserted that hypnosis is not a single entity, but a group of three distinct nervous states, namely Catalepsy, Lethargy and Somnambulism. Each was capable of being introduced separately by specific physical means. Another investigation maintained that hypnosis and all its attendant phenomena were not pathological manifestations, but purely results of suggestions.

In hypnotism, the individual is asked by another person, the hypnotist, to gaze intensely at a small bright object held in front of the person, while the hypnotist tells him that he is becoming relaxed and drowsy, that his eyes are getting heavy and dosing, that he is falling asleep. Finally the subject falls asleep. But it is quite distinct from the natural sleep that the subject seems to be selectively m sensory contact with the hypnotist. He carries out the requests and commands of the hypnotist. Sometimes the subject acquires new extrasensory powers. Suggestions and suggestibility are the two elements of hypnotic task. Suggestion is the process by which the subject uncritically accepts and follows the commands of the hypnotist. Hypnotism works only if suggestions are positive. Subject must be suggestible to suggestions. Children are more suggestible than adults, women more than men. Neurotics are more suggestible than normal individuals. When one is sick, the influence of suggestion is quick. A suggestion acts as if there is faith in the individual who gives it.

There are some reports that show hypnotic suggestions have been effective in some cases. Suggestions can decrease hallucinations and delusions experienced by neurotic patients. Suggestions are powerful in improving sensory, motor and intellectual faculties.

Sometimes individuals can be asked to read the experiences of the past events vividly, especially of childhood. Smoking and alcoholism have been stopped by hypnotic suggestions.

Hypnotism is not possible if patients are not co-operating, or unwilling to be hypnotized. There is also evidence to show that person will not act against his will and conscience.

### **Sigmund Freud (1856 - 1939)**

Sigmund Freud was the founder of psychoanalytic school of psychology. He began his career as a medical student in Vienna. After taking his M.D. he started practicing medicine with another physician Dr. Joseph\_Bruer. Freud became interested in neurotic disorders and with Breuer, he wrote a book on 'Studies on Hysteria'. He was dissatisfied with the then existing therapeutics of neurotic patients. First he started with hypnotic suggestions, but later gave it up and developed the technique of psychoanalysis.

Psychoanalysis may be viewed as a theory of mind, a form of treatment, and a movement. After discarding hypnosis, he developed a method called talking method, in which the patient was encouraged to speak out to the physician in a free manner. In this conversion, Freud found the forgotten memories & experiences were associated with their problems. This is the method of free association. Here the patient is asked to relax both physically and mentally, and waited for the patient to speak out spontaneously. The patient was free to tell anything and everything that came to his mind.

The main beliefs of Freud are motivation on human behavior, emphasis on sexuality, psychic determinism, and influence of unconscious, repression, mental conflict, anxiety and defense as causes of neurosis. Freud believed that all human behavior is mentally determined, and unconsciously motivated. To him, mind is mainly unconscious, which originated from repression. Every human being is born with a number of desires, mainly instinctual desires. A good many of them are not satisfied due to many reasons. Sometimes the mind experiences two powerful contradictory desires, the satisfaction of one is against the satisfaction of the other. In other words, the mind is pulled in two opposite directions by two strong opposing forces. This experience is called mental conflicts

Freud says that in our attempt to forcefully throw out the unwelcome desire from the mind, it goes from the conscious mind to the unconscious mind. This is how the unconscious part of the mind develops. The repressed desire is never inactive in the unconscious mind. It is always trying to come up to the conscious mind to get satisfied. But the conscious -mind always tries to keep it down. Thus there is a perceptual war between the conscious and unconscious mind- The theory of repression is the main pillar on which the whole edifice of psychoanalysis rests.

### **To Freud, mind consists of three parts, Id, Ego and Superego**

Id consists of the instinctual desires, seeking immediate satisfaction. It is completely selfish .It is the pleasure principle. It is irrational and infantile.

Ego is that part of mind which is always in contact with the external world. Ego is guided by the reality principle. It tries to control the pleasure principle

Superego is that part of mind which consists of moral ideas and standards of the individual. When a child grows up, he imbibes the moral ideas of his parents, brothers and sisters. All these ideas of right and wrong, good and evil constitute the Superego. It is the moral guide, and its is that of a sensor. Very often there is conflict between Id and Superego.

Freud has vividly explained infantile sexuality. His fundamental assumption is that all neurosis is due to sexual maladjustments, probably at the childhood age. The neurotic patients have repressed their sexual desires, and in order to understand their problems, 'one has to go back to the original cause of repression, which may be found only in early childhood.

The most surprising statement of Freud is that the sexual life of an individual begins at early childhood, not at puberty. Freud rejects the idea of innocent childhood, as the child has a strong sexual desire and very malicious tendencies.

Freud gives an elaborate explanation of the development of Libido or the sex energy. In the first stage, one derives pleasure from one's own body (Oral stage & Anal stage), in the second stage, the homosexual stage, there is strong attachment to the members of the same sex. The third stage is the heterosexual or normal stage, where one is associated with the opposite sex. Freud also states that in the first two years, children are sexually attached to the parent of opposite sex. Oedipus complex refers to boys and Electra complex to girls

To Freud, dream is a disguised satisfaction of a repressed desire, dream. Interpretation is a key to the understanding of the unconscious. Dream has a manifest content and a latent content. Manifest content is what actually appears in the dream. It stands for some hidden ideas and images in the unconscious, which is the latent content, During sleep, Superego is not very alert, so all unsatisfied desires come up to the conscious mind and get satisfaction in a disguised manner. This is done by symbolization, dramatization, condensation and displacement. To Freud, symbols are sexually significant. Interpretation of dreams means understanding the original meaning of disguised symbols and other mechanisms.

## **CONTEMPORARY SCHOOLS OF PSYCHOLOGY**

### **Alfred Adler**

Alfred Adler was born in Vienna, Austria on February 7, 1870. During the early decades of the century, he originated the ideas, which, to a large extent, have been incorporated in the mainstream of present-day theory and practice of psychology and psychopathology.

In 1898, at age 28, Adler wrote his first book, which deals with the health conditions of Jailors. In it he sets forth what later was to become one of the main tenets of his school of thought; the necessity of looking at man as a whole, as a functioning entity, reacting to his environment as well as to his physical endowment, rather than as a summation of instincts, drives and other psychological manifestations.

