

## HUMAN BEHAVIOUR AND DEVELOPMENT

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### UNIT – I

**Psychology:** Definition, Nature, Branches and Scope – Application of Psychology in Various Fields, Special Reference to Social Psychology and its Application, #Relationship between Social work and Psychology#, Biological basis of Behaviour – Human Behaviour.

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#### **Psychology:**

**Psychology** is the study of mind and behavior. It is an academic discipline and an applied science which seeks to understand individuals and groups by establishing general principles and researching specific cases. In this field, a professional practitioner or researcher is called a psychologist and can be classified as a social, behavioral, or cognitive scientist. Psychologists attempt to understand the role of mental functions in individual and social behavior, while also exploring the physiological and biological processes that underlie cognitive functions and behaviors.

**Psychology** can be broadly defined as the investigation of human and animal behavior and of the mental and physiological processes associated with the behavior. In terms of behavior refers to the entire life activities and experiences of all the living organisms. Psychology is quite scientific and not philosophical or mysterious. The scope of this psychology is too wide. It studies, describes and explains the behavior of all the living organisms. It may broadly be divided as pure and applied psychology.

**Psychology** is the science of behavior and mind, including conscious and unconscious phenomena, as well as feeling and thought. It is an academic discipline of immense scope and diverse interests that, when taken together, seek an understanding of the emergent properties of brains, and all the variety of epiphenomena they manifest. As a social science it aims to understand individuals and groups by establishing general principles and researching specific cases.

**Psychologists** explore behavior and mental processes, including perception, cognition, attention, emotion (affect), intelligence, phenomenology, motivation (conation), brain functioning, and personality. This extends to interaction between people, such as interpersonal relationships, including psychological resilience, family resilience, and other areas. Psychologists of diverse orientations also consider the unconscious mind. Psychologists employ empirical methods to infer causal and correlational relationships between psychosocial variables. In addition, or in opposition, to employing empirical and deductive methods, some—especially clinical and counseling psychologists—at times rely upon symbolic interpretation and other inductive techniques. Psychology has been described as a "hub science" in that medicine tends to draw psychological research via neurology and psychiatry, whereas social sciences most commonly draw directly from sub-disciplines within psychology.

#### **Meaning and Definitions of Psychology:**

**Psychology** is the scientific study of behaviour and mental processes. Behaviour includes all of our outward or overt actions and reactions, such as verbal and facial expressions and movements.

Mental processes refer to all the internal and covert activity of our mind such as thinking, feeling and remembering. It is a scientific study because to study behaviour and mental processes, the psychologists use the scientific methods for understanding more precisely and accurately.

The word **Psychology** has its origin from two Greek words 'Psyche' and 'Logos', 'psyche' means 'soul' and 'logos' means 'study'. Thus literally, Psychology means 'the study of soul' or 'science of soul'.

### **1. The first definition of the Psychology was the study of the soul:**

The earliest attempts at defining Psychology owe their origin to the most mysterious and philosophical concept, namely that of soul. What is soul? How can it be studied? The inability to find clear answers to such questions led some ancient Greek philosophers to define psychology as the study of the mind.

### **2. In terms of the study of the mind:**

Although the word mind was less mysterious and vague than soul, yet it also faced the same questions, namely what is mind? How can it be studied, etc. This definition was also rejected.

### **3. In terms of the study of consciousness:**

The description and explanation of the states of consciousness is the task of Psychology which is usually done by the instrument introspection—process of looking within.

### **This definition was also rejected on the grounds that:**

- (i) It could not include the study of the consciousness of animals.
- (ii) It would not include subconscious and unconscious activities of mind.
- (iii) The introspection method for the study proved that it is most subjective and unscientific method.

### **4. In terms of the study of behaviour:**

The most modern and widely accepted definition of psychology even today, is the study of behaviour, both humans and animals.

### **5. William McDougall:**

In his book An Outline of Psychology, “Psychology is a science which aims to give us better understanding and control of the behaviour of the organism as a whole”.

### **6. JB Watson:**

Psychology is “the science of behaviour” (taking into account the human as well as animal behaviour).

### **7. NL Munn:**

“Psychology is the science and the properly trained psychologist is a scientist or at least a practitioner who uses scientific methods and information resulting from scientific investigations”.

### **Nature of Psychology**

#### **Nature of the subject psychology**

It is an accepted reality that the nature of the subject psychology is quite scientific. This fact has been properly recognized by the eminent psychologists and thinkers as may be inferred out of the definitions of psychology (in terms of the scientific study or science of behaviour) given by them in the earlier pages of this chapter. However, let us try to demonstrate why the subject psychology should be

called as a science. In general, we may call the nature of a subject scientific, if it fulfils the following criteria:

- (i) Possesses a body of facts and is able to support it through universal laws and principles.
- (ii) Emphasizes on search for truth.
- (iii) Does not believe in hearsay, stereotypes or superstitions.
- (iv) Believes in cause and effect relationships.
- (v) Adopts the method of objective investigation, systematic and controlled observation and scientific approach.
- (vi) Stands for the generalization, verifiability and modifications of the observed results or deduced phenomena.
- (vii) Helps in predicting the future developments.
- (viii) Is able to turn its theory into practice by having its applied aspect.

Let us summarize the nature of psychology in the light of the abovementioned criteria.

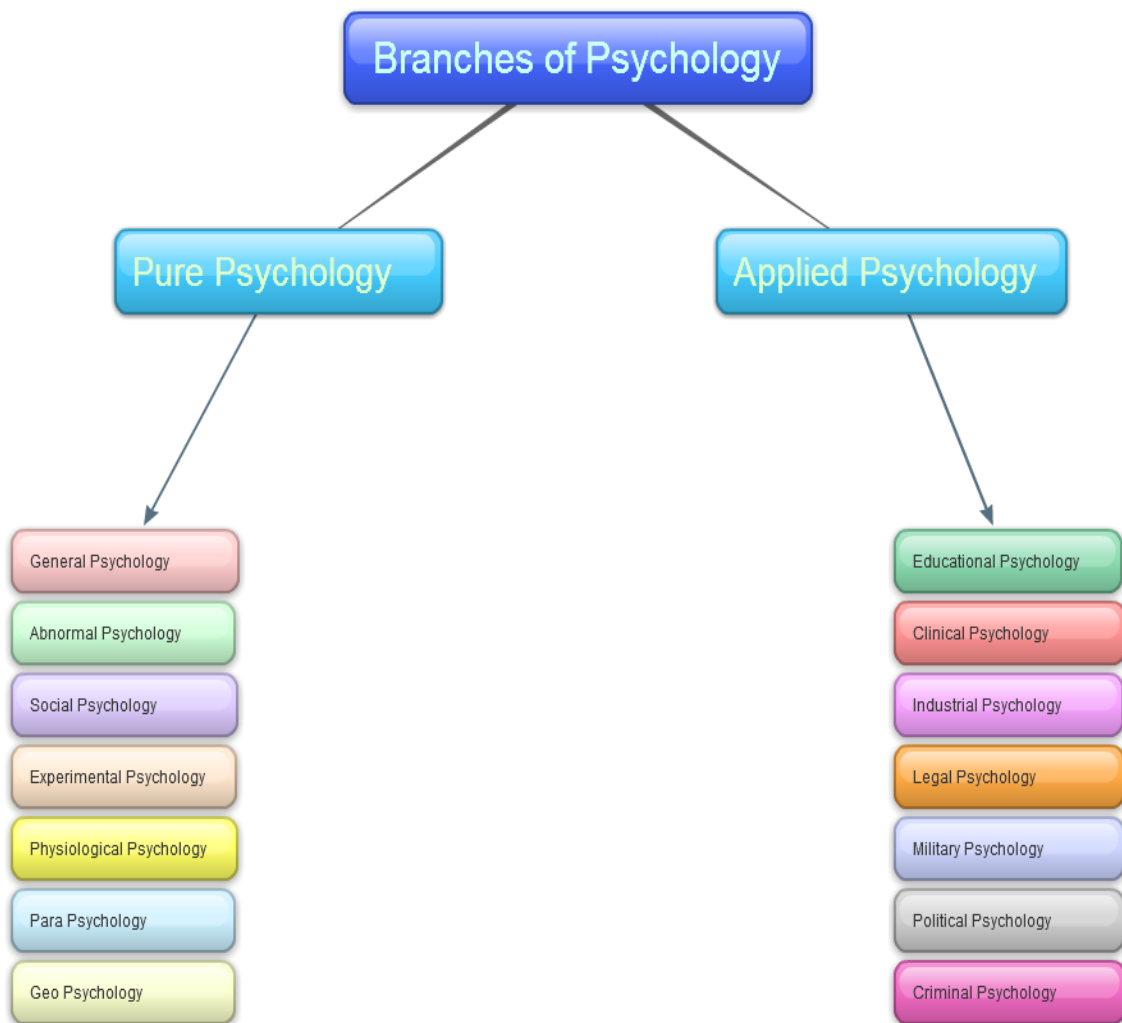
1. Psychology possesses a well organized theory which is supported by the relevant psychological laws and principles.
2. It has its applied aspects in the form of various branches of applied psychology like industrial, legal, clinical and educational psychology.
3. It believes that every behaviour has its roots, the factors of its causing, influencing or nurturing.
4. Subjective ideas and opinions have little weight in carrying out the study of behaviour in the subject psychology. It emphasizes on the search for truth by advocating objectivity, reliability and validity in the assessment of the behaviour.
5. The methods and techniques employed in the study of the behaviour in psychology are quite scientific. The steps like analysis of the behaviour, formulation of hypothesis, objective observations or controlled experimentation, deduction, verification and generalization of the results etc., provide the solid base for scientific method and approach in the subject psychology.
6. The results of the study of behaviour always stand for their verification in similar other conditions by other experimenters and observers. These results may be accepted, modified or altered in the light of the recently available data and findings.
7. The established facts, principles and laws of the behaviour in the subject psychology enjoy universal applicability in practical life, other bodies of the knowledge and future researches in its own fields.
8. The appropriate description as well as quantification of behaviour is possible through the help of psychology. We may make trustworthy predictions about the organism in the light of the studied behaviour.

## Branches of psychology

1. Pure psychology
2. Applied psychology

**Pure psychology** provides the framework and theory. It's contents deal with the formulation of psychological principles and theories. It suggests various methods and techniques for the analysis assessment, modification and improvement of behavior.

In **applied psychology**, the theory generated or discussed through pure psychology finds it's practical application. We discuss ways and means of the applications of psychological rules, principles, theories and techniques with reference to the real practical life situations. In pure psychology we generate theories and discuss principles which find their practical shape in applied psychology. Here Psychological principles, techniques and theories are applied to the real life situation.



## BRANCHES OF PURE PSYCHOLOGY

- ✓ General psychology
- ✓ Abnormal psychology
- ✓ Social psychology
- ✓ Experimental psychology
- ✓ Physiological psychology
- ✓ Para-psychology
- ✓ Geo-psychology
- ✓ Developmental psychology

**General psychology:** The field of psychology which deals with the fundamental rules, principles and theories of psychology in relation to the study of behavior of normal adult human beings.

**Abnormal psychology:** It is that branch of psychology which describes and explains the behavior of abnormal people in relation to their own environment. The cause, symptoms and syndromes, description and treatment of the abnormalities of behavior form the subject matter of this branch.

**Social psychology:** This branch of psychology deals with the group behavior and interrelationships of people with other people. Group dynamics, likes and dislikes, interests and attitudes, social distance and prejudices of the people in their personal and social relationships form the subject matter of this branch.

**Experimental psychology:** This branch of psychology describes the ways and means of carrying out psychological experiments following scientific methods in controlled or laboratory situations for the study of mental processes and behavior. It picks up animals, birds and human beings as subjects for these experiments.

**Physiological psychology:** This branch of psychology describes the biological and physiological basis of behavior. The study of the internal environment and physiological structure of the body, particularly brain, nervous system and functioning of the glands in relation to the conative, cognitive and affective behavior of the human being form part of the subject matter of this branch.

**Para – psychology:** It deals with extra-sensory perceptions, cases of rebirth, telepathy and allied problems.

**Geo-psychology:** This branch of psychology describes and explains the relation of physical environment particularly weather, climate, soil and landscape with behavior.

**Developmental psychology:** This branch or field of psychology describes and explains the processes and products of the process of growth and development in relation to the behavior of an individual from birth to old age. It is further sub-divided into branches like Child psychology, Adolescent psychology and Adult psychology.

**APPLIED PSYCHOLOGY** is the use of psychological methods and findings of scientific psychology to solve practical problems of human and animal behavior and experience. Mental health, organizational psychology, business management, education, health, product design, ergonomics and law are just a few of the areas that have been influenced by the application of psychological principles and findings.

#### **BRANCHES OF APPLIED PSYCHOLOGY**

- ✓ Educational psychology
- ✓ Clinical psychology
- ✓ Industrial psychology
- ✓ Legal psychology
- ✓ Military psychology
- ✓ Political psychology

**Educational psychology:** This branch covers psychological ways and means of improving all aspect of the teaching learning process including the learner, learning process, learning material, learning environment and the teacher. This branch applies Psychological principles and techniques to human behaviour in educational setting. This theory focuses on the teacher, learner, learning environment, learning process and learning materials .

**Clinical psychology:** This branch of applied psychology describes and explains the causes of mental illness or abnormal behavior of a patient attending the clinic or hospital and suggests individual or group therapy for the treatment and effective adjustment of the affected person in society.



**Industrial psychology:** This branch of applied psychology tries to seek application of the psychological principles, theories and techniques for the study of human behavior in relation to industrial environment. It includes the topics or contents that are useful for improving the ways and means of knowing the taste and interest of the consumers, advertising and sale of products, selection training and placing of personnel, solving labor problems, establishing harmonious relationship between the employee and employer, strengthening morals of the workers and increasing production . It is also known as Consumer Psychology i.e understanding the behaviour of consumers, Advertising and it's impact. It helps to understand the human behaviour of people at work , Employer Employee relationship , Industrial training and Development and Business leadership

**Legal psychology:** It helps to study the behavior of the persons like clients, accused, criminals, officials and witnesses. It contains the subject matter for improving the ways and means of detection of crimes, false witnesses and other complex phenomena. The root causes of the crime, offence, dispute or any legal case can be properly understood and analyzed through the use of this branch of psychology and subsequently proper reformatory and rehabilitation measures may be employed.

**Military psychology:** This branch of psychology is concerned with the use of psychological principles and techniques in the world of military science. How to keep the morale of the soldiers and citizens high during war time, how to deal with war propaganda and intelligence services, how to secure better recruitment of the personnel for the armed forces and how to improve the fighting capacities and organizational climate and leadership are the various topics that are dealt with in this branch of psychology.

**Political psychology:** This branch of psychology relates itself with the use of psychological principles and techniques in studying politics and deriving political gains. The knowledge of the dynamics of the group behavior, judgment of the public opinion, qualities of the leadership, psychology of the propaganda and suggestions and the art of diplomacy are some of the key concepts that find place in the subject matter of political psychology.

### **Scope of Psychology**

What do we mean by the scope of a subject? The scope of a subject can usually be discussed under the following two heads:

1. The limitations of its operations and applications.
2. The branches of, topics and subject matter with which it deals.

The field of operation and applications of the subject psychology is too vast.

It studies, describes and explains the behavior of the living organisms. Here the terms 'behaviour' and 'living organisms' carry unusual wide meanings.

1. **Behaviour** is to be used to include all types of life activities and experiences – whether conative, cognitive and affective, implicit or explicit, conscious, unconscious or sub-conscious of a living organism.
2. On the other hand, the **living organism** is to be employed to all the living creatures created by the Almighty irrespective of their species, caste, colour, age, and sex, mental or physical state. Thus normal's, abnormal, children, adolescents, youths, adults, old persons, criminals, patients, workers, officials, students, teachers, parents, consumers and products belonging to different stock, spheres and walks of human life all are studied in the subject psychology.

Moreover, the studies in psychology do not limit themselves to the study of human behavior only but also try to encircle the behavior of the animals, insects, birds and even plant life.

In this way, where there seems some life and we have living organisms, psychology may be needed for the study of the activities and experiences of these living organisms. We know that the living organisms as well as their life activities are countless and consequently,

no limit can be imposed upon the fields of the operation and applications of the subject psychology.

### **Application of Psychology in Various Fields**

1. **In the field of Clinical:** Clinical psychology constitutes the largest psychology specialties field. Clinical psychologists usually work in counseling centers, independent or group practices, hospitals, or clinics. They assess and treat mental, emotional and behavioral disorders.
2. **In the field of Cognitive and Perceptual:** Cognitive and perceptual psychologists study human perception, thinking and memory.
3. **In the field of Counseling:** Counseling psychologists use various techniques, including interviewing and testing, to advise people on how to deal with problems of everyday living. They work in settings such as university counseling centers, hospitals, and individual or group practices. In most states, people with master's degrees cannot have their own private practice.
4. **In the field of Development:** Developmental psychologists study the physiological, cognitive, and social development that takes place throughout life. Some specialize in behavior during infancy, childhood, and adolescence, or changes that occur during maturity or old age.
5. **In the field of Education:** Educational psychologists conduct research on classroom dynamics, teaching style, and learning variables; develops educational tests, evaluates educational programs, acts as a consultant for schools.
6. **In the field of Engineering:** Engineering Psychologists conduct research on how people work best with machines.
7. **In the field of Experimental / Research:** Experimental or research psychologists work in university and private research centers and in business, nonprofit, and governmental organizations. They study behavior processes with human beings and animals such as rats, monkeys, and pigeons.
8. **In the field of Forensic:** Forensic psychologists study problems of crime prevention, rehabilitation programs in prisons, courtroom dynamics, psychology and the law, select candidates for police work.
9. **In the field of Geriatric:** Geropsychologists deal with the special problems faced by the elderly. The emergence and growth of these specialties reflects the increasing participation of psychologists in providing direct services to special patient populations.
10. **In the field of Industrial / Organizational:** I/O psychologists apply psychological principles and research methods to the workplace in the interest of improving productivity and the quality of work-life.
11. **In the field of Neuropsychology:** Neuropsychologists study the relation between the brain and behavior. They often work in stroke and head injury programs.
12. **In the field of School:** School psychologists work in elementary and secondary schools or school district offices to resolve students' learning and behavior problems.
13. **In the field of Social / Personality:** Social psychologists examine people's interactions with others and with the social environment. They work in organizational consultation, marketing research, systems design, or other applied psychology fields.
14. **In the field of Sports:** Sports psychologists help athletes refine their focus on competition goals, become more motivated, and learn to deal with the anxiety and fear of failure that often accompany competition.
15. **In the field of medicine:**

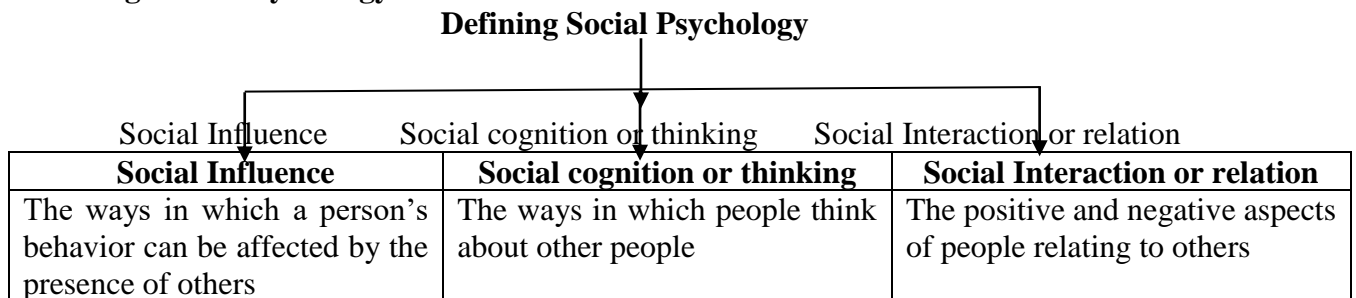
- 16. In the field of Business
- 17. In the field of mental health
- 18. In the field of guidance
- 19. In the field of human relationship
- 20. In the field of self development
- 21. In the field of Military
- 22. In the field of politics
- 23. In the field of law

**Special Reference to Social Psychology and its Application**

The scientific study of how a person's behavior, thoughts and feelings are influenced by the real imagined or implied presence of others

Definition Social psychology is a discipline that uses scientific methods "to understand and explain how the thought, feeling and behavior of individuals are influenced by the actual, imagined or implied presence of other human beings Psychology for Social Workers

**Defining Social Psychology:**



**1. Social Influence:**

Social influence is the process by which attitudes, perceptions and behaviours can be affected by the real or implied presence of others.

Social influence is the process through which other people change our thoughts, feelings, and behaviors and through which we change theirs.

**Categories of Social Influence:**

1. **Social Norms:** Rules or standards that are understood by a group and that guide behavior without the force of laws
2. **Conformity:** Changing one's behavior to match the responses or actions of others (no pressure necessarily)
3. **Compliance:** Changing one's behavior in response to a direct request

**Goals of Social Influence:** People yield to social influence to achieve one or more of three basic goals:

1. to choose correctly and behave effectively (to be right)
2. to gain social approval (to be liked)
3. to manage self-image

**2. Social cognition or thinking:**

Social cognition is an understanding of how our knowledge about our social worlds develops through experience and the influence of these knowledge structures on memory, information processing, attitudes, and judgment.

**3. Social Interaction or relation:**

The positive and negative aspects of people relating to others

**What differentiates Social Psychology from other disciplines?**

Focus on social nature of the individual person

**Two assertions:**

- ✓ Person is influenced by social environment



- ✓ Individual actively construes social situations – we do not respond to environments as they are but as we interpret them to be

### **Relationship between Social work and Psychology:**

- Both social work and psychology may have some similar work, but the actual job descriptions vary.
- The primary focus of social workers is on working with families and individuals to improve their quality of life.
- Social workers must have a thorough understanding of basic human development and behavior in order to work directly with individuals, families or other groups with the goal of building stronger communities.
- Social workers help clients overcome personal challenges and help them develop the skills they need to succeed in life.
- If the scope of an individual's problems is beyond a social worker's training, a referral to a psychologist may become necessary.
- Psychologists also work with those who are experiencing trouble in their lives, but typically work with individuals rather than whole families or other groups.
- When an individual sees a psychologist, he or she may undergo psychological testing or counseling.
- The psychologist can identify the problem behavior can in order to help their patients adapt to the challenges.
- The primary goal of psychologists is to perform diagnostic testing for mental illnesses and provide psychotherapy to their patients.
- Psychologists and social workers are dedicated to helping others. Although the end goal is the same.
- In social work, professionals work within the social service system to find solutions to problems such as poverty and emotional or mental health.
- Psychologists are more likely to use their training and education in the human mind and human behavior to diagnose mental health issues and provide psychotherapy and other treatment.
- The work environments in which social workers and psychologists spend their time is also quite different.
- While both careers can involve working in an office setting, providing therapy and counseling to individuals, groups and families, there are also differences in the environment.
- For instance, psychologists often work in hospitals or in private office settings.
- Social workers External link , on the other hand, work in a large variety of locations, including rehab centers, nursing homes, schools, mental health institutions, prisons, military bases and many other locations.
- As individuals make choices for their future career, it is valuable to weigh the pros and cons of each type of work they consider. Some individuals use the terms of psychologist and social worker interchangeably, but the two jobs differ significantly. While the two careers share some similarities, they provide different care to individuals and require different degrees. Once you understand the differences between these two career paths, you will be better equipped to make the right choice External link for your future.
- The primary focus in social work is to find ways in which individuals, families, and community groups are able to improve situations with the help of various social service programs.

- Psychologists are also concerned with individuals in the context of society as whole; they are also trained in research and evaluation, testing, and development of methods for treatment, in addition to practical application in the mental health field.
- In each field, professionals are trained and educated to handle various issues related to these groups.
- Psychologists are required to complete significantly more schooling, and these professionals will have more courses in the functions of the human mind in relation to mental health outcomes.
- Social workers, in contrast, focus more on how to formulate and implement plans in order to provide social services to those same groups. The education in each field reflects these differing competencies.
- When it comes to social work, a lot of the work involves dealing with the existing problems of a group or community. Examples of typical concerns include dealing with problems of addiction, domestic abuse, unemployment, illiteracy, etc. Psychological interventions form a vital component of the plan and procedure for dealing with such problems. For instance, if all the men of a community are addicted to alcohol then group therapies practiced in psychology can be applied in helping them exert their will power in overcoming addiction, besides the social measures that would be taken, such as seeking to ban alcohol in the region.

### **Biological basis of Behaviour – Human Behaviour:**

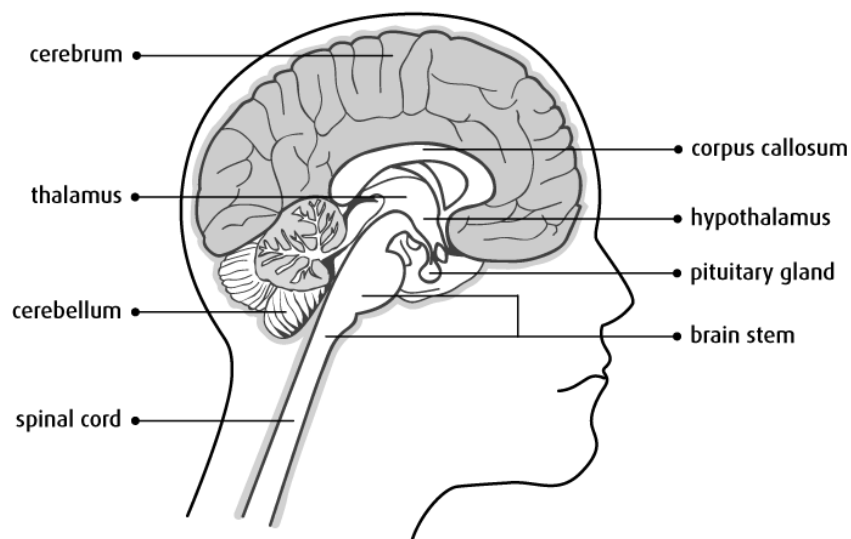
The brain is a complex organ made up of specialized nerve and supportive tissues. It's surrounded by many bones that together form the skull. The part of the skull where the brain sits is called the cranium. The base, or lower part, of the brain is connected to the spinal cord. Together, the brain and spinal cord are known as the central nervous system (CNS). Many nerves send electrical signals to and from the brain and spinal cord.

### **Structure and function of the brain**

The brain is the body's control centre. It constantly receives and interprets nerve signals from the body and sends new signals based on this information. Different parts of the brain control movement, speech, emotions, consciousness and internal body functions, such as heart rate, breathing and body temperature.

**The brain has 3 main parts: cerebrum, cerebellum and brain stem.**

The Central Nervous System

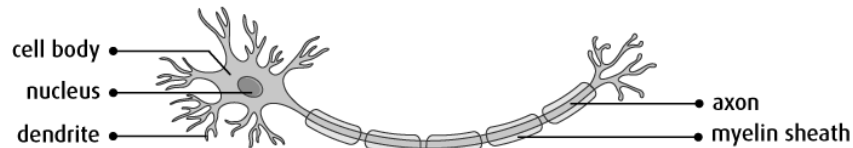


## Types of cells in the brain

The brain is made up of 2 main types of cells:

**Nerve cells** (neurons) are cells that carry the electrical signals that make the nervous system work. They cannot be replaced or repaired if they are damaged. They are the longest cells in the body.

### Structure of a Neuron



**Glial cells** (neuroglial cells) are cells that support, feed and protect the nerve cells. The different types of glial cells are:

- ✓ astrocytes
- ✓ oligodendrocytes
- ✓ ependymal cells
- ✓ microglial cells

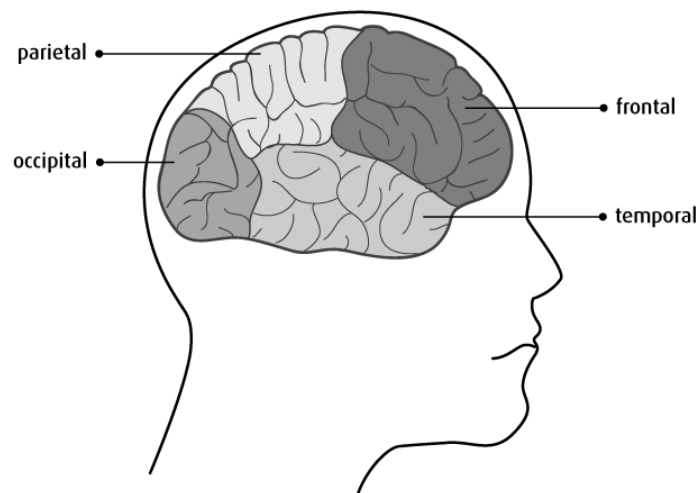
## Cerebrum

- ✓ The cerebrum is the largest part of the brain. It is divided into 2 halves called the left and right cerebral hemispheres. The 2 hemispheres are connected by a bridge of nerve fibres called the corpus callosum.
- ✓ The right half of the cerebrum (right hemisphere) controls the left side of the body. The left half of the cerebrum (left hemisphere) controls the right side of the body.
- ✓ The cerebral cortex is the outer, folded part of the brain. It is also called the grey matter. The cerebral cortex is mostly made up of the cell bodies and dendrites of nerve cells (neurons). Cell bodies contain the nucleus and other main parts of the cell. Dendrites are the short branching fibres that receive signals from other nerve cells. The inner part of the cerebrum is called the white matter. It is mostly made up of the long fibres of a nerve cell (called axons) that send signals to and from the brain to the rest of the body. The fatty coating that surrounds axons (called myelin) gives this part of the brain a whitish appearance.

**Each hemisphere is divided into 4 sections called lobes.**

These include the frontal, parietal, temporal and occipital lobes.

### Lobes of the Brain



**Each lobe has different functions:**

- The **frontal lobe** controls movement, speech, behaviour, memory, emotions and intellectual functions, such as thought processes, reasoning, problem solving, decision-making and planning.
- The **parietal lobe** controls sensations, such as touch, pressure, pain and temperature. It also controls the understanding of size, shape and direction (called spatial orientation).
- The **temporal lobe** controls hearing, memory and emotions. The dominant (left side in most right-handed people) temporal lobe also controls speech.
- The **occipital lobe** controls vision.

**Cerebellum**

The cerebellum is located under the cerebrum at the back of the brain. It is divided into 2 parts or hemispheres and also has grey and white matter.

**The cerebellum is responsible for:**

- movement
- posture
- balance
- reflexes
- complex actions (walking, talking)
- collecting sensory information from the body

**Brain stem**

The brain stem is a bundle of nerve tissue at the base of the brain. It connects the cerebrum and cerebellum to the spinal cord.

**The brain stem has 3 areas:**

- midbrain (also called the mesencephalon)
- pons
- medulla oblongata

The brain stem sends information to and from the other parts of the brain to the rest of the body and controls:

- breathing
- body temperature
- blood pressure
- heart rate
- hunger and thirst
- digestion of food

**Cerebrospinal fluid (CSF)**

The cerebrospinal fluid (CSF) is a clear, watery liquid that surrounds, cushions and protects the brain and spinal cord. The CSF also carries nutrients in the blood to (and removes waste products from) the brain. It circulates through chambers called ventricles and over the surface of the brain and spinal cord.

**Meninges**

The brain and spinal cord are covered and protected by 3 layers of tissue (membranes) called the meninges:

- dura mater – thickest outer membrane
- arachnoid layer – middle, thin membrane
- pia mater – inner, thin membrane

The CSF flows in the space between the arachnoid layer and the pia mater. This space is called the subarachnoid space.

### **Corpus callosum**

The corpus callosum is a bundle of nerve fibres that allows communication between the 2 cerebral hemispheres. It is the largest fibre bundle in the brain.

### **Thalamus**

The thalamus is a structure in the middle of the brain that has 2 lobes or sections. It acts as a relay station for almost all information that comes and goes between the brain and the rest of the nervous system in the body.

### **Hypothalamus**

The hypothalamus is a small structure in the middle of the brain below the thalamus. It plays a part in controlling body temperature, hormone secretion, blood pressure, emotions, appetite and sleep patterns.

### **Pituitary gland**

The pituitary gland is a small, pea-sized organ in the centre of the brain. It is attached to the hypothalamus and makes a number of different hormones that affect other glands of the body's endocrine system. It receives messages from the hypothalamus and releases hormones that control the thyroid and adrenal gland, as well as growth and physical and sexual development.

### **Pineal gland**

The pineal gland is a very small gland in the third ventricle of the brain. It produces the hormone melatonin, which influences sleeping and waking patterns and sexual development.

### **Choroid plexus**

The choroid plexus is a small organ in the ventricles that makes CSF.

### **Cranial nerves**

There are 12 pairs of cranial nerves that perform specific functions in the head and neck, including giving us our sense of smell, sight (vision), hearing, taste, speech, feeling in the face and movement of the muscles in the face, eyes and tongue. One pair of nerves starts in specialized cells in the roof of the nose and another pair starts in the retina of the eye. The other 10 pairs start in the brain stem.

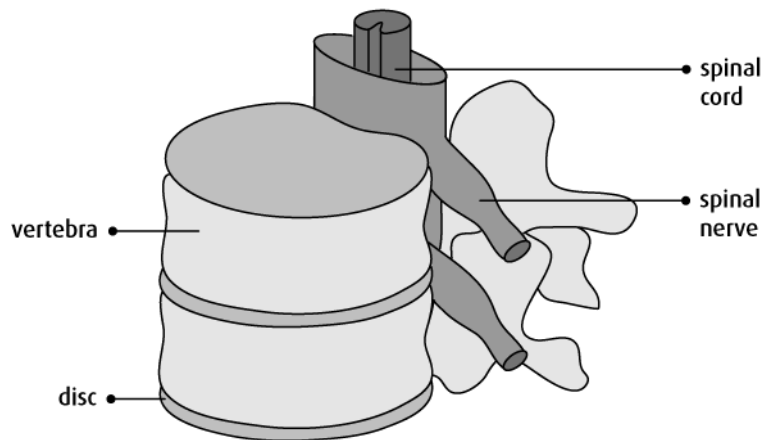
### **Blood-brain barrier (BBB)**

The blood-brain barrier (BBB) is a specialized system of cells lining blood vessels in the brain. The BBB prevents most substances in the blood from passing into the brain and helps maintain a constant environment so the nerve cells in the brain can work properly.

The BBB is made up of very small blood vessels (capillaries) that are lined with thin, flat endothelial cells. In other parts of the body, endothelial cells have small spaces between them that allow substances to move in and out of the capillary so they can reach other cells and tissues. In the brain, the endothelial cells are packed tightly together so substances cannot pass out of the bloodstream into the brain.

## Structure and function of the spine

### The Spine



**The spine is made up of 26 bones divided into 5 sections.** These bones surround and protect the spinal cord. This includes 24 vertebrae (divided into cervical, thoracic and lumbar regions), the sacrum and the coccyx.

- **Cervical region** – These are 7 vertebrae at the top of the spine that run from the base of the skull to the lowest part of the neck.
- **Thoracic region** – These are 12 vertebrae that run from the shoulders to the middle of the back.
- **Lumbar region** – These are 5 vertebrae that run from the middle of the back to the hips.
- **Sacrum** – This is a large section of fused vertebrae at the base of the spine.
- **Coccyx (tail bone)** – This is a small, thin section of fused vertebrae at the end of the spine.

Between the vertebrae are the discs (intervertebral discs).