In 1902, when Adler was one of the few who reacted favorably to his book on dream interpretations, Freud sent him a hand-written postcard suggesting him join the circle which met weekly in Freud's home to discuss newer aspects of psychopathology. At that time Adler had already started collecting material on patients with physical handicaps, studying both their organic and psychological reactions to them. Only when Freud had assured him that in his circle a variety of views, including Adler's, would be discussed did Adler accept the invitation.

Five years later, in 1907, Adler published his book on Organ inferiority and its Compensation. From then on, the difference between Freud's and Adler's views became steadily more marked. Adler had never accepted Freud's original theories that mental difficulties were caused exclusively by a sexual trauma, and he opposed the generalizations when dreams were interpreted, in each instance, as sexual wish fulfillment. After prolonged discussions, during which each of the two men tried to win the other over to his point of view- attempts doomed to failure from the start- Adler left Freud's circle in 1911 with a group of eight colleagues and formed his own school.

In 1912 Adler published his book, *The Neurotic Constitution*, in which he further developed his main concepts. He called his psychological system "Individual Psychology," a term which is sometimes misunderstood. It refers to the indivisibility of the personality in its psychological structure.

### **Carl Justav Jung**

He is the founder of the Analytic school of psychology. He was born in 1875. He studied Biology, Philosophy, Archeology and mysticism. The dissertation for his medical degree was parapsychology. He took his MD in 1900, He was attached to Freud in 1907, but he disagreed with Freudian concept of sexuality. According to him, libido is the sexual instinct. It should not be generalized as the central core personality development.

His concepts:

1. Human behavior is controlled by past & future
2. Human beings are religious animals wherein the unconscious mind goes back to the very beginning of human race. Man is motivated more by religious and moral values than by primitive sexuality.
3. Structure of personality; The total personality of psyche consist of a number of interacting systems namely ego, personal unconscious and collective unconscious.



**Ego-** It is the conscious mind.. including all elements of mind which an individual is aware of , like thought, perception, learning and memories. It is the centre of personality responsible for one's feelings.

**Personal unconscious:** It includes materials outside one's conscious mind, but forgotten repressed or pushed out of conscious mind. This is highly individual based upon one's own past experience.

**Collective unconscious:** It is the part of human heritage common to all people, It is the storehouse of latent traits inherited from our ancestral part. It is nothing personal but universal. It is composed of a number of universal thought forms called archetypes. An archetype is the original mode or pattern from which something develops. They are 3 types

**Persona:** It is the mask worn by the person according to the demands of the social situations. It produces definite impressions upon others.

**Anima & Animus:** These are the feminine and masculine principles respectively. Man essentially a bisexual animal. E.g. Every human being secretes both male and female hormones.

Anima- It is the undeveloped feminine part of man's personality. Animus is the undeveloped masculine part of woman's personality. Anima is more operative in emotional situations, and animus in practical situations. Jung considers man as rational and woman as emotional.

**Dynamics of Personality:** It is the energy by which the personality develops. There are two alternatives for it, namely Libido and Psychic energy.

### **Stages of development**

Man is constantly progressive, always attempting from the unstable to more stable to complete self-actualization.

Early phase is by the Libido action, necessary for the survival of childhood.

Sexual values begin to appear during adolescence. In one's youth, the basic life instinct is more energetic and impulsive.

During 30 to 40 years, youthful instincts are replaced by cultural values.

In middle age, man becomes more introvert and introspective, and less impulsive. Man attains wisdom gradually, and transferred into a spiritual man.

## **Attention**

First step in observation.

It is focusing consciousness on stimulus.

It is a process of preferentially responding to a stimulus or a range of stimuli.

**Titchner,**— Attention is a state of sensory clearness with a margin and a focus. "Attention is the aspect of consciousness that relates to the amount of effort exerted in focusing on certain aspects of an experience, so that they became relatively more vivid."

Attention can be voluntary or involuntary

Concentration is sustained attention with continuity in focusing.

### **Factors influencing attention**

1- Objective factors" (Characteristics of stimuli)

- a. Intensity of stimulus
- b. Frequency of repetition
- c. Size
- d. Movement
- e. Change of stimuli
- f. Systemic form or order
- g. Contrast

## 2. Subjective (Qualities of the observer)

- a. Habit or familiarity
- b. Immediate need ,
- c. Profession - Interest or motivation.
- d. Innate tendencies

### **Division of Attention**

Ability to focus on more than one stimulus at a time. Usually subjects are unable to attend to more than one thing at a time. It depends upon the amount of mental energy needed for each task.

- 1. If two or more tasks do not demand full resources, then they may be performed simultaneously.
- 2. Performance of one task will disrupt a second, if it makes demands on the resource pool.
- 3. Subjects themselves are in control of allocation policy and they match these to meet the demands of the task being performed.

### Selective attention

The ability to focus on a single stimulus filtering the rest. It is the mental process of restricting to one event at a time. Selective attention provides a means by which we reduce the workload on our mental systems.

### Assessment of attention

Span Of attention :It is the number of stimuli one can attend to in one act of attention. Average 6, up to 8 or 9.

### **Tests for attention**

- 1. Digit span
  - a. Digit Forward; 836, 6315, 37194 etc up to 9 digits.
  - b. Digit Backward:
    - Expected range
    - DF 5-7
    - DB3-5

Average difference between DF and DB is 2.

More than 2 are pathological. It has a diagnostic value in mental patients.  
Low score of DF and DB in cases of depression, anxiety, and schizophrenia.  
High score in cases of paranoid conditions.

### 2. Cancellation test for illiterate

Digit cancellation  
Colour cancellation

### 3- Tests for concentration

Immediate memory test ( Eysenk- British psychologist)  
Letters or digits are used.  
37516849  
W NXADOR  
Ask to repeat only the last few digits.

### **Perception**

Perception is meaningful understanding of stimulus (object)  
Perception is that organizing process by which we come to know objects in their appropriate Identity,  
Perception involves interpretation and understanding. But sensation refers to the process of receiving information.