**Disc** – A layer of cartilage found between the vertebrae. Discs cushion and protect the vertebrae and spinal cord.

### Spinal cord

The spinal cord is a thick column of nerves surrounded by vertebrae that runs from the brain stem to the lumbar region of the spine. Like the brain, the spinal cord has both grey and white matter. The spinal cord sends information between the brain and most of the body through the spinal nerves.

### Spinal nerves

Pairs of spinal nerves exit the vertebrae along the length of the spinal cord. At the lumbar region, the spinal cord branches into a group of spinal nerves that exit the lumbar vertebrae and sacrum. The spinal nerves control body functions like movement, bladder and bowel control and breathing. The spinal nerves are numbered after nearby vertebrae.

### Hormone

- A substance that regulates specific body functions, such as metabolism, growth and reproduction.
- Natural hormones are produced by glands. Artificial or synthetic hormones can be made in the lab.

### Endocrine system

- The group of glands and cells in the body that make and release hormones (which control many functions such as growth, reproduction, sleep, hunger and metabolism) into the blood.



- The endocrine system is made up of the hypothalamus, pituitary gland, pineal gland, thyroid, parathyroid gland, adrenal gland, pancreatic islet cells (also known as islets of Langerhans) and the ovaries or testicles.

### **Human behavior**

**Human behavior** is the response of individuals or groups of humans to internal and external stimuli. It refers to the array of every physical action and observable emotion associated with individuals, as well as the human race. While specific traits of one's personality and temperament may be more consistent, other behaviors will change as one moves from birth through adulthood. In addition to being dictated by age and genetics, behavior, driven in part by thoughts and feelings, is an insight into individual psyche, revealing among other things attitudes and values. Social behavior, a subset of human behavior, study the considerable influence of social interaction and culture. Additional influences include ethics, encircling, authority, rapport, hypnosis, persuasion and coercion.

The behavior of humans (and other organisms or even mechanisms) falls within a range with some behavior being common, some unusual, some acceptable, and some beyond acceptable limits. In sociology, behavior in general includes actions having no meaning, being not directed at other people, and thus all basic human actions. Behavior in this general sense should not be mistaken with social behavior, which is a more advanced social action, specifically directed at other people. The acceptability of behavior depends heavily upon social norms and is regulated by various means of social control. Human behavior is studied by the specialized academic disciplines of psychiatry, psychology, social work, sociology, economics, and anthropology.

Human behavior is experienced throughout an individual's entire lifetime. It includes the way they act based on different factors such as genetics, social norms, core faith, and attitude. Behavior is impacted by certain traits each individual has. The traits vary from person to person and can produce different actions or behavior from each person. Social norms also impact behavior. Due to the inherently conformist nature of human society in general, humans are pressured into following certain rules and displaying certain behaviors in society, which conditions the way people behave. Different behaviors are deemed to be either acceptable or unacceptable in different societies and cultures. Core faith can be perceived through the religion and philosophy of that individual. It shapes the way a person thinks and this in turn results in different human behaviors. Attitude can be defined as "the degree to which the person has a favorable or unfavorable evaluation of the behavior in question." One's attitude is essentially a reflection of the behavior he or she will portray in specific situations. Thus, human behavior is greatly influenced by the attitudes we use on a daily basis.

### **Factors of human behavior**

- ✓ Genetics
  - ✓ Social norms
  - ✓ Creativity
  - ✓ Core faith and culture
  - ✓ Attitude
-

## UNIT – II

**Human growth and Development:** Meaning and Definition – Significant Facts about Development. **Developmental Stages:** #Pregnancy and Child Birth# – Physical, Psychological and Emotional Aspects of: Infancy, Babyhood, Childhood, Puberty, Adolescence, Adulthood and Old age.

### Human growth and Development: Meaning and Definition

The term **growth and development** both refers to dynamic process. Often used interchangeably, these terms have different meanings. **Growth and development** are interdependent, interrelated process. **Growth** generally takes place during the first 20 years of life.; **development** continues after that.

#### **Growth:**

- ✓ It is physical change and increase in size.
- ✓ It can be measured quantitatively.
- ✓ An indicator of growth includes height, weight, bone size, and dentition.
- ✓ Growth rates vary during different stages of growth and development.
- ✓ The growth rate is rapid during the prenatal, neonatal, infancy and adolescent stages and slows during childhood.
- ✓ Physical growth is minimal during adulthood.

#### **Development:**

- ✓ It is an increase in the complexity of function and skill progression.
- ✓ It is the capacity and skill of a person to adapt to the environment.
- ✓ Development is the behavioral aspect of growth.

#### **Factors that influence growth and development:**

- ✓ **Heredity:** An individual's genetic makeup determines not only physical characteristics such as skin color, facial features, hair texture, and body structure, but also a predisposition to certain disease(sickle cell anemia).
- ✓ **Health status:** Achievement of developmental milestones can be delayed by illness or disability.
- ✓ **Life experiences:** A child whose family has few resources for food, shelter, and health care has a higher risk of lagging in physical and mental growth and development than a child whose family has plenty of resources.
- ✓ **Culture:** individuals are expected to master certain skills at each developmental period, but the age for master id determined partly by culture.

#### Difference between Growth and development

Sl.No	GROWTH	DEVELOPMENT
1	Growth refers to increase in physical aspects of the organisation	Development refers to overall changes in the whole of the organism.
2	Growth is structural.	Development is functional.
3	Growth is quantitative.	Development is qualitative.
4	Growth is cellular.	Development is organizational.
5	Growth stops when the organisation reaches the stage of maturity.	Development is a lifelong process.
6	Growth involves body changes.	Development involves changes from origin to maturity.
7	Growth influences the process of development, but not always.	Development occurs without growth.

## **Significant facts about development**

To understand the pattern of development, certain fundamental facts must be taken into consideration. Each of these has important implications and is explained as follows:

- **Early foundations are critical:** Early foundations are critical because attitudes, habits and pattern of behaviour established during early years determine to a large extent how successfully individuals will adjust in their later life.
- **Role of maturation and learning in development:** Maturation and learning play a significant role in the development. Maturation is unfolding individual's inherent traits. Learning is development that occurs from experience and efforts on the individual's part. Maturation provides the raw material for learning. Generally development is influenced by the interaction of both.
- **Development follows a definite and predictable pattern:** It follows a definite and predictable pattern. There are orderly patterns of physical, motor, intellectual and speech development. Development is governed by certain laws: (i) Cephalocaudal Law- It means that development spreads over the body from head to foot and (ii) Proximodistal Law- It means that development spreads outward from the central axis of the body to extremities.
- **All individuals are different:** No two people react in the same way to the same environmental stimuli and, one can never predict with accuracy how people will react to a situation. These individual differences are significant because they are responsible for individuality in personality make up.
- **Each phase of development has characteristic behaviour:** Each Phase has certain characteristic behaviours. The patterns are marked by periods of equilibrium, when individuals adapt easily to environmental demands and as a result make good personal and social adjustment and by periods of disequilibrium, when they experience difficulty in adaptation, make poor personal and social adjustment.
- **Each phase has hazards:** Each period is associated with certain developmental such as physical, psychological and environment. These hazards inevitably involve adjustment problems. We should be aware of these hazards because awareness of these makes it possible to prevent or to at least alleviate these.
- **Development is aided by stimulation:** While most development occurs as a result of maturation and environmental experiences, much can be done to aid development so that it will reach its full potential. Stimulation is especially effective at the time when ability is normally developing, though it is important at all times.
- **Development is affected by cultural changes:** An individual's development is molded to conform to cultural standards and norms, while changes in these standards affect the developmental pattern.
- **Social expectation with every stage of development:** Every stage has certain societal expectation. The individual will be successful in fulfilling those expectations only if s/he is adhering to the rules and regulations of the family and society.
- **Traditional beliefs about people of all ages:** Traditional beliefs about physical and psychological characteristics affect the judgments of others as well as their self evaluation. So long as these beliefs persist, they have a profound influence on the development pattern.

## **Developmental Stages of life span:**

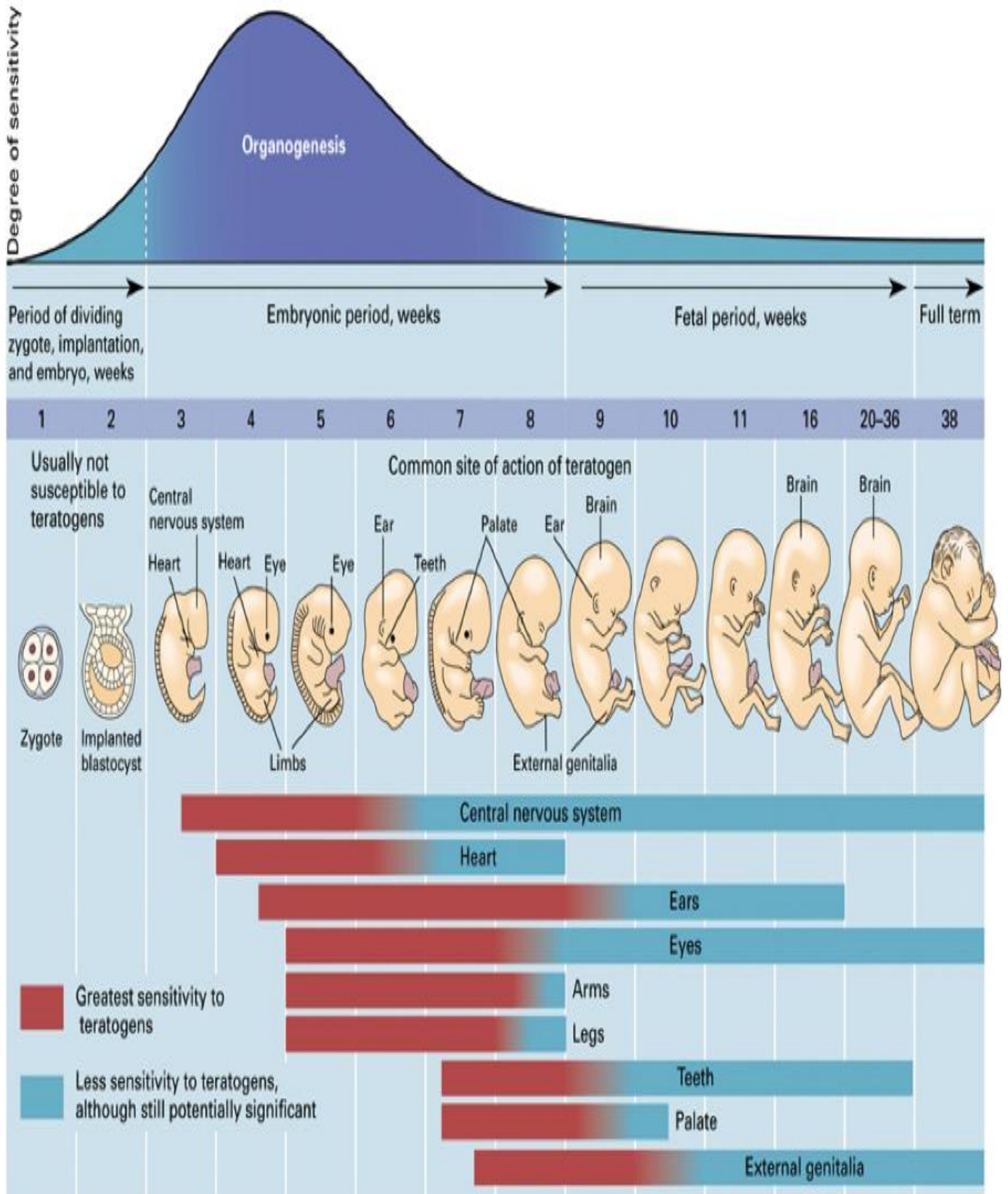
### **Prenatal development** (Pregnancy to till birth) or **before the birth**

There are 3 stages

1. **Z** (Zygote)
2. **E** (Embryo)
3. **F** (Fetus)

### **Post Natal Development – After the Birth**

1. **Neonate** (newborn) (0 – 28 days)
2. **Infant** (baby) (0 month - 12 months)
3. **Toddler** (1 – 3 years)
4. **Play age** (3 – 5 years)
5. **Primary school age** (**middle childhood** also called **prepubescence**) (3 - 11)
  - Elementary school age (5 - 11)
  - Preadolescence (The child in this and the previous phase are called *schoolchild* (*schoolboy* or *schoolgirl*), when still of primary school age.) (9 – 11 years)
6. **Adolescence** (12 – 19 years)
  - Puberty (8-10 until 15-17)
7. **Adulthood** (20+ years)
  - Young adulthood (20 – 39 years)
  - Middle adulthood (40 – 60 years)
  - Elder/Senior citizen (60+ years)
8. **Death** (unpredictable)
  - Decomposition (breakdown of the body after death)



## **New life is begin**

New life begins with the union of a male sex cell and a female sex cell. These sex cells are developed in the reproductive organs, the gonads. The male sex cells, the spermatozoa are produced in the male gonads, the testes, while the female sex cells, the ova are produced in the female gonads, the ovaries.

Male and female sex cells are similar in that they contain chromosomes. There are 23 chromosomes in each mature sex cell, and each chromosome contains genes, the true carriers of heredity. A gene is a minute particle which is found in combination with other genes in a string like formation within the chromosome. It has been estimated that there are approximately 3,000 genes in each chromosome. There are passed on from parent to offspring.

Male and female sex cells also differ in two important ways. First, in the mature ovum there are twenty three matched chromosomes while in the mature spermatozoon there are twenty two matched chromosomes and one unmatched chromosome which may be either an X or a Y chromosome. The function of X and Y chromosomes will be discussed later in relation to sex determination.

The second way in which male and female sex cells differ is in the number of preparatory stages of development they pass through before they are ready to produce a new human being. While all sex cells, male or female, must go through preliminary stages development, male cells go through two preliminary stages maturation and fertilization-while female cells go through three preliminary stages –maturation – ovulation and fertilization.

### **Three preliminary stages**

#### **Maturation**

Maturation is the process of chromosome reduction through cell division: one chromosome from each pair goes to a subdivided cell, which in turn splits lengthwise and forms two new cells. The mature cell, which contains twenty three chromosomes, is known as a haploid cell. Maturation of sex does not occur until sex maturity has been attained, following the onset of puberty in both boys and girls.

#### **Ovulation**

Ovulation is a preliminary stage of development limited to the female sex cells. It is the process of escape of one mature ovum during the menstrual cycle. It is believed that the two ovaries alternate in producing a ripe ovum during each menstrual cycle.

In Non-identical multiple births, two or more mature ova are released from the ovaries. The length of the menstrual cycle is normal, approximately twenty eight days.

#### **Fertilization**

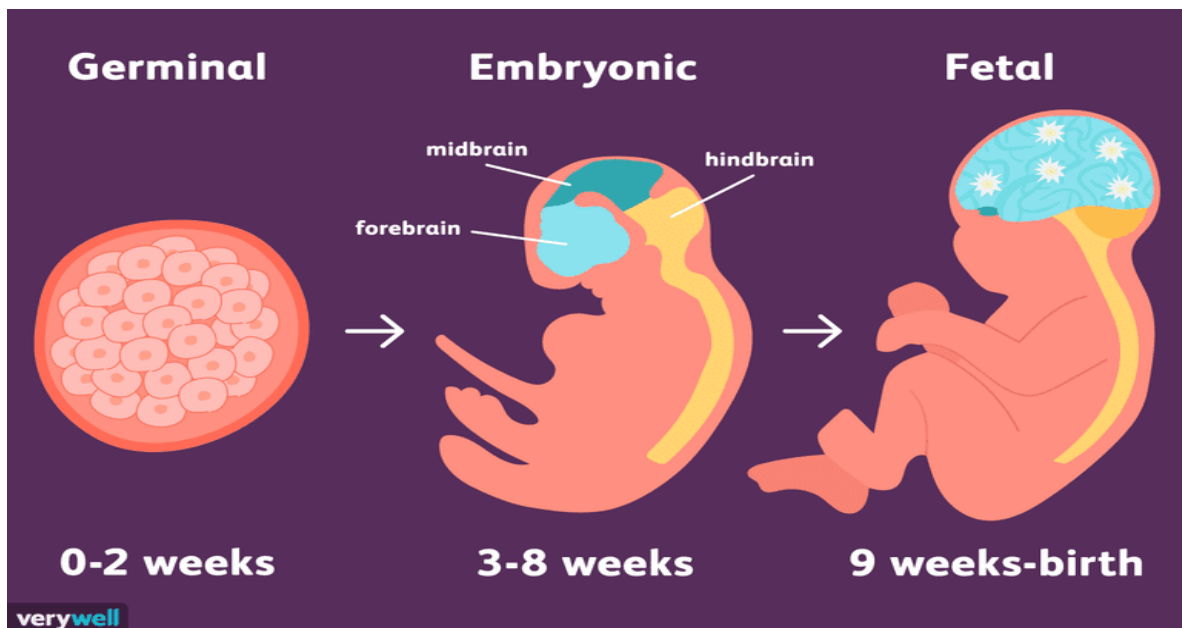
Fertilization, which occurs at the time of conception, is the third stage of development preliminary to the beginning of new life. It normally occurs while the ovum is in the fallopian tube. More specifically, it is generally believed that fertilization takes place within twelve to thirty six hours and usually within the first twenty four hours after the ovum has entered the tube.

### **Periods of Prenatal development: Pregnancy (Z.E.F) Months and weeks**

In pregnancy the 3 stages are commonly referred as **Z.E.F** (Zygote, Embryo and Fetus)

- Pregnancy duration – 36 to 42 Weeks – Exact child birth week is 38<sup>th</sup>
- Pregnancy duration – 260 to 280 days – Exact and enough child birth day is 266
- Pregnancy trimester periods- Three trimester in pregnancy or 9 lunar months 10 calendar months





### Definition

Prenatal development refers to the process in which a baby develops from a single cell after conception into an embryo and later a fetus.

### Description

The average length of time for prenatal development to complete is 38 weeks from the date of conception. During this time, a single-celled zygote develops in a series of stages into a full-term baby. The three primary stages of prenatal development are the germinal stage, the embryonic stage, and the fetal stage.

### Zygote or Germinal stage

Conception occurs when the female egg (ovum) is fertilized by the male sperm. Under normal circumstances, one egg is released approximately once a month from a woman's ovary during a process called ovulation. The egg makes its way into a fallopian tube, a structure that guides the egg away from the ovary toward the uterus. For fertilization to occur, sperm ejaculated during sexual intercourse (or introduced during artificial insemination) in a substance called semen must have made their way from the vagina into the uterus and subsequently into the fallopian tube where the ovum has been released. This process can take up to ten hours after ejaculation. For fertilization to occur, a sperm must penetrate the tough outer membrane of the egg called the zona pellucida. When one sperm successfully binds with the zona pellucida, a series of chemical reactions occurs to allow only that sperm to penetrate. Fertilization occurs when the sperm successfully enters the ovum's membrane. The genetic material of the sperm and egg then combine to form a single cell called a zygote and the germinal stage of prenatal development commences.

The zygote soon begins to divide rapidly in a process called cleavage, first into two identical cells called blastomeres, which further divide to four cells, then into eight, and so on. The group of dividing cells begins to move along the fallopian tube toward the uterus. About sixty hours after fertilization, approximately sixteen cells have formed to what is called a morula, still enclosed by the zona pellucida; three days after fertilization, the morula enters the uterus. As cell division continues, a fluid-filled cavity called a blastocoele forms in the center of the group of cells, with the outer shell of cells called trophoblasts and an inner mass of cells called embryo blasts. The zona pellucida disappears and the morula becomes a **blastocyst**. At this stage the blastocyst consists of 200 to 300 cells and is ready for implantation.

Implantation, the process in which the blastocyst implants into the uterine wall, occurs approximately six days after conception. Hormones **secreted** from the mother's ovaries and a chemical secreted by the trophoblasts begin to prepare the uterine wall. The blastocyst first adheres to the wall then moves into the uterine tissue. Implantation marks the end of the germinal stage and the beginning of the embryonic stage.

### **Embryonic stage**

The embryonic stage begins after implantation and lasts until eight weeks after conception. Soon after implantation, the cells continue to rapidly divide and clusters of cells begin to take on different functions (called differentiation). A process (gastrulation) leads to the formation of three distinct layers called germ layers: the ectoderm (outer layer), the **mesoderm** (middle layer), and the endoderm (inner layer). As the embryo develops, each germ layer differentiates into different tissues and structures. For example, the ectoderm eventually forms skin, nails, hair, brain, nervous tissue and cells, nose, sinuses, mouth, anus, tooth enamel, and other tissues. The mesoderm develops into muscles, bones, heart tissue, lungs, reproductive organs, lymphatic tissue, and other tissues. The endoderm forms the lining of lungs, bladder, digestive tract, tongue, tonsils, and other organs.

The process of differentiation takes place over a period of weeks with different structures forming simultaneously. Some of the major events that occur during the embryonic stage are as follows:

Illustration of prenatal development, from the two-cell, or zygote, stage through the embryonic stage, in which the major body systems develop, to the fetal stage, during which the baby's brain develops and the body adds size and weight.

- **Week 3:** Beginning development of the brain, heart, blood cells, circulatory system, spinal cord, and digestive system.
- **Week 4:** Beginning development of bones, facial structures, and limbs (presence of arm and leg buds); continuing development of the heart (which begins to beat), brain, and nervous tissue.
- **Week 5:** Beginning development of eyes, nose, kidneys, lungs; continuing development of the heart (formation of valves), brain, nervous tissue, and digestive tract.
- **Week 6:** Beginning development of hands, feet, and digits; continuing development of brain, heart, and circulation system.
- **Week 7:** Beginning development of hair follicles, nipples, eyelids, and sex organs (testes or ovaries); first formation of urine in the kidneys and first evidence of brain waves.
- **Week 8:** Facial features more distinct, internal organs well developed, the brain can signal for muscles to move, heart development ends, external sex organs begin to form.

By the end of the embryonic stage, all essential external and internal structures have been formed. The embryo is now referred to as a fetus.

### **Fetal stage**

Prenatal development is most dramatic during the fetal stage. When an embryo becomes a fetus at eight weeks, it is approximately 3 centimeters (1.2 inches) in length from crown to rump and weighs about 3 grams (0.1 ounce). By the time the fetus is considered full-term at 38 weeks gestation, he or she may be 50 centimeters (20 inches) or 3.3 kilograms (7.3 pounds). Although all of the organ systems were formed during embryonic development, they continue to develop and grow during the fetal stage. Examples of some of the major features of fetal development by week are as follows:

- **Weeks 9–12:** The fetus reaches approximately 8 cm. (3.2 in.) in length; the head is approximately half the size of the fetus. External features such as the face, neck,

eyelids, limbs, digits, and genitals are well formed. The beginnings of teeth appear, and red blood cells begin to be produced in the liver. The fetus is able to make a fist.

- **Weeks 13–15:** The fetus reaches approximately 15 cm. (6 in.) in length. Fine hair called lanugo first develops on the head; structures such as the lungs, sweat glands, muscles, and bones continue to develop. The fetus is able to swallow and make sucking motions.
- **Weeks 16–20:** The fetus reaches approximately 20 cm. (8 in.) in length. Lanugo begins to cover all skin surfaces, and fat begins to develop under the skin. Features such as finger and toenails, eyebrows, and eyelashes appear. The fetus becomes more active, and the mother can sometimes begin to feel fetal movements at this stage.
- **Weeks 21–24:** The fetus reaches approximately 28.5 cm. (11.2 in.) in length and weighs approximately 0.7 kg (1 lb. 10 oz.). Hair grows longer on the head, and the eyebrows and eye lashes finish forming. The lungs continue to develop with the formation of air sac (alveoli); the eyes finish developing. A [startle reflex](#) develops at this time.
- **Weeks 25–28:** The fetus reaches approximately 38 cm. (15 in.) in length and weighs approximately 1.2 kg (2 lb. 11 oz.). The next few weeks mark a period of rapid brain and nervous system development. The fetus gains greater control over movements such as opening and closing eyelids and certain body functions. The lungs have developed sufficiently that air breathing is possible.
- **Weeks 29–32:** The fetus reaches approximately 38–43 cm. (15–17 in.) in length and weighs approximately 2 kg (4 lb. 6 oz.). Fat deposits become more pronounced under the skin. The lungs remain immature but breathing movements begin. The fetus's bones are developed but not yet hardened.
- **Weeks 33–36:** The fetus reaches approximately 41–48 cm. (16–19 in.) in length and weighs 2.6–3.0 kg (5 lb. 12 oz. to 6 lb. 12 oz.). Body fat continues to increase, lanugo begins to disappear, and fingernails are fully grown. The fetus has gained a high degree of control over body functions.
- **Weeks 36–38:** The fetus reaches 48–53 cm. (19–21 in.) in length is considered to be full-term by the end of this period. Lanugo has mostly disappeared and is replaced with thicker hair on the head. Fingernails have grown past the tips of the fingers. In a healthy fetus, all organ systems are functioning.

### **Periods of prenatal development – Trimester period**

Development happens quickly during the Prenatal Period, which is the time between conception and birth. This period is generally divided into three stages: the germinal stage, the embryonic stage, and the fetal stage.

#### **Prenatal Period: Pregnancy (Z.E.F)**

- Pregnancy the 3 stages are commonly referred as **ZEF**(Zygote, Embryo and Fetus)

**Pregnancy trimester periods-** Three trimesters in pregnancy or 9 lunar months

- ✓ 1<sup>st</sup> trimester period – 1-3 months or 0 – 13 weeks
- ✓ 2<sup>nd</sup> trimester period – 4-6 months or 14 – 28 weeks
- ✓ 3<sup>rd</sup> trimester period – 7- 9 months or 29 -40 weeks

### **Prenatal Development Stages - Pregnancy trimester periods**

#### **First Trimester**

Pregnancies are measured from a woman's last menstruation. Menstruation signals the release of the old uterine lining, and the beginning of a new reproductive cycle. This cycle starts with the release of an egg, or oocyte, from the ovaries into the fallopian tube. In order to get pregnant, a woman must have sex 5 days before this event, as that is as long as sperm can survive in the female reproductive tract. Also, the egg can only survive for 2-3 days once

outside of the ovary. Therefore, there is a very narrow window in which fertilization can occur.

Because prenatal development is tracked from the last menstruation, fertilization occurs at 1-2 weeks. This event usually happens in the fallopian tube. The sperm meets the eggs, and the two fuse together to form the zygote. As the zygote makes its way to the uterus, it begins to develop and divide. After around a week of slowly traveling down the fallopian tube, the single cell has become a hollow ball of cell, called the gastrula. This ball needs to implant onto the wall of the uterus if it is to survive. These initial stages, known collectively as embryogenesis, carry the new organism from a single cell all the way to a fetus. The process is shown in the image below.

### **Embryogenesis in humans**

During this trimester of prenatal development, the embryo is especially sensitive to any environmental toxins or chemicals that the mother comes in contact with. This is especially true after implantation, when the small embryo begins to receive nutrients from the mother.

By weeks 5 and 6, the embryo is starting to develop the advanced organ systems which the fetus requires. A primitive heart starts circulating fluids around the embryo. Other organ systems, like the nervous system and digestive system, also form as the cells continue to divide and fold into special shapes.

By weeks 11 to 12, the embryo is becoming a fetus, with most of its organ systems intact and mostly functioning. Many changes must still happen before birth however. While the fetus is almost fully formed, it is still tiny. At this point in prenatal development, the fetus is only around 3 inches long. It will be a full 19 to 20 inches before it is born.

### **Second Trimester**

During the second trimester of prenatal development, the fetus begins to finish constructing the organ systems. During this time all of the organ systems advance. The liver, pancreas, spleen, and other secretory organs begin producing fluids. Red blood cells begin to be produced, and the muscles and bones strengthen. As these organ systems form, the fetus becomes less susceptible to damage from toxins and carcinogens. This is because the majority of the cells in the body have already differentiated, and the precursors to the organs are already formed. Therefore, the toxin may do minor damage to one of these systems, but it will not disrupt the entire prenatal development as easily as it can during the embryo stage.

By the end of this trimester, the baby is considered almost fully developed. In fact, babies delivered at only week 24 still have a 50% chance of surviving if given the proper treatment for a premature baby. This treatment includes confining the newborn to an intensive care unit to be carefully monitored as they finish developing. At this point, the fetus has gained control of its body through the development of the nervous system. By week 26, the fetus is entering the third trimester, which is all about gaining weight and preparing to enter the world.

### **Third Trimester**

The third trimester of prenatal development is almost all about growth. The fetus begins to store up large amounts of fat all over the body. Some of this fat is specialized brown adipose tissue, which will help the baby stay warm after it is born. Other fat deposits will be used for energy to continue growing. The brain and neurons continue to develop during this time, and the baby can even use their senses of touch and hearing to begin to understand the outside world.

Babies born within this trimester have an ever-increasing chance of survival as they near “full term” or 36 weeks. Any time after that, and the baby should survive. From the beginning of the third trimester all the way up to 36 weeks, the baby has a chance at

surviving if born early. Along with fat, newborns tend to accumulate hair during this stage of prenatal development, which will also serve to keep them warm.

The end of prenatal development comes with birth. On average for humans, this comes at around 40 to 41 weeks after the woman's last menstruation. At the end of week 42, the baby is considered post mature. When this happens, doctors may choose to induce labor or surgically remove the baby to protect the mother and the baby.

**Pregnancy Signs and Symptoms**

Mild cramping and spotting	Motion sickness
Missed period	Mood swings
Fatigue	Temperature changes
Nausea	High blood pressure
Tingling or aching breasts	Extreme fatigue and heartburn
Frequent urination	Faster heartbeat
Bloating	Acne
Breast and nipple changes	Noticeable weight gain
Pregnancy glow	Tiredness
Morning sickness	Constipation
Pelvic girdle pain	Back pain

**Types of Delivery and childbirth**

**1. Normal vaginal delivery:**

When a baby is born through the birth canal of a woman's body, that delivery is termed as a vaginal delivery. It may or may not be assisted with epidurals or pain medication. The exact time of birth cannot be presumed in such a case, but most births tend to happen once 38 weeks of pregnancy have been completed.

**2. Caesarean delivery:**

In this delivery, the baby is delivered by opening up the abdomen of the mother and surgically opening the uterus to remove the baby. The type of the cut is called a C-section, is how the delivery method gets its name.

**3. Forceps Delivery:**

This is a rather peculiar type of delivery method and is required in certain cases of vaginal birth. This is an addition to the usual vaginal delivery when the baby is on its way via the birth canal but fails to fully emerge out. This could be because of any small obstructions, or the mother being tired and losing consciousness, hence unable to push the baby out.

In these cases, a doctor makes use of specially created tongs, which resemble forceps and insert them slowly in the birth canal. These are then used to gently grab the baby's head and start guiding it outwards through the canal.

**4. Vacuums Extraction:**

The doctors then make use of a specialized vacuum pump which is inserted up to the baby via the canal. The vacuum end has a soft cup which is placed on the top of the baby's head. Vacuum is created so that the cup holds the head and the baby is gently guided outwards through the canal.

**5. Vaginal Birth after Cesarean (VBAC):**

Most of the times, once a woman has had a caesarean delivery, her chances of having vaginal deliveries after that are pretty much nullified. But in recent times, certain techniques are making it possible for women to have successful vaginal deliveries even after the previous delivery had been a C-section. This is termed as VBAC or vaginal birth after caesarean.

**6. Breech birth or delivery:**

A **breech birth** is when a baby is born bottom first instead of head first. Around 3-5% of pregnant women at term (37-40 weeks pregnant) have a breech baby.

## **7. Episiotomy or Perineum operated delivery:**

**Episiotomy**, also known as perineotomy, is a surgical incision of the perineum and the posterior vaginal wall generally done by a midwife or obstetrician. Episiotomy is usually performed during second stage of labor to quickly enlarge the opening for the baby to pass through. The incision, which can be done at a 90 degree angle from the vulva towards the anus or at an angle from the posterior end of the vulva (medio-lateral episiotomy), is performed under local anesthetic (pudendal anesthesia), and is sutured after delivery.

### **Stages of development**

Very broadly the stages of development may be categorized in two main types:

1. Prenatal development
2. Postnatal development

Prenatal development includes all the changes that take place in the womb of the mother. Therefore it is also called “intra-uterine development” where the uterus is the environment. Postnatal development on the other hand, refers to all the stages that follow after the birth till the very end of life.

### **Prenatal Development**

The development of a person begins much before his/ her birth and the stage of development before birth is prenatal development stage. The sperm or spermatozoan from father unites with a cell called egg or ovum in the mother. The sperm enters into the layers of walls surrounding the egg and unites with it. This process is called **fertilization** or conception. As a result a single cell is produced which is called zygote and this is how life begins – as a single cell which cannot even be seen with eyes takes up the journey of development finally to become a complete person! Don't you think it is wonderfully intricate and a beautiful marvel of creation?

Prenatal development covers the period from fertilization to birth. It comprises three stages:

1. The period of the zygote: from fertilization to end of two weeks.
2. Period of the embryo: 2 weeks to 2 lunar months.
3. Period of the fetus: end of 2 months till birth.

#### ***The period of zygote:***

It continues to move down the ovarian tube or oviduct to the uterus. For 4-5 days it floats freely in the uterine cavity. Around the 10<sup>th</sup> day after fertilization the zygote digs into the wall of the uterus and attaches itself firmly, a process called implantation. The wall of the uterus envelops it. Rapid mitotic cell division takes place and the single cell zygote after repeated divisions resembles a ball with two layers of cells.

#### ***The period of the embryo:***

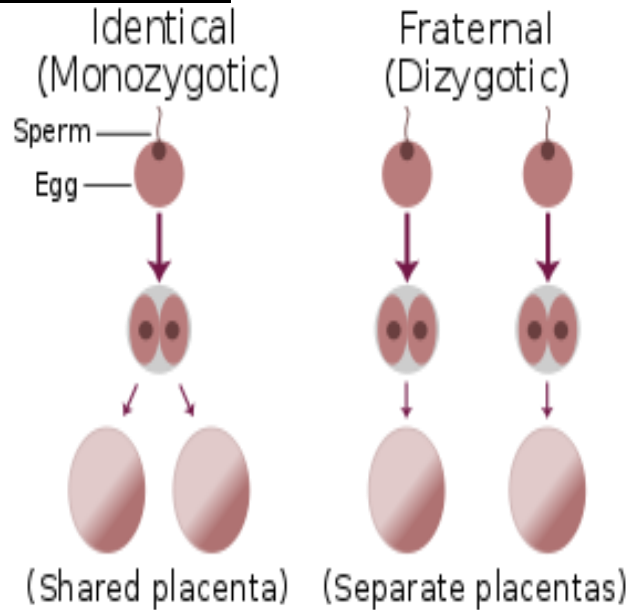
It extends from 2 weeks to 2 months. During this time the embryo is like a miniature human being. Cell differentiation takes place, that is, from one cell, different types of cells arise. External features such as head, face, hands, fingers, legs can be clearly seen and interior organs such as heart, lungs and brain are formed. The embryo turns within the uterus and the heart beat can be heard. The first twelve weeks are very crucial because, it is during this period, the important organs are formed.

#### ***The third stage is the period of the fetus:***

It extends from the beginning of the third month till birth. The body proportions increase as growth continues. Activity of the fetus can be felt. All the internal organs are formed and by 5<sup>th</sup> month they assume actual proportions. Between 2-4<sup>th</sup> month the nervous system develops. On completion of 9 months or 270 days, the fetus is ready for birth.