### **Attributes of perception**

- 1. Perception is independent of conscious will.
  - e.g. two viewpoints of an ambiguous picture

Cross  
Candlestick  
Staircase  
Necker cube

2. Perception is often creative- e.g : When "viewing a two dimensional building, the creative nature of our mind can fill the missing information based on our past experience i.e., visualizes the interior of the room, doors and roof etc...
3. Perception is influenced by context.
4. Perception is rule bound. It follows the law of reduced cues.
5. Perceptual set or expectancy effect.

Human beings are predisposed to see a number of natural shapes and configuration, e.g. circles, squares, and rectangles etc., which are fundamental to universe.

6. Perception occurs as a complete whole, and not as unconnected facts. (Gestaltpsychology)
7. Perception is a highly selective process, both subjective and objective factors influence.

### **Factors influencing perception**

1. Proximity ab cd ef  
ab, cd and ef are perceived as single units than be and de
2. Similarity  
Similar things perceive as a single unit

0000000  
xxxxxxx  
+ + + + +

3. Continuity- continuous objects are perceived as a single unit.

4. Closure  
Tendency to fill incomplete pattern into a coherent whole.

### **Determinants of Perception**

1. Proper function of sense organs
2. Proper function of brain
3. Past experiences
4. Set or attitude

### **Errors of perception ( Illusion - misperception)**

Process of perceiving an object in a wrong way.

In illusion, there is a definite discrepancy between what we perceive and the actual facts, Our senses may be deceived in many ways, and these extend to any of the senses. But, in psychological experimentation, visual illusions have received greatest importance.

- a. Illusion of length - Mueller-Lyer Illusion.
- b. Illusion of area
- c. Illusion of distortion
- d. Illusion of direction
- e. Zollner illusion
- f. Poggendorf illusion

### **Inferences from the study of illusion**

1. Illusions are due to misleading stimuli.
2. Due to force of habit, and blindness from new impression
3. Influenced by preoccupation, bias. expectancy
4. Influenced by setting, background, familiarity, emotion, enthusiasm. strong drives.
5. From being satisfied with total general impression. Hallucinations

Hallucinations are sensory experiences for which no adequate sensory stimulus can be discovered. Hallucinations are perceptions without real object or stimulus.

Normal Hallucinations - Not pathological - e.g., dreams, fantasies, visual memories anticipations under stress or anxiety.

Psychotic hallucinations - Pathological. Usually do not realize that their hallucinations are not real.

Materials of hallucinations are formed from individual's memories, both conscious and unconscious (repressed), recent or remote. They reflect the motives, interests, preoccupations and experiences of the individual.

Psychotic hallucinations are mostly unpleasant

E.g.: Sees enemies threatening him.

Hears voices cursing him.

Smells foul odors.

Taste putrid flavors.

Disguising touch sensation- crawled upon by vermin.

Normal people can have hallucinations in sensory deprivation- when away from day to day activity in a voyage. (Callentur)

## **Delusions**

Beliefs or convictions that are firmly held despite objective evidence to the contrary.

Abnormal person can eradicate a prejudice, if he wills.

A neurotic cannot eradicate an obsession, but is critical of it.

A psychotic accepts his delusions whole-heartedly.

### **Types of delusions**

1. Expansive: Direct compensation for feeling of inadequacy.

There are beliefs in possession of immense abilities or properties - exaggeration of one's own importance.

E.g. Delusions of grandeur in which the psychotic may believe to be a President, Napoleon, Stalin, Jesus.

2. Derogatory - Convictions of worthlessness. evil, depravity, sickness etc, guilty of unspeakable sin.

3- Persecutory - Unjustified beliefs in the existence of enemies dedicated to injure the individual or his loved ones. The person believes that the enemy has taken control of him, inflicting pain or leading to danger.

Because delusions satisfy emotional needs, rational arguments do not affect them.

a. Delusions of persecution.

b. Delusions of poisoning.

c. Litigious delusions\_- Pathological tendency to take legal action against the accused. It starts as a suspicion.

### **Learning**

Learning is a conscious activity.

Jalefa: - Learning is defined as modification of behavior as a result of past experience.

Woodworth: Learning consists in doing something new, provided this doing something new is retained by the individual and re-appears in his later activities.

Thorndike: Learning is the establishment of connection between stimulus and response.

### **Types of Learning**

#### **I. Trial and Error method**

Explained by Thorndike and C.L.Hill. Animals learn things, by this method. Cages or puzzle boxes or mazes are used for animal experimentation.

Animal has to do some simple movements to reach food; it makes many trials and errors when trying to reach food.

Observations

- a. When trials increase, errors decrease and unwanted movements are decreased.
- b. When reward is withdrawn, errors increase, i.e., learning process is adversely affected.
- c. When reward is offered, errors decrease.

### **Essentials of Trial and Error method**

1. Motivation

There should be a 'set' to reach a certain goal.

2. There should not be a clear or obvious way to reach the goal.

3. Exploring the situation for finding the way, backing off when blocked at one level, and shifting to another way.

4. Finding a good lead and reaching the goal.

### **Laws of Learning**

1. Law of frequency - Repeated acts tend to learning

2. Law of recency - Recently performed acts learning.

3. Law of Effect - Thorndike showed that teaching an animal any behavior is easy, if it is rewarded or 'reinforced'. If the effect of response is pleasant or a reward, then necessary movements are adopted. This is called positive reinforcement.

If the effect of response is unpleasant or punishment, unwanted movements are avoided. This is negative reinforcement.

## **II. Insightful Learning**

Explained by Tolman and Kohler.

Learning requires some amount of insight.

Experiments are done on Apes and Chimpanzees, and on children below 10 years of age.

A cage with no doors is used.

Animal is kept inside

Food is kept outside

Some sticks are kept inside the cage.

### **11I. Learning by conditioning or sequence**

Changes in nature occur in dependable patterns or sequences, so the individual can learn the sequence of events.

Conditioning occurs in terms of stimulus response.

Stimulus is an event, situation, object or factor that is measurable and affects the behavior (S).

Response is a reaction to a stimulus, which is expressed as a change in behavior (R),

**Ivan Petrovich Pavlov** - This Russian physiologist, while studying the digestion in dogs, noticed what is called 'Psychic salivation', the dog salivating before it was actually given food. This led to his research on conditioning.

Classical Conditioning

Unconditioned Response- A natural reflex reaction to natural stimulus, e.g., salivation in the presence of food.

Papillary contraction when light is directed to the eye.