## Monozygotic and Dizygotic or Twins



### **Monozygotic Twins**

Monozygotic twins are developed by the splitting of a fertilized embryo. The embryo is developed from the zygote, which is formed by the fusion of one egg with one sperm. Since monozygotic twins are developed by the splitting of an embryo, both individuals share the same chromosomes. Therefore, the genetic code of monozygotic twins is considered as the same. Hence, monozygotic twins are called as **identical twins** or **maternal twins** as well. Both individuals have the same gender in monozygotic twins. The birth of monozygotic twins are quite rare. The rate of birth of monozygotic twins is about 1 in 333 pregnancies.



**Figure 1: Monozygotic Twins**

The degree of separation of twins inside the uterus depends on the time. That means the separation of both chorion (Chorionicity) and amniotic sac (amniosity) depend on the time in which the separation occurs. One-third of the monozygotic twins consist of a separate placenta and the amniotic sac inside the uterus. This situation is called dichorionic-diamniotic twins) (Di-Di twins). **Di-Di twins** are formed by the splitting of the embryo within 2-3 days after fertilization. In contrast, two-third of the monozygotic twins share the same placenta and two separate amniotic sacs (monochorionic-diamniotic twins) (Mono-Di twins). **Mono-Di twins** are formed by the splitting of the embryo within 3-8 days after the fertilization. Around 1% of monozygotic twins share their amniotic sac as well (monochorionic-Monoamniotic twins) (Mono-Mono twins). **Mono-Mono twins** are formed by the splitting of the embryo within 8-13 days after the fertilization. **Conjoined twins** are developed by the splitting of the

embryo after 13 days of fertilization, creating twins with joined body parts. Different types of chorionicity and amniosity are shown in *figure 2*.

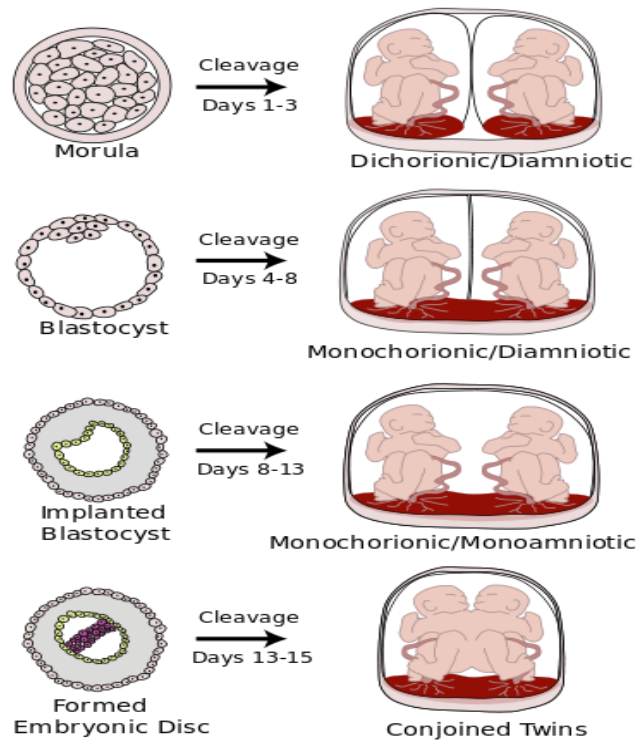
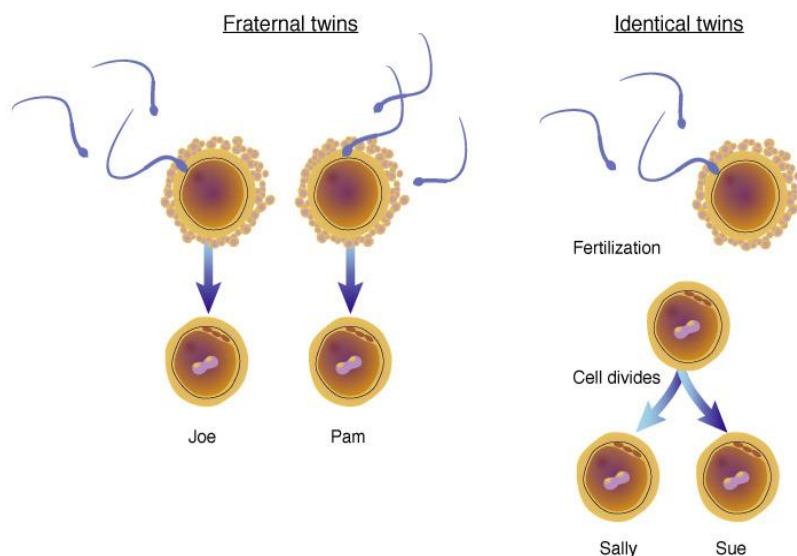


Figure 2: Various chorionicity and amniosity in monozygotic twins

### What are Dizygotic Twins

Dizygotic twins are developed by separate fertilizations of two eggs by two sperms. Since dizygotic twins are developed by two separate fertilization events, they are genetically varied as any two siblings. Hence, their gender is also different from each other. They can be either girl/boy, boy/boy or girl/girl. Therefore, they are called **non-identical twins** or **fraternal twins**. Dizygotic twins are caused by hyper-fertilization. They are hereditary. The occurrence of dizygotic twins around the world depends on the population. The highest rate of occurring dizygotic twins is found among African-Americans whereas the lowest rate is found among Asians. All the dizygotic twins are dichorionic-diamniotic. The development of both monozygotic and dizygotic twins are shown in *figure 3*.



### **Factors Influences during Prenatal stage:**

There are several factors which affect the development during the prenatal stage. These factors are collectively called as teratogens.

#### ***Maternal Nutrition:***

In order to grow, the fetus needs nutrients which in turn come from the mother. Mother's dietary intake must be balanced. Care must be given to include vitamins and minerals (such as calcium, phosphate, iron) water, proteins, fats and not carbohydrates alone. Vegetables, green leaves, seasonal fruits, pulses and cereals in addition to milk, eggs and meat or fish provide a diet adequate for the baby and the mother.

#### ***Maternal age:***

Between the ages of 21 to 29 years is the ideal age of the mother to have children. Below this bracket the mother is too immature physiologically and psychologically with a high risk of infant death. Beyond 30, risk of incidence of mental retardation and other genetic abnormalities is very high.

#### ***Rest and exercise of the mother:***

These are essential specially during pregnancy. When the mother is tired and over worked the fetal activity increases and beyond limits it can cause still birth or irritability of the child. At the same time mother must have adequate exercise.

#### ***Rh blood group:***

Majority of us are Rh+ while some have Rh- blood group. If the mother is Rh- and the fetus is Rh+ then it is an incompatible condition. The mother must be aware of it and at the time of delivery, if precautions are not adequate then complication such as jaundice can occur and may result in infant death.

#### ***Addictions:***

If the mother is addicted to alcohol, cigarettes or drugs the waste material is passed onto the fetus. Risk of irritability, low birth weight or prematurity, even still birth or child being born with addictions are very high.

#### ***Maternal diseases:***

The diseases of the mother can significantly affect the fetus. Specially during the initial critical times during pregnancy. German measles or Rubella can cause deafness, mental retardation or even heart trouble. AIDS, Syphilis or other sexually transmitted diseases can cause miscarriage.

#### ***Maternal stress:***

When the mother has emotional problems, tensions and anxieties, blood supply to the fetus is not adequate, but is diverted. Therefore growth is hindered. This also can result in prematurity, still birth or the child being irritable. Prenatal development comes to an end with the onset of the birth process. Birth can be normal and spontaneous or assisted. The fetus may suffer difficulties and complication, especially lack of oxygen or anoxia. In case of complication assistance is required as in assisted birth such as instrumental birth or caesarian section. In such assisted birth care must be ensured for the health of the new born.

### **Infancy**

The steady prenatal development faces an end and a shock at the time of birth. The fetus is now in a drastically different environment and further development depends on how well he/she can adjust. Normal new born lets out a lusty cry which signals that the newborn now breaths on its own. The lungs that have been inactive get filled and that makes the baby cry. However, if there is any delay in the birth cry, it means that the baby is not breathing. This delay can affect the oxygen supply to the brain and if not restarted, the child may be retarded or even die. The weight of the new born must be noted. Average birth weight is around 2.5 kg below which, it is called low birth weight. Consequently the newborn has to struggle much more to reach normalcy and face life.

During this stage, adjusting to the new non-uterine environment becomes the major goal or focus in the life of the neonate. Adjusting to room temperature, breathing independently, sucking and swallowing the milk, elimination of body waste are prime areas that the new born needs to master. The newborn goes through a wake-sleep cycle. It consists of wakefulness and activity for about 50 to 60 minutes followed by sleep for three to four hours.

### **Characteristics of Infancy**

Infancy is the shortest of all developmental stages. Since the environment changes are drastic, the infant needs to make radical adjustment. There is a slight weight loss during infancy which is also considered as a plateau in development or stagnation. Infants' adjustment is also an indication or a preview to future development. There are several hazards or dangers facing the infant. These hazards are physical and psychological in nature. Getting adjusted to the new environmental conditions such as respiratory, digestive and vascular functions themselves become a threat for the infant.

### **Babyhood**

Babyhood is the stage that follows infancy and extends between two weeks to two years. The characteristics of babyhood are as follows.

- Development during babyhood is the foundation for the development during the entire life span.
- During babyhood rapid physical and intellectual development takes place as evidenced by increase in height, weight and body proportions.
- Increased independence and individuality mark babyhood.
- Socialisation begins during babyhood as the baby shows increasing desire to be a part of the social group of the family and extend the basic relationship with the mother or mother substitute to others as well.
- Sex-role typing begins during babyhood. Boys and girls are dressed sex appropriately and are treated in subtly different ways. Culturally relevant sex-appropriate clothes, games, behaviour or even interactions are gradually brought in.
- There are hazards faced by a baby which may be physical or psychological. Physical hazards such as in illness, accidents and psychological hazards can interfere with positive development of the baby.

During babyhood, the baby is expected to learn to walk by two years, to take solid foods, to gain partial control over elimination, learn the foundation of receptive and expressive speech and to emotionally relate to parents and others.

### ***Physical Development:***

Rapid growth takes place during babyhood. Height and weight increase. The birth weight is doubled by four months and tripled by one year. On an average the height of the baby at four months is 23 to 24 inches and at one year 28 to 30 inches and by two years 32 to 34 inches. Social smile which is a response to recognizing a face is the first clear milestone which happens around 2 months. Also, the baby can roll over from side to back at 2 months and from back to side at 4 months. At 6 months, it can roll over completely. The baby begins to pull the body to a sitting positions and sits up without support around 8 months. Hands and palm scoop up an object which is called palmer's scoop, around 5 months. Around 9 months it can use the fingers in a pincer-grip to pick up even fine objects.

The baby hitches or moves in a sitting position around six months, crawls and creeps around 8 months. Walks on all fours, pulls up and stands by 10 months. He/ she learns to stand with support by 11 months and without support, for longer time around a year. Also he/she learns to walk with support initially and without support around 14 months. These milestones, which indicate movement, are also called as motor development. The motor skills

of babyhood are not integrated initially but when they are integrated later, they are of importance to the baby and its developing personality.

### ***Speech Development:***

As the baby develops, the important bridge into the world of other is also developed in the form of speech which aids communication. It has two aspects : receptive speech to understand what others are communicating and expressive speech to make oneself understood. The baby begins to babble or produces several sounds. Then she moves on to the stage of monosyllables (eg: Ma, Ma, Da, Da, Na, Na etc.) which gives way to two-syllables stage. Before two years, the baby speaks with words made of two syllables formed in a sentence which typically has no grammar.

### ***Emotional and Social Development:***

Babyhood emotions such as joy, affection, curiosity, fear and anger are often expressed explosively and are out of proportion to the stimuli. They are also short lived. These emotions get conditioned or established much more in later years. Beginning with a social smile babies learn to respond to the social environment and are the foundations of the social skills valued greatly in later years.

### ***Play Development:***

Play activities may be classified on the basis of the content of play, what the child does. In terms of content, the play activity may be sense pleasure play, skill play, dramatic play, ritual and competitive games. The second classification of play is in terms of the social character of play that is, who is the child playing with and the nature of their relationship. Under this play with adult, solitary play, parallel play, associative play and cooperative play are the different types.

### ***Personality Development:***

The personality of the individual already begins to take shape. The core of the personality, namely the self concept is formed. Other personality traits are strengthened or weakened depending on interaction with environment which are called as quantitative changes. The roots of these can be observed during babyhood.

### ***Hazards in Babyhood:***

There are several hazards the baby needs to overcome. Physical hazards range from mortality as in cot or crib death, due to various illnesses, accidents or malnutrition.

1. **Psychological hazards** include delay in motor or speech development and their subsequent disadvantages. Delay in development hinders social relation and in turn becomes a threat to emotional development.
2. **Social hazards** are lack of opportunities and experiences to learn to become social. Hazards in personality development result because self concept is largely a mirror image of what babies believe significant people in their lives think of them. Unfavorable attitudes reflected in resentfulness, negativism or withdrawal behaviour from parents and others, therefore, can cause damages to the developing personality.

### **Early Childhood**

Childhood extends from 2 to 12 years and is generally divided as early and late childhood. Early childhood can be taken to range from the completion of 2 years to 6 years. In this section, the skills acquired by the child, speech development and play development, personality development are outlined. Further the hazards during early childhood in various developmental areas are discussed. Happiness during childhood is derived from parental acceptance and ways of extending acceptance are presented.

Early childhood is also called as preschool stage. The young child is eager to gain control over knowledge about the environment. He/she tries to explore the environment, hence this stage is called the exploratory stage. Every object or situation holds such wonder for the young child that he/she is full of questions about what, why and how—giving rise to

the name 'questioning age'. They tend to imitate others usually the adults around them. Thus this age is called the 'imitative age'. Their play activity includes a great deal of creativity and imagination, so this stage also earns the additional name 'creative age'.

### **Physical Development**

Compared to the rapid physical development in babyhood, there is a slow down. Body proportions are evened out and the head heavy look is lost. Weight gain of about 2 Kg per year and an additional 3 inches of height are gained on an average. Milk teeth are lost and the chubbiness of babyhood is replaced by a gaunt look. Because of all these developments the child looks rather unattractive.

### **Skills of Early Childhood**

The young children learn and master a variety of skills because their immense curiosity gets them to manipulate and learn; they feel no inhibition or fear of ridicule as older children would; in addition, their bodies are pliable and fingers dexterous and they are 'teachable'— an essential quality for learning skills. Depending on the environmental opportunities and the family background children learn a variety of skills.

The hand skills of self feeding and dressing become perfect during childhood. Bathing, dressing, combing hair or even finer motor skills required for tying shoe laces are all learnt. Catching and throwing a ball, use of scissors, painting, colouring, use of crayons, drawing all become a part of early childhood years.

With the foundational skill of walking firmly established, young children move onto additional skills. Hopping, skipping, jumping, running, climbing up and down the stairs show the progress made by the child. Cycling, swimming, skating, walking on walls are all activities enjoyed greatly by children at this stage. Handedness is established and the child now shows a clear left or right hand preference by the end of early childhood.

### **Speech Development**

Both receptive and expressive communication improve as babbling of babyhood and crying are largely reduced. Normal speech development gains significant strides where they learn proper pronunciation, making of sentences (even though with poor grammar) and building of vocabulary. Also the content of speech takes a turn. From talking about self, self interests and self needs the child moves on to socialized speech around six years wherein others and their concerns are spoken of.

### **Emotional Development**

Emotions during early childhood are intense with frequent emotional outbursts. These are associated with temper tantrums, intense fears or jealousies and can be traced to the cause of long and tiring play and too little food intake.

### **Play**

The beginning of early childhood finds children playing extensively with toys but slowly they grow out of it towards the completion of this stage. The number of toys or play equipment, the opportunities for manipulation, well developed motor skills, creativity, higher IQ—all these factors or their lack influence the pattern of playing. Play includes a great deal of imitation and dramatizing. For example, young children behave like mothers, teachers and others. The imaginative play often merges reality and fantasy and is enjoyed by young children.

### **Relationship with Significant Others**

1. **Parental relationship:** Children experience it with their father and mother or parent-substitute. Poor relationships lead to devastating effects since young children depend on parents to a great extent. Besides the security of the child is centered around the parents. Therefore, poor relationship with parents, or their absence or death can severely traumatize the young child and affect the developing personality.

2. **Sibling relationship:** The child progressively moves on to independence and is no longer the 'baby'. Siblings often start frictions when a young child wants his/ her way. This is called sibling rivalry. However, siblings may also enjoy a good relationship. Specially when the older children serve as role models for the young children to learn socially approved and sex appropriate behaviour through imitation.

### **Personality Development**

Shaping of the self concept which is the core of personality takes place within the family. Because the social world of the child is the parents, siblings and relatives who stay with the child and what they feel about the child is mirrored and the child accepts that as the self. Peer members too have an effect on the self concept which stems from their attitude towards the child which may reinforce and establish or contradict and damage the influence the family has on the child.

### **Hazards of Early Childhood**

Unlike earlier stages, physical hazards such as illness, accidents or awkwardness have physical as well as psychological repercussions. Mortality rate reduces steeply as compared to earlier phases. Young children are highly susceptible to infections and illnesses. With improved health care facilities generally illnesses are taken care of. Accidents of everyday such as cuts, bruises, falls or burns are common and are more common among boys than girls. Serious or prolonged illness restricts the child and deprives him/her of opportunities and hence affects him/her psychologically by affecting adjustments made by the child.

A preschooler who frequently experiences negative or unpleasant emotions such as anger with few pleasant emotions, faces major emotional hazards of developing a negative disposition. Early in childhood children must learn to establish an emotional linkage between themselves and significant others in their environment called as 'empathic complex'. Failure to establish empathic complex becomes yet another emotional hazard. Children need to establish a warm and stable relationship with the mother, which is then extended to other relationships.

There are also several situations, which threaten the degree of social adjustment of the child. Such situation arise from:

- Speech or behaviour of the child, if unpopular, then he/she is isolated and lacks the opportunity to learn in the peer group situation.
- Children placed under strong pressure to play in a sex appropriate way may over do and become rejected.
- Young children, who face unpleasant social situations because of their age, sex or race, shun all social relations in order to protect themselves.
- Those children who play extensively with imaginary playmates or pets, tend to be dominating. This may result in social maladjustment.
- Children who have too many playmates all the time, do not learn how to handle the situation when they are alone and hence become lonely.

### **Moral Development**

Around early childhood the young ones learn approved and unapproved behaviour. They must be trained appropriately thus aiding moral development. It is based on:

1. Parents who teach children right from wrong must be consistent, otherwise the child gets confused.
2. A mistake must not be appreciated, approved or smiled upon – it reinforces learning of wrong behaviour.
3. Too much punishment wrecks havoc with the child. Praise, awards and rewards for good behaviour and rare and consistent punishment develop moral fiber.
4. The system must not be authoritarian but based on love and acceptance of the child.

Parents who teach the children right from wrong must be consistent. Children get confused when adults teach them that what was wrong yesterday is considered right today, and hence overlooked. Inconsistency between two adults also confuses children. If the mistake of the child is punished by parents but approved and appreciated by others, especially peers, then the child has a positive attitude towards wrong behaviour. Often delinquency arises out of such behaviour. Therefore not only the mistake, but also the attitude towards it needs to be checked.

### **Happiness**

A child who is happy develops to be a well-adjusted person. To a great extent, parents must take responsibility for accepting the child, a key factor in happiness. They need to ensure that acceptance is perceived by the child. It is done through the following ways:

1. Parents must accept the child, regardless of the looks, timing of birth, sex, or his/her strengths and weaknesses. They must warmly welcome the child in their midst and make him/her feel wanted.
2. Parents must provide the basic needs of the child. Proper food and nutrition helps the child to feel accepted and wanted. Keeping him/her clean and away from dangers such as electric shock, fire, accidents etc by providing a safe environment translates as acceptance in the mind of a young child.
3. Parents must take time out and spend with the child. Involving in the child's activities and enhancing the opportunities provided to grow and develop are important ways of extending acceptance to the child.
4. Parents must talk to the child making eye contact. When talked to, the child not only learns the language but feels psychologically secure and accepted.
5. Encouragement, especially when the child is fast picking up motor and speech skills makes the child feel happy and accepted.
6. Age appropriate, interest-based responsibilities must be shared with the child. A child's help when taken to water a plant or clean the house; the child gains acceptance and feels part of the social group of family.
7. Demonstrating affection by a hug or a kiss or picking up the child in addition to feeling accepted, helps the child to feel connected.
8. Parents must take time to teach the child right from wrong, acceptable from unacceptable behaviour. This entire process is called disciplining the child. In order to discipline, parents must explain and show the correct behaviour. Also they must be consistent – between themselves and between two points of time. Frequent punishment would take away the effect and desensitize the child. This should only be a last resort.

Punishment should always be proportionate to the mistake and must be just. The child must know why he/she is being punished.

### **Late Childhood**

The period of late childhood ranges from 6 years to the attainment of sexual maturity, around 12-13 years. During this stage children develop marked negativism and because of their desire for independence seldom obey the parents. The child begins going to school and learns the rudiments of knowledge essential for successful adult life. The peer group assumes great significance and children of this age 'crowd together' or 'gang up', thus earning the name 'gang age'.

### **Developmental Tasks**

The peer members accepting the older child is an important aspect. Within the peer relationship the older child learns several social skills, which as developmental tasks, provide happiness when successful or frustration if failed.

The older child's accomplishments during this stage include the followings.



- ✓ Learns to get along with age mates.
- ✓ Develops the basic skills of reading, writing and arithmetic.
- ✓ Develops concepts necessary for everyday living.
- ✓ Develops a conscience, a sense of morality and values.
- ✓ Develops attitude towards social groups and institutions.
- ✓ Learns physical skills necessary for ordinary games.
- ✓ Begins to develop appropriate masculine or feminine social roles.

### **Physical Development**

There is relatively uniform but slow physical development. The weight gain is almost even throughout late childhood and the child gains 2-3 inches every year. Body proportions are more elongated with long arms and legs giving an awkward appearance. Face also becomes angular with the loss of fat. Teeth that begin to fall during the sixth year are all replaced with permanent teeth except for the wisdom teeth.

### **Skills of Late Childhood**

Children develop a numbers of skills during this stage. These skills also differ from boys to girls.

- ❖ Self help skills of eating, dressing, bathing grooming become almost as adept as that of an adult, with very little concentration required.
- ❖ Social skills include helping others. Cleaning and helping in daily activities at home and helping teacher at school, sharing responsibilities with age mates at play are important achievements of the child.
- ❖ School skills of writing, reading, drawing, painting, clay modeling, crayoning become more proficient.
- ❖ Play skills such as throwing and catching the ball, bicycling, skating and swimming are developed. Fine motor skills of painting and needlework are well developed among girls while boys achieve gross motor skills of throwing a ball, kicking football or jumping.

### **Speech Improvement**

Older children are increasingly aware of speech as a tool for being accepted by their peer group members.

Therefore speech is consciously improved from immature, unacceptable ways of communication such as crying and gesturing which are avoided. Proper pronunciation and grammar are learnt. Children take interest in telling jokes or narrating events or riddles. Parents and teachers also contribute to speech improvement by encouraging them. Radio and television serve as models for speech. There is marked improvement in vocabulary as names of colours, numbers, money concepts, time concepts are included. Secret codes used by the gang often become part of older child's communication pattern.

### **Emotions during Late Childhood**

Older children learn to control emotional outbursts as these are looked down upon by peer members, as immature and inappropriate behaviour. Happy and pleasant expressions on the other hand are expressed freely as seen in laughing, giggling or jumping. While the child tends to curtail expressions of negative emotions, he/she may show moodiness or resort to sulking. In expressing emotions, sex appropriateness can be noticed. Boys tend to show anger or curiosity while girls experience fears, worries and feelings of affection.

### **Social Development**

The older child shows strong desire to be an accepted member of the peer group. Staying at home or playing with siblings are disliked by them. The gangs are not delinquent groups but play groups. Their main activity is to play games, sports or simply chatting. The gangs are also strictly segregated, that is, members of a gang often come from the same sex.

Those who are accepted by the gang members gain social status and feel self confident while the opposite is true of those who are rejected.

### ***Play activities***

Play for the older child is not a mere amusement, it is the chief instrument of socializing which provides opportunities for social skills. Various games, sports or activities such as collecting items (shells, stamps and pictures) are enjoyed. While these activities may be used, acceptance and popularity are the social goals of play.

### ***Improvement of understanding***

The older child is now in a stage where concepts become specific and concrete. They reflect a stage of cognitive development termed as 'concrete operations'. The school plays an important role in building, improving and clarifying concepts. The child begins to understand social dimensions in concepts – types of groups, differences, similarities etc are perceived by the child.

### **Moral Behaviour**

The code of conduct and morality learnt at home is now extended to the social group. The child makes a conscious choice to be part of the peer group. Moral code is developed on the basis of general rather than specific situations. Discipline also helps in this process. Use of rewards, punishment and consistent application of rules enable the child to develop moral behaviour.

### **Personality Development**

The older child enters the school and the social horizon is broadened beyond family members. Now the child views himself/herself not only through the eyes of parents but also teachers, classmates and peers. Thus the child's self concept, mirrored by people around is revised: child's personality traits also undergo changes.

### **Hazards in Late Childhood**

The child is susceptible to many physical and psychological hazards. They include illness and accidents which are the physical hazards encountered by older children. Improved medicare takes care of several illnesses but accidents are a major cause of death among older children. Children who experience lack of peer acceptance are dissatisfied leading to personality maladjustments in later life.

### **Happiness in Late Childhood**

The older child experiences happiness from several sources. Play time is eagerly awaited. But for occasional difficulties, if the home atmosphere is relaxed, then the child loves the family and derives satisfaction from them, an added source of happiness. Social acceptance becomes a major factor in establishing happiness in late childhood.

### **Adolescence**

Adolescence literally means 'to grow to maturity'. It is an intermediary stage between childhood and adulthood characteristically possessing qualities of both stages, although not fully in either of them. The age range is from 12-19 years. It is the threshold to adulthood. There are rapid physical changes taking place including sexual maturity which is attained during adolescence. Consequently there are also psychological and social changes. Adolescence is a crucial stage for the person. In addition, it usually encounters problems of different kinds. Adolescents are very sensitive. This must be understood and handled with utmost responsibility. The developmental tasks for adolescents are as follows.

- Coming to terms with one's own body and accepting the changes.
- Achieving new and more mature relations with age mates of both sexes.
- Selecting and training for a career.
- Desiring, accepting and achieving socially responsible behaviour.
- Achieving emotional and economic independence.
- Gaining self identity.

## **Physical Changes**

The most important change that takes place during adolescence is sexual maturity which occurs at *puberty*. The body prepares for it for about two years (prepubescence or prepuberty) followed by adjusting and becoming fully functional over another two years (post pubescence/post puberty). Changes in height, weight are rapid referred to as 'growth spurt'. Puberty marks 'menarche' or beginning of the menstrual cycle among the girls and nocturnal emissions among the boys. The changes during puberty are both internal and external. Internally the endocrine system produces hormones which trigger the reproductive cycle. Chief among them are Estrogen and Progesterone among females and Androgens and Testosterone among males. External changes include secondary sexual characteristics such as facial hair (growth of beard and moustache) among the males and development of breasts among the females. Consequently, the body form assumes the adult figure and voice changes are accompanied.

## **Emotionality and Social Behaviour**

Stanley Hall had termed adolescence as the stage full of 'storm and stress'. The hormones, the growth spurt and the reproductive maturity all these are not merely physical for they also have an emotional impact. The emotional pattern of the adolescent is called 'heightened emotionality' wherein the person is irritable, moody, irrational or feels intensely. However, maturity sets in as adolescence makes way for adulthood and the person learns to adjust appropriately.

The peer group influence increases. The adolescent begins to notice and take interest in the opposite sex. Making friends and adjusting to new social situations in school, search for career are learnt during this time. Great deal of interest is shown in personal grooming, looks and clothes. Adolescents also ponder over several philosophical issues and try to find an answer to questions such as "Who am I? What is the purpose of life?", The search for identity when it takes a meaningful turn, enables the adolescent to adjust well and in contrast, in identity, crisis leads to confusion and diffidence in future.

## **Moral Development**

By adolescence, the mechanism of moral code should be developed. Morality must be rooted in internal control and not external agencies such as fear, punishment and social consequences. While these factors deter the adolescent he/she learns to decide on his/her own.

## **Hazards in Adolescence**

While illness rates may be low, accidents and conflicts leading to suicide are high. Psychological hazards arise out of inability to make the transition into maturity. Social disapproval is still a major source of hazard specially with the opposite sex.

## **Happiness**

Adolescents are happy based on their social and family adjustments. Choosing and training for a career contributes to a happy state of mind. If the career aspirations are realistic and achievable, then the adolescents have reasons to be well adjusted and happy.

## **Adulthood**

Adulthood is the stage where growth is complete and the person assumes various responsibilities. Starting around 18 years, it extends till middle age which is around 45 years. The developmental tasks for this stage of life are as follows:

Like all earlier stages adult too has certain developmental tasks, except they are referred to as 'Vital roles'. All of us occupy a 'status', a position, socially recognized and regularized. For example, the status of being a son, an officer or/and a captain. According to the status one occupies, one needs to perform certain duties or fulfil certain responsibilities, which are termed as 'roles'. A role is the dynamic side of the status. Taking the example further, the son takes care of the parents or the captain leads the team. The roles of the adult

are so important that they are called as vital roles and each adult performs these roles. These roles include the role of a worker, a spouse and a parent.

### **Role of Worker**

Having selected and trained for a career during adolescence, the adult takes up the important task of getting a job and settling in it. As one settles, one experiences job satisfaction or dissatisfaction. Proportionate to the job satisfaction (also called as vocational adjustment) one will find adjustment in life. The vocational adjustment depends on the following factors.

- Reasons why the job was selected
- Preparation for working
- Training and qualification
- Experience and expertise, skill in performance Personal interest
- Willingness to learn and adjust 'the attitude'
- Money

If these factors are more or less balanced, then the adult is vocationally adjusted. Not only for the person, but also for the family, adjustment is required. For example if he is a travelling executive away on long tours, the family must find a way of adjusting to the circumstances. It is found that one who balances the financial demands, is often well adjusted as an adult.

### **Marriage Partner**

Taking up the responsibility of a spouse and fulfilling this role greatly contributes to a person's life, happiness and adjustment. Marital adjustment depends mainly on the following factors:

1. Age at marriage
2. Type of marriage—arranged or love marriage
3. Courtship or prior knowledge about the partner
4. Similarities/differences in backgrounds Sharing of interests
5. Willingness to make the marriage work and having a positive attitude

Marriages are made in heaven says the proverb. But the couple must work at keeping it healthy on earth! Success in marriage must be achieved in several aspects or areas. Basically both partners need to be satisfied in marriage. Marital faithfulness and trust establishes the foundation in marriage. Communication between the partners is a key area. Further, a loving respect for each other and mutual desire for harmony between husband and wife become crucial. Besides, the couple need to adapt to each other's interests, work demands and personality. Another area is sexual satisfaction. Handling of money, spending and saving, if not done in a mature manner can cause havoc in marriage. Adjustment in these areas can truly make marriage a source of happiness.

### **Parental Role**

As the family grows and children are added, one must realize that it involves great responsibility. Adjustment to parenthood depends on several factors including the desire for children, number of children, time when they are born, sex of children, spacing between children, ability to support them, child rearing practices used by parents, acceptance of children.

Children can contribute greatly to the emotional well being of parents if brought up with loving care provided with overall acceptance. The parental role must be played with commitment and creativity. Adjustment to parenthood may become elusive if children are rebellious, sick or uncaring. Those who are childless by choice, although enjoy greater freedom, forfeit the joys of child's affection and companionship.

## **Middle Age**

Middle age is an intermediary stage between adulthood and old age. Beginning around 45 years it ends when old age begins. It is a period of transition from adulthood to old age. It is characterized by achievements, professional and otherwise. It is a time when life is evaluated by introspection. It is called Empty nest period, as children leave home. Many observers view it as a time of stress, often termed as 'Middle age' crises.

The developmental tasks of the middle aged adult are centered around success in career, adjusting well in marriage and finding satisfaction in children. At work the person attains great achievements and experiences a climax. Depending on the foundations, the marriage may be shaken up or strengthened. The relationship with children assumes a new dimension as they too start early adult life.

### **Physical Changes**

With active reproductive stage behind them, men and women undergo the experience of a physical decline. Women go through menopause, the end of menstrual cycle. As a result, she cannot have children any more. With the decline in hormones leading to *menopause* in women several other features appear. Weight gain around the abdomen, joint pains, changes in appearance with grey hairs and sagging muscles, problems with teeth and vision, slow down the pace of life. Men too experience reduced sexual drive and motivation, hence they may question their own virility. As the youthfulness begins to fade away refocusing the relationship between husband and wife become essential.

### **Emotional Changes**

The drastic physical changes brought in by reduced hormones, lead to emotional ups and downs. Periods of moodiness, loneliness or blues affect the middle age adult. The feelings of reduced function, unattractiveness and the like cause negative feelings and stress which if left uncared for, can escalate to full blown crisis situation. Emotional stability can be achieved in meaningful work, interests and relationships. Frequently people turn to religion and God for peace, strength and meaning.

### **Social Changes**

During middle age social activities and responsibilities assume increased significance. Children and their families are a source of satisfaction. Friends and peer group members are very important in helping one realize he/she is not alone.

Happiness comes from accepting the journey of life with its many twists and turns. Developing and experiencing career goals and achieving them, renewed family intimacy and social contributions provide added value to the person.

## **Old Age**

While it is true that a person can feel and behave very old age 45, another one at age 85 may lead an active life enjoying good health. Old age, often referred to as the evening of life, begins around 65 years. The old person is called as senior citizen. Old age is a period of decline in physical strength and social participation. It is not welcomed unlike other phases of life. The adjustment of older people is often poor. The problems of old age stem from disability, diseases, dependence and death.

### **Physical Changes**

As strength declines, the various organs and organ systems slow down. Diabetes, heart conditions, osteoporosis and such diseases are common during old age. Disabilities in walking, seeing, hearing etc restrict the person in several ways. These disabilities make the person dependent on others.

### **Psychological Changes**

An old person is often isolated. The disease and disabilities produce a strong feeling of inadequacy and the dependence makes the person feel worse. They are given to depression and moodiness. Death of the spouse plunges the person into despair making him/ her feel

totally at a loss. Memory fails the old person which creates further problems. Fear of death can be a dominant emotion. Worries about whether he/she would be invalid, a burden to others is very common.

### **Social Changes**

Older people retire often from work. Their busy life suddenly comes to a halt. Re-employment possibilities may not be bright enough. Thus, the old person finds too much time at hand, with too little work and reduced mobility very frustrating. Redirecting and remodeling the entire life style with meaningful activities become necessary. The peer group members are no longer accessible due to various reasons. The social status of a widow or widower is not a pleasant one either. Dependent on others for even small things, mobility, money and moorings, the social life of the old person shrinks drastically.

As an individual he/she needs to take personal responsibility for self that is a milestone. The developmental tasks become the individual life and existence, rather than the others in the social circle.

Happiness in old age is centered around children and their welfare. Simple events and memories, shared love and concern, provide feelings of satisfaction to the old person.

### UNIT – III

**Personality:** Definition, meaning and concept- Important Concepts and Contributions of Freud, Jung, Adler, Maslow and Eysenck. #Factors Influencing Personality Development#: Heredity, Environment and Socialization Process.