Unconditioned Stimulus

The stimulus, which elicits unconditioned response. It refers to unlearned nature of reflexes.

Conditioning is a process of learning

**In Pavlov's experiment**, learning is based on forming a connection between the bell and food, Ringing of the bell initially had no effect on salivation. It was a neutral stimulus. After repeated pairings with food, which was placed in the mouth, the sound of the bell came to elicit salivation. At this point, sound became

the conditioned stimulus. And the salivation, which results is the Conditioned Response.

Response elicited is a pre-existing response. Learning actually consists in forming a connection between conditioned stimulus and unconditioned stimulus. For optimal conditioning, the conditioned stimulus should occur a second or so before the unconditioned stimulus, rather than simultaneously.

C.S serves as an advanced signal that U-S is going to occur.

It allows one to anticipate the environmental events.

C.S - Conditioned stimulus - S1- Warning signal

U.S - Unconditioned stimulus ~ S2 Actual stimulus

C.R. -Conditioned Response - R1- Preparatory response

U.R - Unconditioned Response - R2 - Actual response

Before Conditioning

C.S (Bell) -----^ No response

U.S (Food) -----^ Unconditioned response

During Conditioning

C.S followed by U.S -----^ U.R

After Conditioning

C.S (Bell) -----^--> Conditioned response

### **Laws of Conditioning**

1.C.R is established by repetitions with reinforcement (i.e. ringing of bell followed by food)  
Quantity of saliva increases trial by trial.

2. Extinction of C.R by repetition without reinforcement.

12.07 PM -13 drops of saliva

12.10 PM - 7 drops of saliva

12.13 PM - 6 drops of saliva

12.16 PM - 5 drops of saliva

12.19 PM - 3 drops of saliva

12.22 PM - 2 drops of saliva

12.25 PM No-saliva

C.R can be easily restored in 2 ways

a. Give 1-2 reinforcement in between the experiments

b. No reinforcement on that day, next day initial trials show some response.

3. Delayed C.R when reinforcement is delayed

Two phase reaction

Early phase - dog learns to be neutral.

Late phase - salivation

4. Selective conditioning accompanied by selective reinforcement (Stimulus discrimination.)

#### Experiment

Black square (C.S) was followed by food, but the gray square was never followed by food. After a number of such trials, dog salivated only to the black square, but never to Grey Square.

Here the dog was conditioned to distinguish between the two stimuli.

This is the basis of discriminative learning.

5. Similar conditioned stimulus will produce same response. (Stimulus generalization^

If the dog is conditioned to the sound of bell, a different bell will elicit the same response. The degree of response is related to the degree of similarity between the new stimulus and the original C.S.

### **Instrumental or Operant Conditioning**

Thomdike studied the situation in which an animal actually interacts with the environment. A hungry cat was

kept inside a puzzle box and food was kept outside. The cat could free itself by pressing a lever and thus reach food.

The time needed for the cat to escape gradually declined with repeated trials- Improvement in performance represented a change in behavior as a result of experience- in other words, by learning.

Operant conditioning is a type of learning concerned with changes in emitted responses as a function of their consequences.

Thomdike used the term instrumental learning.

### **B.F. Skinner**

He created a framework for the study of learnt behavior. He coined the term Operant learning, Skinner Box/would allow running trials continuously with behavior automatically recorded.

The rat inside the box had to press a lever to obtain food- When placed in the box for the first time, it had to explore the whole situation inside the box before finding out the fever. Gradually it learns the mechanism to get food whenever hungry-

### **Applications of Classical Conditioning**

1. It explains the development of behavior patterns such as phobias.

2. May be used in the treatment of phobias, by bringing about:

a. Extinction of the response by presenting the conditioned stimulus a number of times.

b. Stimulus substitution - Unpleasant stimulus is substituted with something pleasant.

c. Systematic desensitization - (Fear of Snake)

Person is asked to relax, and while relaxing he is asked to imagine situation with snakes, varying from least fearful to most fearful, over a gradual process. each step is dealt with until the patient reports having no anxiety to most fearful situation.

d. Aversion Therapy (alcoholism)

Pairing of unwanted behavior with an unpleasant event.

Alcohol (C.S) + emetic (U.S) — ^ Nausea and vomiting(U.R)

Alcohol (C.S) — ^ Nausea and vomiting (C.R)

3. Programmed learning

Correct responses are rewarded immediately.

4. Behavioral Therapy

This method is used to treat a range of behavioral disorders.

## **INTELLIGENCE**

**Intelligence** is a person's innate capacity.

It is a comprehensive term for observing, understanding, remembering, thinking and gaining knowledge.

Spencer." Intelligence is the capacity of the organism to adjust itself to the complex environment."

Galton:" Intelligence is the capacity to meet a novel situation"

David Weschler "Intelligence is the general capacity of the organism to act purposefully, to think rationally and to deal effectively with the environment."

Researchers have so far not been able to establish a firm theoretical basis for the nature of the concept of intelligence. Most of the work on the topic has been concerned with practical application of intelligence. Therefore, the pragmatic definition is one that defines intelligence as that which is measured by an IQ test.

### **Development of IQ theory**

The technique was introduced for the first time in 1904 by Alfred Binet, a French psychologist, to study the

problems associated with subnormal children in schools. To him, a subnormal child was simply one who was not performing as well as the rest of the children of that age group. With this in mind, a test was constructed to screen out subnormal children.

He includes items in the test in such a way that: -

1. They would differentiate between performances of children of different age groups
2. They would not depend upon the use of ordinary knowledge obtainable from school lessons
3. They would motivate the child irrespective of age, not too easy but of practical nature
4. They should appear in a scale of ascending difficulty such that all children from a given age group should be capable of answering the early items of the test with relative ease, while only few are capable of answering the final items correctly

The test as revised by Alfred Binet and Henry Simon in 1911

$IQ = (MA/CA)100$

### **Classification of people according to IQ '**

**0 - 20.** Profound mental retardation - Cannot talk, understand etc. Cannot avoid common dangers. Needs help always.

**21-35** Severe mental retardation - Little speech, uses monosyllables, little understanding. Can avoid common dangers, but needs supervision.

**36- 50.** Moderate mental retardation - Can talk freely, but cannot understand abstract ideas. Can do routine manual work with supervision.