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**Personality: Definition, meaning and concept:**

The term personality is derived from the '*Latin*' word '*persona*' meaning a '*mask*'. Personality is a patterned body of habits, traits, attitudes and ideas of an individual as these are organized externally into roles and statuses and as they relate internally to motivation, goals and various aspects of selfhood.

**J.P. Guilford (1959)** "*An individual's personality, then, is his unique pattern of traits.*"

**According to Robert Park and Earnest Burgess** Personality is the sum and organization of those traits which determine the role of the individual in the group.

According to Linton, personality embraces the total organized aggregate of psychological processes and status pertaining to the individual.

**Personality says Maclver** is all that an individual is and has experienced so far as this all can be comprehended as unity. According to Lundberg the term personality refers to the habits, attitudes and other social traits that are characteristic of a given individual's behavior.

**By personality Ogburn** means the integration of the socio-psychological behavior of the human being, represented by habits of action and feeling, attitudes and opinions.

**Davis regards personality** a psychic phenomenon which is neither organic nor social but an emergent from a combination of the two. According to Young personality is the totality of behavior of an individual with a given tendency system interacting with a sequence of situations.

On the basis of these definitions it may be said there are two main approaches to the study of personality:

1. The psychological
2. The sociological

The psychological approach considers personality as a certain style peculiar to the individual. This style is determined by the characteristic organization of mental trends, complexes, emotions and sentiments. The psychological approach enables us to understand the phenomena of personality disorganization and the role of wishes, of mental conflict and of repression and sublimation in the growth of personality. The sociological approach considers personality in terms of the status of the individual in the group, in terms of his conception of his role in the group of which he is a member. What others think of us plays a large part in the formation of our personality.

Thus personality is a sum of the ideas, attitudes and values of a person which determine his role in society and form an integral part of his character.

Personality is acquired by the individual as a result of his participation in group life. As a member of the group he learns certain behavior systems and symbolic skills which determine his ideas, attitudes and social values. These ideas, attitudes and values which an individual holds comprise his personality.

In brief it can be said:

1. Personality is not related to bodily structure alone. It includes both structure and dynamics.
2. Personality is an indivisible unit.
3. Personality is neither good nor bad.
4. Every personality is unique

5. Personality refers to persistent qualities of the individual. It expresses consistency and regularity.
6. Personality is acquired.
7. Personality is influenced by social interaction. It is defined in terms of behavior.

Personality - A relatively stable set of characteristics that influences an individual's behavior

To social scientists, personality is the sum total of behaviors, attitudes, beliefs, and values that are characteristic of an individual. Our personality traits determine how we adjust to our environment and how we react in specific situations. No two individuals have the same personalities. Each individual has his or her own way of interacting with other people and with his or her social environment.

The term personality represents the overall profile or combination of characteristics that capture the unique nature of a person as that person reacts and interacts with others and how he views himself. Personality combines a set of physical and mental characteristics that reflect how a person looks, thinks, acts, and feels. An understanding of personality contributes to an understanding of organizational behavior in that we expect a predictable interplay between an individual's personality and his or her tendency to behave in certain ways.

### **Personality Traits and Classifications**

Numerous lists of personality characteristics describing an individual's behavior, have been developed, many of which have been used in OB research and can be looked at in different ways. First, recent research has examined people using extensive lists of personality dimensions and distilled them into the "**Big Five Personality Traits:**"

1. Extraversion— outgoing, sociable, assertive
2. Agreeableness— Good-natured, trusting, cooperative
3. Conscientiousness— Responsible, dependable, persistent
4. Emotional stability— unworried, secure, relaxed
5. Openness to experience— Imaginative, curious, broad-minded

A second approach to looking at OB personality traits is to divide them into social traits, personal conception traits, and emotional adjustment traits, and then to consider how those categories come together dynamically.

- Social traits are surface-level traits that reflect the way a person appears to others when interacting in various social settings. Problem-solving style, based on the work of Carl Jung, a noted psychologist, is one measure representing social traits. It reflects the way a person goes about gathering and evaluating information in solving problems and making decisions.
- The personal conception traits represent the way individuals tend to think about their social and physical setting as well as their major beliefs and personal orientation concerning a range of issues. An important personal conceptions trait of special importance to managers is self-monitoring. Self-monitoring reflects a person's ability to adjust his or her behavior to external, situational (environmental) factors.
- The emotional adjustment traits measure how much an individual experiences emotional distress or displays unacceptable acts.

### **Important Concepts and Contributions of Freud, Jung, Adler, Maslow and Eysenck**

#### **THEORIES OF PERSONALITY**

What is this thing we call personality? Consider the following definitions, what do they have in common?

"Personality is the dynamic organization within the individual of those psychophysical systems that determine his characteristics behavior and though" (Allport, 1961, p. 28).



“The characteristics or blend of characteristics that make a person unique” (Weinberg & Gould, 1999).

Both definitions emphasize the uniqueness of the individual and consequently adopt an idiographic view.

- The idiographic view assumes that each person has a unique psychological structure and that some traits are possessed by only one person; and that there are times when it is impossible to compare one person with others. It tends to use case studies for information gathering.
- The nomothetic view, on the other hand, emphasizes comparability among individuals. This viewpoint sees traits as having the same psychological meaning in everyone. This approach tends to use self-report personality questions, factor analysis, etc. People differ in their positions along a continuum in the same set of traits.
- We must also consider the influence and interaction of nature (biology, genetics etc.) and nurture (the environment, upbringing) with respect to personality development.
- Trait theories of personality imply personality is biologically based, whereas state theories such as Bandura's (1977) Social Learning Theory emphasize the role of nurture and environmental influence. Sigmund Freud's psychodynamic theory of personality assumes there is an interaction between nature (innate instincts) and nurture (parental influences).

### 1) FREUD'S THEORY

#### Freud's Tripartite Theory of Personality

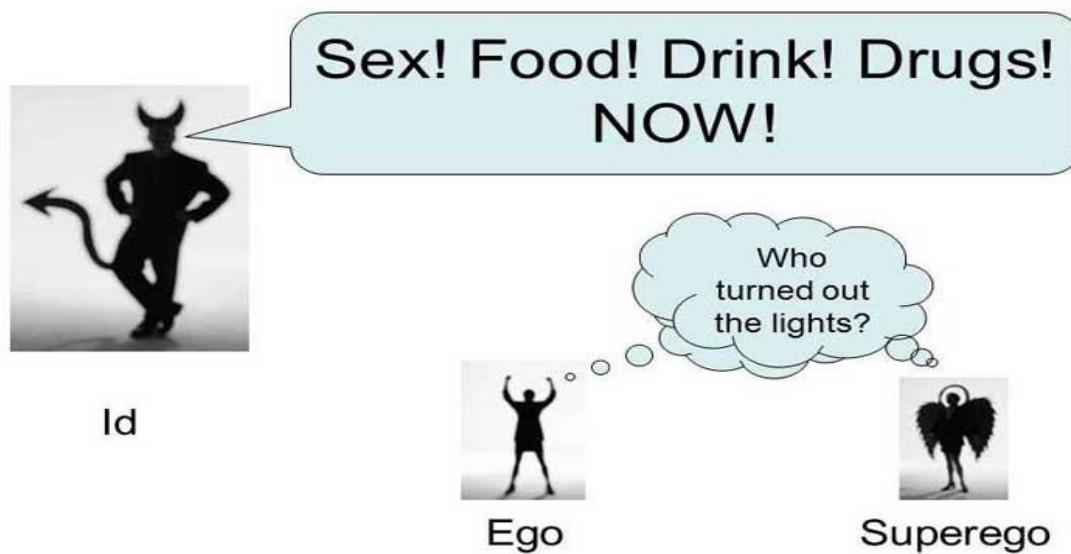
Freud (1923) saw the personality structured into three parts (i.e. tripartite), the id, ego and superego (also known as the psyche), all developing at different stages in our lives. These are systems, not parts of the brain, or in any way physical.



The **id** is the primitive and instinctive component of personality. It consists of all the inherited (i.e. biological) components of personality, including the sex (life) instinct – **Eros** (which contains the libido), and aggressive (death) instinct - **Thanatos**.

It operates on the **pleasure principle** (Freud, 1920) which is the idea that every wishful impulse should be satisfied immediately, regardless of the consequences.

# Psychotic Psyche



The **ego** develops in order to mediate between the unrealistic id and the external real world (like a referee). It is the decision making component of personality

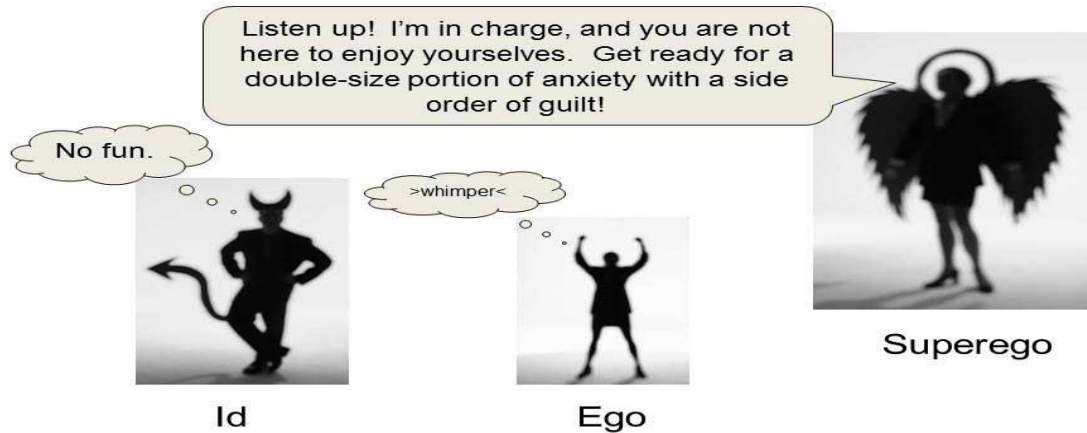
The ego operates according to the **reality principle**, working our realistic ways of satisfying the id's demands, often compromising or postponing satisfaction to avoid negative consequences of society. The ego considers social realities and norms, etiquette and rules in deciding how to behave.

# Healthy Psyche



The **superego** incorporates the values and morals of society which are learned from one's parents and others. It is similar to a conscience, which can punish the ego through causing feelings of guilt.

## Neurotic Psyche



### 2) CARL G. JUNG'S PERSONALITY TYPE EXPLAINED

According to **Carl G. Jung's theory** of psychological types [Jung, 1971], people can be characterized by their preference of general attitude:

- Extraverted (E) vs. Introverted (I),

their preference of one of the two functions of perception:

- Sensing (S) vs. Intuition (N),

and their preference of one of the two functions of judging:

- Thinking (T) vs. Feeling (F)

The three areas of preferences introduced by Jung are *dichotomies* (i.e. bipolar dimensions where each pole represents a different preference). Jung also proposed that in a person one of the four functions above is dominant – either a function of perception or a function of judging. Isabel Briggs Myers, a researcher and practitioner of Jung's theory, proposed to see the judging-perceiving relationship as a fourth dichotomy influencing personality type [Briggs Myers, 1980]:

- Judging (J) vs. Perceiving (P)

1. The first criterion, **Extraversion – Introversion**, signifies the source and direction of a person's energy expression. An extravert's source and direction of energy expression is mainly in the external world, while an introvert has a source of energy mainly in their own internal world.
2. The second criterion, **Sensing – Intuition**, represents the method by which someone perceives information. Sensing means that a person mainly believes information he or she receives directly from the external world. Intuition means that a person believes mainly information he or she receives from the internal or imaginative world.
3. The third criterion, **Thinking – Feeling**, represents how a person processes information. Thinking means that a person makes a decision mainly through logic. Feeling means that, as a rule, he or she makes a decision based on emotion, i.e. based on what they feel they should do.
4. The fourth criterion, **Judging – Perceiving**, reflects how a person implements the information he or she has processed. Judging means that a person organizes all of his life events and, as a rule, sticks to his plans. Perceiving means that he or she is inclined to improvise and explore alternative options.

All possible permutations of preferences in the 4 dichotomies above yield 16 different combinations, or *personality types*, representing which of the two poles in each of the four dichotomies dominates in a person, thus defining 16 different personality types. Each personality type can be assigned a 4 letter acronym of corresponding combination of preferences:

ESTJ	ISTJ	ENTJ	INTJ
ESTP	ISTP	ENTP	INTP
ESFJ	ISFJ	ENFJ	INFJ
ESFP	ISFP	ENFP	INFP

- ✓ The first letter in the personality type acronym corresponds to the first letter of the preference of general attitude - “E” for extraversion and “I” for introversion.
- ✓ The second letter in the personality type acronym corresponds to the preference within the sensing-intuition dimension: “S” stands for sensing and “N” stands for intuition.
- ✓ The third letter in the personality type acronym corresponds to preference within the thinking-feeling pair: “T” stands for thinking and “F” stands for feeling.
- ✓ The fourth letter in the personality type acronym corresponds to a person’s preference within the judging-perceiving pair: “J” for judging and “P” for perception.

For example:

- ISTJ stands for Introverted, Sensing, Thinking, Judging
- ENFP stands for Extraverted, iNtuitive, Feeling, Perceiving

### 3) ALFRED ADLER'S PERSONALITY THEORY

Adler's Personality Theory was created by Alfred Adler (1870 - 1937). Adler called his theory Individual Psychology because he believed that people were unique and that no theory created before his applied to all people. He originally followed Sigmund Freud's teachings but left after a disagreement of Freud's theory which says that the drive of human behavior is sex. Adler's Personality Theory is similar to that of Freud's Personality Theory except that Adler's drive for human behavior is the need to overcome the feelings of inferiority.



Inferiority is a feeling that humans feel since they are born. They grow up being dependent on their parents and feeling like they cannot do anything on their own. It is humans drive to overcome inferiority and become superior which causes humans to act. Humans act to achieve perfection and superiority. Those that do feel like they are being overwhelmed by feelings of inferiority will develop an inferiority complex. An inferiority complex brings an exaggerated feeling of inferiority on the sufferer and they will feel less motivated to strive for superiority.

His theory also contains the effects of the order of the family. Children who are the only child will get pampered which will cause the child to feel inferior when left to do things on their own. Those who are firstborn get all the attention at first but then all that attention goes towards the middle child. Now the firstborn feels neglected and inferior and develops to reserved and conservative. The middle child will be competitive and constantly try to beat the firstborn. The youngest child will be pampered and will feel inferior when left to do

things by themselves. The youngest child could also feel the need to constantly beat their older siblings like the middle child.

Adler also had 4 different psychological types that described people based off of their energy levels.

Adler's Psychological Personality Types			
Ruling Type	Learning Type	Avoiding Type	Socially Useful Type
This type refers to those who will push others in order to gain superiority. They have a lot of energy which causes them to push others out of their way. This type contains bullies, sadist, alcoholics, etc.	Those who fall under this type are sensitive and build a shell around themselves. They have low energy levels. They are dependent on others to help them with life difficulties. When overwhelmed they develop phobias, obsessions, anxiety, etc.	These people are people who survive by avoiding life. They have the lowest energy levels. They usually become psychotic, living in their own worlds.	This is a healthy person. They have the right amount of energy and take interest in others.

There are problems with Adler's Personality Theory however. One weakness of this theory is that it isn't very scientific. Adler's theory is based of on the strive for superiority and the feelings of inferiority but you cannot measure or test such a thing. Also the theory doesn't explain every personality of every human. A firstborn child doesn't always feel like the attention he was receiving went to the middle child nor does the middle child always feel the need to surpass the firstborn child.

#### 4) MASLOW'S H THEORY OF PERSONALITY

##### Key Points

- As a leader of [humanistic psychology](#), Abraham Maslow approached the study of [personality](#) by focusing on [subjective](#) experiences, free will, and the [innate drive](#) toward [self-actualization](#).
- Maslow expanded the field of humanistic psychology to include an explanation of how human needs change throughout an individual's lifespan, and how these needs influence the development of personality.
- Maslow's hierarchy of needs ranks human needs from the most basic physical needs to the most advanced needs of self-actualization. A person must acquire and [master](#) each level of need before proceeding to the next need.
- Maslow studied the personalities of self-actualizers and found they had many things in common; he believed self-actualizers indicate a *coherent personality syndrome* and represent optimal psychological health and functioning.
- Maslow's ideas have been criticized for their lack of scientific rigor, as well as their Western cultural [bias](#).

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##### Terms

- [self-actualization](#)  
According to humanistic theory, the realizing of one's full potential; can include creative expression, quest for spiritual enlightenment, pursuit of knowledge, or the desire to give to society.
- [transcendence](#)  
Superior excellence; supereminence.
- [humanistic psychology](#)

A psychological perspective which rose to prominence in the mid-20th century in response to psychoanalytic theory and behaviorism; this approach emphasizes an individual's inherent drive towards self-actualization and creativity.

### Full Text

Often called the “third force” in psychology, humanism was a reaction to both the pessimistic [determinism](#) of [psychoanalysis](#), with its emphasis on psychological disturbance, and to the behaviorists’ view of humans passively reacting to the environment. Two of the leading humanistic theorists who made advancements in the field of personality psychology were Abraham Maslow and Carl Rogers.