**51-70.** Mild mental retardation- Looks like an average, but abstractions are difficult. Cannot study according to age level.

**71-89.** Slow learner. Borderline or Dull mental retardation - In between normal and subnormal. Misled easily by antisocial

**90-109.** Normal average

**110-119.** High average - Can do more abstractions. Can have higher education and achieve higher positions in various levels.

**120-139.** Superior- Superior in profession. Adjusts Very well in all situations.

**139.** Gifted or Genius

### **Classification of assessment tools**

1. Individual and Group Tests.
2. Verbal and Performance Tests - Verbal tests involve efficiency in language, hence applicable only in literate people.
3. Tests for Adults and Children
4. Tests for Suspected average and below average.
5. Tests for Suspected high average
6. Clinical Tests.
7. Speed Test and Power Test.- Speed test is an efficiency test, as time factor important in completing the test items.

Power test is a capability test, as it brings out the maximum innate capacity, there is no time limit. .

### **Determinants of IQ test performance**

Social and educational background - Better opportunities of developing skills. .

Teacher expectation and a positive self-esteem by the children.



3. Maturation and aging - Between 5 - 11 years, rate of development is fair and uniform; so test results more reliable. But scores are less reliable in adolescence, as many personal and social changes guide the individual in a number of directions.

4. Birth order First-born children tend to have higher IQ than the later-born ones. This may be due to the additional care given to the first-born.

## **MEMORY**

It is the ability to process and retrieve information, it is the function involved in relating past experiences. It is the totality of past experiences that can be remembered

### **Components of Memory**

1. Assimilation or Fixation
2. Retention
3. Recall
4. Recognition
5. Relearning

### **Assimilation**

It is the actual process of learning or gathering information in a meaningful way and organizing it into mental schemata.

Factors influencing

Positive factors - Intelligence, interests and motivation, quality of stimulus.

Negative factors - Mental illness in general, physical and psychological problems, extremes of age. (old age and childhood), fear, anxiety and excitement- Drugs and alcohol.

### **Retention**

It is the storage of learned material as impressions in memory tracers.

Factors influencing-

Positive factor - Intelligence

Negative factors- Physical and psychological stress, over work, absence of retention

### **Recall**

It is the ability for active retrieval of information, or the ability to reproduce what is retained.

100% recall is not usually possible. Emotional factors hinder the process of recall.

### **Recognition**

It is the process of identifying the presented information as familiar.

### **Relearning**

It is re-fixing the information by more trials. An improvement in performance occurs by reviewing. Learning is easy for already learned material.

## **Types of Memory**

### **1 Sensory memory. -**

It is a modality -specific transient form of memory, which serves as a buffer between the senses and short-term memory.

Several sensory memories- Vision, hearing

### **2- Short term memory: -**

The component of memory, which handles retention over relatively brief intervals of up to approximately 15 seconds.

It is transient and limited, lost after several seconds.

It is very limited in the amount of information it can retain-

Best measure of STM capability is  $7 \pm 2$  meaningful items, or chunks.

Chunk is the basic measure of STM capability representing a meaningful unit, such as random numbers, letters or words.

### **3- Long Term Memory**

The component of memory, which is involved with retention over relatively long periods (hours, days, weeks or longer)

LTM is potentially permanent.

LTM has unlimited capacity.

a- Procedural memory- Stores 'how-to' information - e.g. how to play piano, how to cook a chicken.

b. Semantic memory - Involves general knowledge of the world. E.g. Capital of Jaipur.

c. Episodic memory - Contain personal experience, organized according to where and when events happen.

E.g. what happened on your last birthday?

### **Memory test ,**

1- Digit span- OF and DB

2. Memory Drums - Paired association test

a. Single word series

b. Two word series

First trial

Crow- Tail

Apple - Mother

Second trial

Only first words are shown, person should recall the second in each pair.

Average score - 9 out of 10 pairs.

Third trial

Second word in each pair is shown, person should recall the first words.

Only 1 or 2 answers are correct.

### **Memory influenced by age**

Peak age for better learning 20-30 years.

31-45 - Slight drop or plateau.

> 45 - Rapid drop

< 10 to better than > 55

### **Influenced by sex**

Women of all age levels have greater memory capacity than men

## **Methods of studying**

In 1885, the German psychologist Ebbinghaus made a series of experiments to study the subject on memorizing. He began to learn by heart a series of meaningless nonsense syllables like MOG, FtD, and TAZ. Subsequent researchers repeatedly confirmed his discoveries on the subject. They are known as Ebbinghaus's Principles of Economy in Acquiring.

1. Distributed practices are more effective than massed practices.

38 repetitions distributed over 3 days are just as effective as 68 repetitions made on 1 day.

2. Whole learning is usually better than part learning- divide the material into logical divisions i.e. paragraphs or stanzas.

3. Meaningful material can be memorized more easily than meaningless material.

4. Recitation to oneself after several readings will save time in fixing the lesson firmly in his memory.
5. Definite instruction for learning will help better learning, We learn according to the requirements of the task;
6. Knowledge of result (how he is doing in studies) will offer the learner strong incentive to put forth extra effort.
7. Reward or Punishment

People learn more quickly when the right response is reinforced with a reward than when a wrong response is followed by punishment. Punishment has the effect of preventing the child from responding, and thus destroys the possibility of learning.

Acknowledging a correct response is more effective for foaming than publicizing his errors.

### **Factors influencing the efficiency in Learning (methods, of improving memory)**

1. Motivation
- 2- Ability to learn- Intelligence
3. Genera/ health" Physical and mental
4. Environmental Factors - Vary from individual to individual
- 5 Method of assimilation - understand the whole idea first, then learn it by part by part or as a whole
5. Meaningful understanding of the material, relate it with other aspects also.
7. Total involvement with the subject.
8. Adequate interval in between the acts of learning
  - Maximum 45 minutes continuously
  - Rest for 10-15 minutes or a short sleep.
9. Difficult items in better mood
10. Avoid two similar subjects one by one.
11. Frequent repetition or re-learning
12. Knowledge of result and correction
  - Test memory after learning
  - Do correction wherever necessary
13. Grouping and Rhythm
14. Mnemonic devices
15. Secondary associations
16. Reinforcement - motivation should be sustained by rewards

### **CAUSES OF FORGETTING**

#### **2 Theories**

1. Atrophy theory - Fading due to decay of memory tracers in brain due to
  - a. Senile condition
  - b. Overloading
  - c. Absence of proper activation frequently.
2. Interference theory
  - a. Blocking
    - Emotional factors like anxiety, tension.
  - b. Retroactive inhibition

Interference or confusion of present learning with subsequent learning. Mostly noticeable when two learning situation involve similar associations e.g., a player learning two similar games at the same time finds himself confusing the rules. It may also be due to poor rest in between 2 learning situations.

#### c. Repression

Active forgetting unconsciously to protect the ego.

Embarrassing things are forgotten - associated materials may be repressed.

e.g., unacceptable teacher - student forgets the topic taught by him.

## **COGNITION**

The term is used to cover a broad range of abilities, all of which involves internal mental abilities. These include processes such as reasoning, interpreting, assessing and representing, which lead to the development of intelligence.

Concept of intelligence involves' adaptation to environment and gaining knowledge is of primary importance in facilitating this adaptation. Adaptation Is brought about by a continual striving to achieve balance or harmony with the surroundings. This occurs through complimentary processes of Assimilation and Accommodation.

**Assimilation** means to take in or incorporate. It refers to the individual's effort to deal with new objects or events in the environment using the already existing ideas or schemata. For example, when a child sees a bird flying, it forms an idea of flying, from his previous idea of Birds.

**Accommodation.** it is an individual's effort to deal with a new object or event by modifying the existing schemata.

For example, when the child sees an aero plane flying, he modifies the previous idea of a bird flying, and understands that what he sees now is not a bird, but an aero plane.

## **IDEATION (Concept formation)**

The term concept refers to a general idea or unit of knowledge, which is the result of many experiences. Concepts are based on generalizations, and once developed, they play an important role in further thinking.

Concepts are represented by words. Example- Cat, Tree, Beauty- Words, which refer to unique instances, are not concepts. Example- Spain, Christ, Hitler.

Concepts develop through the processes of observation, comparison, analysis and generalization of observed facts.

Concepts may be conjunctive and disjunctive, abstract and concrete.

Conjunctive concepts are those having several dimensions, all of which must be present to define the concept.

For example, shoes

- 1.These are coverings worn on the feet
- 2-They are relatively stiff as opposed to socks
3. They are tow as opposed to boots

Disjunctive concepts are those having several dimensions, but only one of them, by itself,constitutes an instance of the concept

For example, 1- Brother-in-law means brother of one's wife or husband of one's sister.

**2. Scandinavian** means a native of Denmark, Norway, Sweden, Iceland or Finland.

Abstract concept is that which cannot be actually seen, but perceived or experienced subjectively.

For example, Beauty, Truth, Love, Sweetness \*

Concrete concept is that which can be objectively experienced, or perceived.

For example, Tree. Table, Egg.

## **IMAGINATION**

The power of imagination is a unique character found in human beings. All our achievements, inventions and discoveries, artistic and literary pursuits are the results of imagination. Imagination is a mental activity. In our imagination, we think about objects in their absence. Sense perception is not needed for imagination. Effect of memory is also visible in imagination.

Imagination is that mental activity which helps an individual to create in his mind new ideas or to think about new things on the basis of past experience. Imagination is based on knowledge gained through perception in the past. We cannot imagine a thing of which we have no past experience. One, who is blind by birth, cannot imagine anything about color. Functioned imagination is to create new things, to establish new relationships between various objects.

Individuals differ in their power of imagination. It is stronger in children than in adults. Power of imagination decreases with age.

A superior kind of imagination is creative imagination, in which the individual creates new things or principles. It is of two types, pragmatic and aesthetic. Railways, Telegraph, Atom bomb etc. are results of pragmatic imagination. In aesthetic imagination, the mind is completely independent. The poet or artist produces his work with aesthetic imagination.

## **EMOTION**

Emotion may be defined as a state of agitation, disturbance of equilibrium, an intense random and disorganized response to a stimulus.

Emotion has two aspects, subjective and objective.

Subjective aspect of emotion — The most striking aspect of emotion is the subjective feeling it produces - an experience of fear, anger, gloom etc.

Objective aspect of emotion - The most notable aspects of emotion are the changes they cause in immediate behavior - overt acts like fighting, fleeing, sulking, laughing, crying etc. A person may manage to control such overt acts, but the facial expressions are self-betraying. Persons may also experience some bodily sensations, such as a lump in the throat, a dry mouth, or cold sweat, which only express some of the many internal changes that occur in response to stimuli, which provoke an emotional state.

**William James** put forth the theory that emotions are instinctive; but J.B. Watson's "extensive experiments showed that emotions are more of an acquired nature.

Training may modify facial expression in emotion. It can be too easily suppressed or exaggerated, with or without real stimulus.

For example, flow of tears from joy or grief.

In psychiatric cases, knowing the direction of emotional energy is important. It may be against, towards, away from people or inward against oneself. The feelings usually associated with these responses are rage, love, fear and depression respectively.

In rage, one moves against the source of one's frustrations.

In love, one moves towards the source of pleasure.

In fear, one moves away from it.

In depression, one turns the emotion inward against oneself.

Internal changes in emotion

### **Varied reactions occur in the emotionally aroused person**

1. Eyes - Pupil dilates, eyes are unusually and widely open, eyeball protrudes.

2. Cardiovascular system - Heart beat increases, Blood pressure rises, peripheral vasodilatation occurs, hair stand on end (goose flesh)

3. Respiratory system - Rate and depth of breathing increases, inhalation is lower and exhalation is quicker.

4. Sweat glands - Excessive secretion of cold sweat.

5. Salivary glands - Salivation is inhibited, dry mouth occurs.

6. Gastric secretion is inhibited causing interference in digestion.

7. Endocrine ~ Increased production of Adrenalin, causing anxiety and nervous tension-

Changes in bodily functions are mediated through the sympathetic - parasympathetic nervous systems.

**Polvgraf** - Slightest variations in bodily functions during emotion can be accurately measured using this sensitive machine devised by Prof. John. A. Larsen. It is used in Lie detector (except in cases "of psychopaths)

### **Effects of emotion**

1. Emotions interfere with thinking

2. Emotionally upset person makes useless movements - walks up and down, pulls the hair, slams the doors etc.  
3. Sustained emotional disturbances lead to psychosomatic diseases, like Peptic ulcer, Colitis, Hypertension, Asthma, Migraine, and Insomnia etc.

### **Spectrum of emotions**

Emotions can be of both extremes with an average in between.

1- Ecstasy	Depression
2. Excitement	Inertia
3. Tension	Relaxation

Positive emotion      Positive Health

Negative emotion      Negative Health

Extremes of emotions are not desirable for positive health.  
Average more towards positive is essential for good health.  
Intensive negative emotions are unfavorable for physical and mental health.

### **INSTINCTS & SENTIMENTS**

The behavior of a newborn baby is mostly instinctive; but slowly and gradually, it becomes modified by experience. Instincts are inborn or innate tendencies or dispositions by which we act in a particular manner. Instincts are common to all human races. Instincts are purposive.

William Me Douglas has done a very extensive study on instincts of man and animals. He speaks of 14 instincts - 7 primary and 7 secondary. He defines instinct as an innate tendency because of which we perceive an object of a particular kind. Feels a peculiar emotion, and engages in a particular activity, in relation to that object. This definition includes the cognitive and affective aspects of instincts. Every instinct has its particular emotion. Though animal behavior is largely determined by instincts, human behavior is never purely instinctive. It is greatly modified by our education, experience, intelligence and culture.

In human beings a number of instinctive drives are combined together, and in the light of our experience and intelligence, they are modified to become sentiments. A sentiment is an acquired one. It is a prominent disposition towards an object. It becomes a permanent part of our mental setup. Patriotism is a sentiment. In an adult human being behavior determined by the dominant sentiment. Sentiments are the results of our experience and represent our ideas and ideals in life.

### **CONATION**

In psychology, conation is a term used by Sir William Hamilton to designate one of the three great divisions of the mind, the other two being cognition and feeling. As used by him it induced the mental states of desire and volition alone; but modern writers make the term broad enough to include every state of mental change, so that we find conation wherever consciousness, of itself, drifts from one state to another. Although akin to feeling and attention, it is distinct from Jaoth. The word is occasionally applied to those sensations, whether "painful or pleasant, which accompany muscular activity. Cudworth first used the adjective conative in 1688.

Conation is that aspect of mental process or behavior directed towards action or change, and includes impulse, desire and striving.

Synonym - Intention, Drive, Motivation

Drives and Motives are forces that determine the behavior of the individual.

Drive is an aroused, goal-directed tendency of the organism based on a change in organic process. Biological processes are involved in drives.

Motive is a state of tension within the individual that arouses, maintains and directs behavior towards a goal. It is the conscious reason, which the individual gives for his action.

## **Classification of Drives & Motives**

### 1. Physiological or Organic

- a. Hunger
- b. Thirst
- c. Sex
- d. Need for Air & Oxygen
- e. Need for rest & sleep
- f. Need for relief from pain
- g. Need for activity
- h. Need for Eliminations

### 2. Social motives -the desire to obtain social significance in terms of social relationship

- a. Gregariousness- association with clubs & organizations
  - b. Mastery motives- desire to have power or superiority
  - c. Possession motives- Desire to own whatever seems useful or grateful
- ### 3. Personal motives - Personal interests & inner secret wishes.

- a. Vocational ambition or Life goal
- b. Level of Aspiration- the degree of expectation - how much a person expects to achieve,
- c. Force of habit, interest, attitude etc. on determining the motives-

### 4. Unconscious motives

We are not able to explain the reasons for the particular behavior of an individual on conscious level. Such behavior may be explained indirectly by means of Psychoanalysis and Dream analysis.

## **Hierarchy of motives**

Abraham Maslow presented a theory on human motivations where he identified a hierarchy of needs that act as motivators. His theory emphasizes that the more basic need must be satisfied, before a higher need can motivate action. Hunger, thirst, and air are examples of basic physiological needs that must be satisfied before anything else. After the physiological needs are satisfied, the need for safety (shelter, personal comfort) follows and it is only after no further danger is perceived that the next level - the need of love - becomes operative. These needs are followed by the need for esteem, the desire to know and understand and finally the need for self-actualization

### 5 levels of Human Needs

1. Basic or Physiological - hunger, thirst
2. Need for safety - security, freedom from danger
3. Need for love - To have friends, family & belongings and to identify with a group.
4. Need for self-esteem - Achievement, prestige, and superiority.
5. Self-actualization - desire to utilize one's personal capacities & develop one's potential to the fullest.

## **Hierarchy of Needs Behavior**

Human behavior is complex from the very beginning of life. In the first days of life the infant discriminates among a wide variety of sounds and smell, and reacts to the environment in a countless way. As the child grows up, his behavior pattern changes, by the process of learning. He may become inactive or elated, angered or confused, from one moment to the next.

Behavior is the product of stimulus-response relationship. Man is a biological and social entity, and hence human behavior has to be studied under biological and social aspects,

Biological behavior is dependant on physiological functions of man, In this sense, psychology is a biological science,

Social behavior - Man can also be studied in his relationship with the environment in which he lives. Social interaction is one of man's most obvious traits. Man's behavior is modified by and, in turn modifies the behavior of the other. Hence psychology is a social science, or Psychology may be called a Biosocial science

Conscious experience is a private phenomenon with more subjectivity and cannot be relied upon completely. Behavior is a public phenomenon, and can be observed more objectively. Hence it is the topic of study.

Psychology as a science of behavior is applied not only in academy settings and laboratories, but also in schools, industrial settings, hospitals and clinics.

### **Behavior may be influenced by many factors**

#### 1. Genetic factors and heredity

Study on monozygotic twins show identical behavior pattern, similar habits and interests, even when they were brought up separately at two different environments.

2. Integrity of CNS and physiological mechanism -Awareness of environment through sense, perception, and the processing of information thus gathered by higher centers are integral part of behavior formation. Perception is called the first principle of behavior as it is the gateway to knowledge

3: Learning and symbolic activity are the most important aspects for understanding the uniqueness of human behavior.

4. Behavior is prompted and directed by motivation i.e. behavior is goal - directed.

5.No two human beings are exactly alike; there will be individual differences. Differences in the mental activities have far reaching influences upon human behavior.

6.Behavior is influenced by endocrine system.

7.Behavior is influenced by environment. Behavior can be modified by changing relevant aspects of environments particularly sources of reinforcement.

8.Behavior is modified by stress, and the way in which one adjusts to the stressful situation.

Adjustment is a continuous process of satisfying one's needs, and involves virtually all aspects of behavior.

### **Sequence of motivated behavior**

1. Individual is pursuing a course of action

2. Encounters a barrier

3-Engages in exploring the barrier.

4.Finds out that one of the responses enables him to overcome the obstacle-

5.Reaches the goal and temporarily adjusts to the situation.

### **Physical basis of behavior**

The extent to which the nervous system has developed influences the patterns of behavior. Human being, with a central Organization of nerve cells and innumerable peripheral connections can perform endless varieties of behavior pattern.

Behavior involves responding to, or interacting with environment. Three types of structures, which affect behavior, are Receptors, Neural conduction mechanism and effectors.

### Social behavior

It is learned through constant interaction with others. The person develops certain patterns, customs and manners, which are socially pleasing and acceptable.

### Method of Study

Observational

Experimental

Statistical

Methods of Studying Behavior

Scientific study of behavior consists of making observation, analyzing and classifying the observed facts and drawing general principles by induction, and verifying the principles by deduction.

1- Introspection (Subjective Observation) Look within - More private in nature

A method of self-analysis about the inner feelings, attitudes etc. Patient presents his inner problems. Rely



upon the report of the patient.

Less time is needed

Write down or express

#### Limitations

False information

Not possible in abnormal people, children and animals.

Language used by the person to report may be inadequate to express the idea exactly.

Actual thought or idea may not come out.

True facts cannot be always obtained due to poor memory -

### 2. Objective Observation

Direct observation of behavior - more public It is more objective

Data more accurate

#### Limitations

Only expressed behavior can be observed.

Gives proper information only in a natural setup- field setting

In laboratory setting, behavior may be controlled when the person feels that he is being observed.

Limitations caused by the observer

- Prejudices

- Pre-occupation

- Pre-judgment

- Mental set-up

Participant Observation-

Researcher becomes part of the group which he wishes to observe.

### 3. Case studies - Clinical method

A case study is a detailed description of an individual. Done in problematic cases and Clinical conditions.

Current symptom and history or background can be obtained from the patient, relatives, bystanders, friends, occupational and school authorities etc.

#### Limitations

**A.** Representative ness:

A case study is essentially a sample of one. Hence the researcher must be careful in generalizing to a larger population.

**B.** The doctor is presented with a situation whose causes are not known.

Case history may reveal several incidences as background; hence it is difficult to draw conclusions about the actual cause of behavior.

However case studies are helpful in suggesting further direction of research.

Co relational research - To find out correlation between factors being studied.

### 4. Genetic Method Developmental

Tracing the history of developmental stages from childhood, Pre-morbid personality at different stages can be assessed.

- Thumb-sucking

- Nail-biting

- Bed-wetting-

### 5. Anecdotal Method

Personal artistic works and literature, biography, contents of the creative work often reflect the inner conflicts, problems or attitudes.

### 6. Psychometric Method

Using scientifically designed assessment tools to study the attitudes.

- Personality tests
- Adjustment tests
- IQ tests

a. Objective method- Direct method - The person is aware of the aim of the test. E.g. Questionnaire,  
b, Projective method - Indirect method- The person is unaware of the aim of the test. E.g. Inkblot test.

Here the unconscious mind projects the inner deep feelings, emotions, attitudes etc. on the vague pictures or blots. -

7. Psychoanalysis - The free association method of Sigmund Freud.

8. Hypnosis — In a highly aware state, cognitive processes are very acute. But in a hypnotic relaxed state, these processes are less focused, and therefore more open to suggestibility. Hypnosis is used to allow people to openly recall the memories that have been repressed as being painful or --unpleasant.

9. Scientific or experimental method -  
Formulate a hypothesis and try to verify it experimentally

### **Relationship between Body and Mind in Health and Disease**

Health is a condition of being sound in body, mind and spirit.

Health is a state of relative equilibrium of body and mind that results from its successful dynamic adjustment to forces tending to disturb it.

W.H.O. has defined health as 'a state of complete physical, mental and social well-being, and not merely an absence of disease or infirmity. This harmonious balance of the state of the individual integrated into his environment constitutes health. The state of positive health implies the notion of perfect functioning of the body and mind. Biologically, health is a state in which every cell and every organ is functioning at optimum capacity. Psychologically, it is a state in which the individual feels a sense of perfect well-being and of mastery ..over the environment. Socially, it is a state in which the individual's capacities for participation in the social system are optimal. ""

The term well being of an individual or group of individuals has an objective and subjective component. The objective component is connected with the standard of living or the level of living. It is referred to the level of education, employment status, availability of basic needs, social security, amusements and comforts of modern living.

The subjective component of well-being is the quality of living. It is a composite measure of physical, mental and social wellbeing, as perceived by each individual or group of individuals, i.e. the happiness, satisfaction and gratification as it is experienced in various life situations. Thus the quality of living comprises of an individual's own subjective evaluation of his level of living. The quality of life can be evaluated by assessing a person's subjective feeling of happiness or unhappiness about various life concerns.

Physical health generally implies a perfect or normal biological functioning of the organism at the optimal capacity and in perfect harmony with the rest of the body. The well being of the organism is not complete in itself without mental health, because mind and body are in constant interaction, and influence each other. Unity of mind and body play an important role in maintaining the state of well being of the individual

.Mental health is not merely an absence of mental illness. Good mental health is the ability to respond to the many varied experiences of life with flexibility and a sense of purpose. It is a state of balance between the individual and the surrounding environment, a state of harmony between oneself and others, a co-existence between the realities of self and those of other people and environment.

Disease is just the opposite of health, i.e. any deviation from normal functioning. A few decades ago, mind and body were considered independent entities. It is now an accepted fact that psychological factors can induce all kinds of illness, not merely mental ones. They include conditions such as Hypertension, Peptic ulcer and Bronchial asthma. Some major mental illnesses such as Depression and Schizophrenia have

biological components. From these it may be inferred that there is a behavioral, psychological and/biological dysfunction in any disease.

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