### Abraham Maslow's Humanism

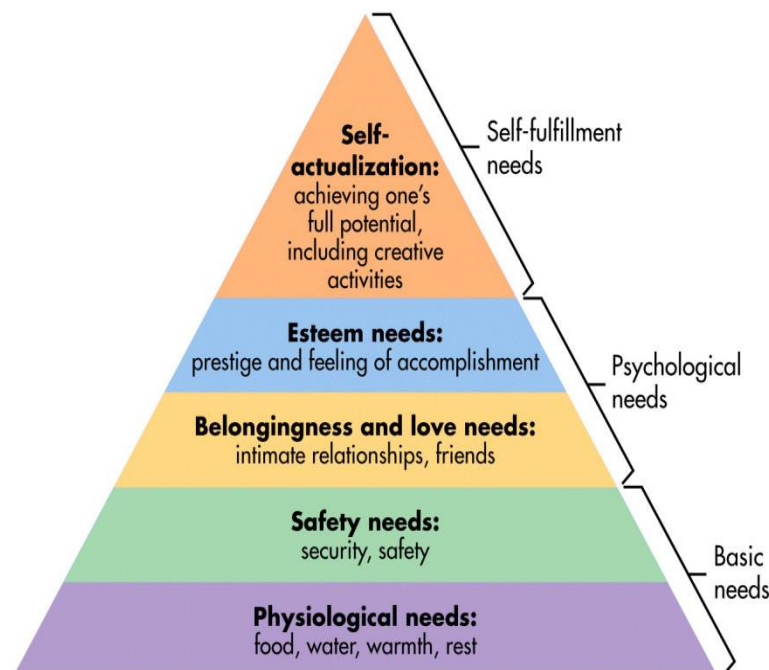
As a leader of humanistic psychology, Abraham Maslow approached the study of personality psychology by focusing on subjective experiences and free will. He was mainly concerned with an individual's innate drive toward self-actualization—a state of fulfillment in which a person is achieving at his or her highest level of capability. Maslow positioned his work as a vital complement to that of Freud, saying: "It is as if Freud supplied us the sick half of psychology and we must now fill it out with the healthy half."

In his research, Maslow studied the personalities of people who he considered to be healthy, creative, and productive, including Albert Einstein, Eleanor Roosevelt, Thomas Jefferson, Abraham Lincoln, and others. He found that such people share similar characteristics, such as being open, creative, loving, spontaneous, compassionate, concerned for others, and accepting of themselves.

### Personality and the Hierarchy of Needs

Maslow is perhaps most well-known for his hierarchy of needs [theory](#), in which he proposes that human beings have certain needs in common and that these needs must be met in a certain order. These needs range from the most basic [physiological](#) needs for survival to higher-level self-actualization and [transcendence](#) needs. Maslow's hierarchy is most often presented visually as a pyramid, with the largest, most fundamental physiological needs at the bottom and the smallest, most advanced self-actualization needs at the top. Each layer of the pyramid must be fulfilled before moving up the pyramid to higher needs, and this process is continued throughout the lifespan.

### [Maslow's hierarchy of needs](#)







Maslow believed that successful fulfillment of each layer of needs was vital in the development of personality. The highest need for self-actualization represents the achievement of our fullest potential, and those individuals who finally achieved self-actualization were said to represent optimal psychological health and functioning. Maslow stretched the field of psychological study to include fully-functional individuals instead of only those with [psychoses](#), and he shed a [more](#) positive light on personality psychology.

### Characteristics of Self-Actualizers

Maslow viewed self-actualizers as the supreme achievers in the human race. He studied stand-out individuals in order to better understand what characteristics they possessed that allowed them to achieve self-actualization. In his research, he found that many of these people shared certain personality [traits](#).

Most self-actualizers had a great sense of awareness, maintaining a near-constant enjoyment and awe of life. They often described *peak experiences* during which they felt such an intense degree of satisfaction that they seemed to transcend themselves. They actively engaged in activities that would bring about this feeling of unity and meaningfulness. Despite this fact, most of these individuals seemed deeply rooted in reality and were active problem-seekers and solvers. They developed a level of acceptance for what could not be changed and a level of spontaneity and [resilience](#) to tackle what could be changed. Most of these people had healthy relationships with a small group with which they interacted frequently. According to Maslow, self-actualized people indicate a *coherent personality syndrome* and represent optimal psychological health and functioning.

### Criticism of Maslow's Theories

Maslow's ideas have been criticized for their lack of scientific rigor. As with all early psychological studies, questions have been raised about the lack of [empirical](#) evidence used in his research. Because of the subjective nature of the study, the [holistic](#) approach allows for a great deal of variation but does not identify enough constant variables in order to be researched with true [accuracy](#). Psychologists also worry that such an extreme focus on the subjective experience of the individual does little to explain or appreciate the impact of society on personality development. Furthermore, the hierarchy of needs has been accused of

cultural bias—mainly reflecting Western values and ideologies. Critics argue that this [concept](#) is considered relative to each [culture](#) and society and cannot be universally applied.

### 5) EYSENCK'S PERSONALITY THEORY

Eysenck (1952, 1967, 1982) developed a very influential model of personality. Based on the results of factor analyses of responses on personality questionnaires he identified three dimensions of personality: extraversion, neuroticism and psychoticism.

During 1940s Eysenck was working at the Maudsley psychiatric hospital in London. His job was to make an initial assessment of each patient before their mental disorder was diagnosed by a psychiatrist. Through this position he compiled a battery of questions about behavior, which he later applied to 700 soldiers who were being treated for neurotic disorders at the hospital (Eysenck (1947).

He found that the soldiers's answers seemed to link naturally with one another, suggesting that there were a number of different personality traits which were being revealed by the soldier's answers. He called these first order personality traits

He used a technique called factor analysis. This technique reduces behavior to a number of factors which can be grouped together under separate headings, called dimensions.

Eysenck (1947) found that their behavior could be represented by two dimensions: Introversion / Extroversion (E); Neuroticism / Stability (N). Eysenck called these second-order personality traits.



According to Eysenck, the two dimensions of neuroticism (stable vs. unstable) and introversion-extroversion combine to form a variety of personality characteristics.

**Extraverts** are sociable and crave excitement and change, and thus can become bored easily. They tend to be carefree, optimistic and impulsive.

**Introverts** are reserved, plan their actions and control their emotions. They tend to be serious, reliable and pessimistic.



**Neurotics / unstabiles** tend to be anxious, worrying and moody. They are overly emotional and find it difficult to calm down once upset.

**Stables** are emotionally calm, unreactive and unworried.

Eysenck (1966) later added a third trait / dimension - **Psychoticism** – e.g. lacking in empathy, cruel, a loner, aggressive and troublesome.

Eysenck related the personality of an individual to the functioning of the autonomic nervous system (ANS). Personality is dependent on the balance between excitation and inhibition process of the nervous system. Neurotic individuals have an ANS that responds quickly to stress.

### **FACTORS INFLUENCING PERSONALITY**

Personality: It can be termed as the combination of qualities mental, physical and moral that set one apart from others.

Personality can be termed as the combination of qualities – mental, physical, and moral that sets one part from others. Having a strong personality is the key to success. This is also a key determinant of good leadership. A good personality enables one to establish self control and self direction to discover the reality off freedom of choice. A person with a positive attitude can direct his thoughts, control his emotions and regulate his attitude.

In order to have a good personality, self development is needed. An executive's self is the sum total of all that he can call his own. Self is something of which he is aware of. The self concept which an executive brings to his job is the amalgamation of many things, his perception towards his parents, the rules he has learnt, the impressions he carries about his peers, the record of success and failure, and the idea of what rewards he deserves.

The self development process transforms from dependence to self direction, from impulsiveness to self discipline, from ignorance to knowledge, from incompetence to competence from immorality to morality and from self centered to concern for self and others. Developing and bearing a sound personality is a changing process.

The personally can be broadly classified into two groups – sick personality and healthy personality.

The sick personality is also known as disturbed or peculiar personality. Sick personality can be the consequence of physical and/or psychological factors. These factors may or may not be in the control of the person. Some of these factors can be troubled childhood, repeated failures, lack of motivation, rejections, distrust of the parents and peers etc. The person himself has to assume a greater responsibility for following a prescribed pattern and pulling himself out of this situation.

Healthy personality is an image of a person who does not feel anxious or hostile, is not self defeated or destructive to others. People with healthy personalities are judged to be well adjusted. Apart from a good physical health, some other characteristics and features are necessary for an individual in order to have a positive, strong, and balanced personality. Such a personality helps an executive to influence other people in his favor.

The most important and relevant question related to personality is: How does it originate and develop?

The major determinants of personality of an individual can be studied under four broad heads – biological, family, cultural and situational.

#### **Biological factors:**

The foremost determinant of personality is the biological factor, in which are included heredity, the brain and the physical stature. Psychologists and geneticists argue strongly that heredity plays an important role in one's personality. The importance of heredity varies from one personality trait to another. For example, heredity plays a more important role in determining a person's temperament than determining the values and ideals.

Another factor which influences the personality is the brain of the individual.

Perhaps, physical stature of an individual is the most outstanding influence on the personality of an individual. For example, the fact that a person is short or tall, fat or skinny, good looking or not, will influence others and in turn will affect the person himself.

**Family factors:**

Family and social factors are also important in giving the shape to an individual's personality. It initially starts with contact with the mother and later with other members of the family. Later still, the contact with social group influences an individual's personality. The personality of an individual is also influenced by the home environment. There is evidence to indicate that the overall environment at home created by parents is critical to personality development.

Apart from the family background, social class also leaves an imprint on the personality of an individual.

**Situational Factors:**

Situational factors also influence the human personality. The effect of environment on personality is quite strong. Knowledge skill and language are acquired by a person and can be termed as learned modifications of behavior.

These learned modifications cannot be passed on to the children. The children in turn must acquire them through their personal effort, experience and the interaction with the environment.

Many a times the actions of the person are determined more by the situation, rather than his behavior. Therefore, the situation may potentially have a very big impact on the actions and expressions.

## UNIT – IV

**Perception and Motivation:** Definition, Types and Factors Influencing Perception – **Learning:** Definition, Types: Cognitive, Sensory, Motor and Verbal – Theories of Pavlov and Skinner, **Memory:** Types, Stages of Memory, Remembering and Forgetting#. **Motivation:** Nature, Definition, Types and Characteristics, Motives for Survival: Hierarchy of Motives.

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### Perception: Meaning

- Everyday different stimuli around us will be stimulating our sense organs. Many of these stimuli are received by our sense organs and are converted into sensations.
- These sensations are transmitted to the concerned parts of brain.
- In turn the brain will interpret these sensations. It is only after such interpretation we understand what the stimulus is.
- Hence in understanding the world around us, attention occurs first, followed by sensation and finally interpretation by brain.
- This process of ‘interpretation of stimulus is known as perception’. So perception involves two processes: sensation interpretation. But interpretation of any stimulus requires past experience also. **For example**, a child who has not seen an elephant earlier either in photo or directly cannot identify that animal, whereas another child who has seen earlier will identify the animal easily.
- Hence, perception may be defined as “a process of interpretation of a present stimulus on the basis of past experience”.
- Perception is not as simple as said here. It is an integrated approach. It is a synthetic process where different physiological and psychological processes are involved. For example, the accuracy of sense organs, clarity of sensations, mental set of an individual, etc. Otherwise our perception may go wrong.
- **Perception** (from the **Latin** perceptio) is the organization, identification, and interpretation of **sensory information** in order to represent and understand the presented information, or the environment.
- All perception involves signals that go through the **nervous system**, which in turn result from physical or chemical stimulation of the **sensory system**. For example, vision involves **light** striking the **retina** of the **eye**, smell is mediated by **odor molecules**, and **hearing** involves **pressure waves**.
- Perception is not only the passive receipt of these signals, but it's also shaped by the recipient's **learning, memory, expectation, and attention**.

### Perception can be split into two processes,

- (1) Processing the sensory input, which transforms these low-level information to higher-level information (e.g., extracts shapes for object recognition);
- (2) Processing which is connected with a person's concepts and expectations (or knowledge), restorative and selective mechanisms (such as **attention**) that influence perception.

Perception depends on complex functions of the nervous system, but subjectively seems mostly effortless because this processing happens outside conscious awareness.

### Perception: Definition

“Perception is the first event in the chain which leads from the stimulus to action”

- *E.G. Boring, H.S. Langfield & H.P. Weld*

### Nature of Perception:

- ✓ Perception is a process
- ✓ Perception is the information extractor

- ✓ Perception is preparation to response
- ✓ Perception involves sensation
- ✓ Perception provides organization
- ✓ Perception is highly individualized

### **Types of Perception:**

#### **1. Perceptual Organization:**

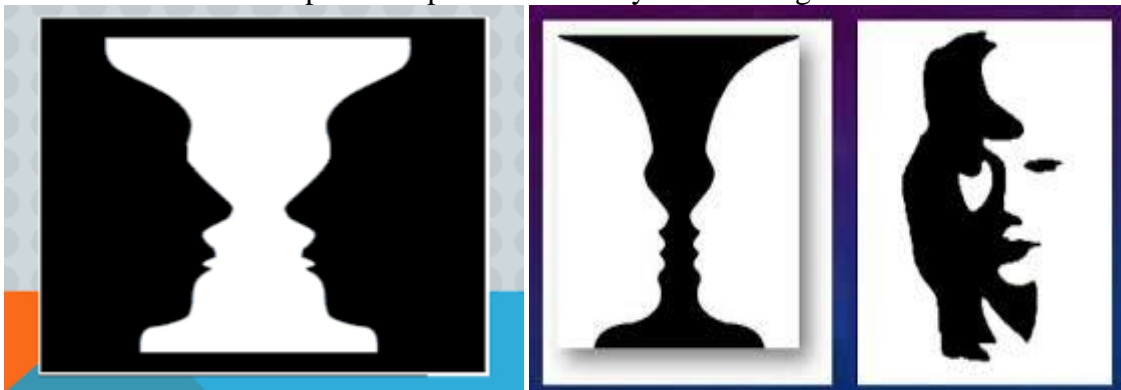
William James American psychologist has said if we understand the world as it appears to us, it will be a big booming- buzzing confusion. Hence, we do not see the things as they appear, but we see them as we want, i.e. more meaningfully.

In perceptual process we select a particular stimulus with our attention and interpret it. In the same way whenever it is necessary many discrete stimuli in our visual field are organised into a form and perceived more meaningfully than they appear.

This phenomenon was well explained by Gestalt psychologists. They believed that the brain creates a coherent perceptual experience by perceiving a stimulus as a whole than perceiving discrete entities. This is more meaningfully stated in the gestalt principle as ‘the whole is better than sum total of its parts’. This is explained under many sub-principles of perception.

#### ***Figure-ground Relationship:***

According to this principle any figure can be perceived more meaningfully in a background and that figure cannot be separated from that background. For example, letters written with a white chalk piece are perceived clearly in the background of a blackboard.



In the Figure 3.2, two faces can be seen in the background of a white colour. So also the white background can be perceived as a vessel in the background of two faces.

#### ***Closure perception***

Another important principle of perceptual organization is that of closure. According to this principle, while confronting an incomplete pattern one tends to complete or close the pattern or fills in sensory gaps and perceives it is a meaningful whole.

For example given below for you perception to closure,



### Grouping Perception

As said above, according to gestalt principle, the objects can be perceived meaningfully when they are grouped together. There are some principles which are followed by us in order to make our perception more meaningful.

**They are as follows:**

#### a. Proximity:

Proximity means nearness. The objects which are nearer to each other can be perceived meaningfully by grouping them. For example, the word 'Man', here though the letters are discrete, when grouped together gives some meaning. The stars in the Figure 3.3 which are nearer to each other are perceived together as groups/single figure.



Fig. 3.3: Proximity

#### b. Similarity:

Stimuli need not be nearer to each other for perception. If there is similarity in these objects, they are grouped together and perceived, even if they are away. For example, in this Figure 3.4 grouping will be done according to similarity, i.e. all circles, squares and triangles are grouped separately.

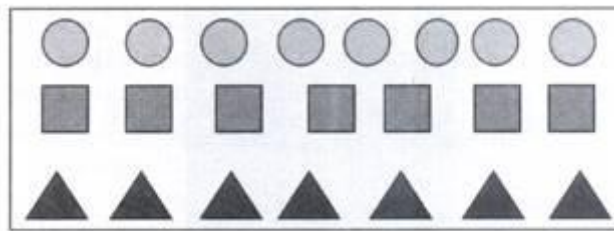
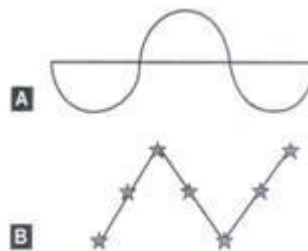


Fig. 3.4: Similarity

#### c. Continuity:

Any stimulus which extends in the same direction or shape will be perceived as a whole Figure 3.5A and B. For example, (A) in this figure though the curved line is broken, it is perceived as a continuous line, so also straight line is not seen with semicircles but as a continuous line (B) the dots are perceived as existing in the same line of direction continuously.



Figs 3.5A and B: Continuity

#### e. Symmetry:

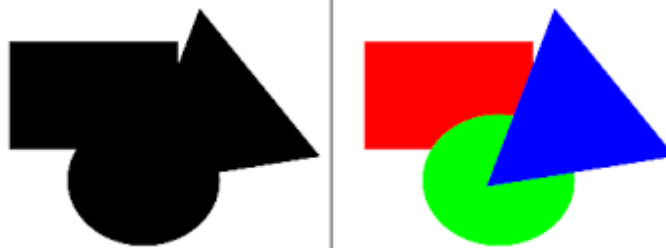
Objects which are having symmetrical shape are perceived as groups. For example, the brackets of different shapes shown in the Figure 3.7 perceived meaningfully, because they are grouped together and perceived as brackets.



Fig. 3.7: Symmetry

### Simplicity perception

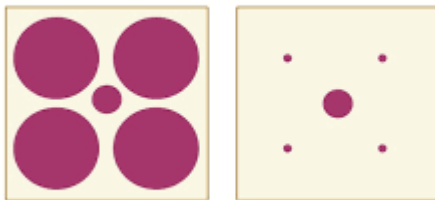
Gestalt is also known as the "Law of Simplicity" or the "Law of Pragnanz" (the entire figure or configuration), which states that every stimulus is perceived in its most simple form. Gestalt theorists followed the basic principle that the whole is greater than the sum of its parts.



### Context perception

#### Context Effect on Perception

In which picture does the center dot look larger?  
Perception of size depends on context.



Spelling test answers:  
double pear apple payor payee pair  
Did context affect which word you wrote?

### Contrast perception

- **Principle of Contrast:** We perceive a figure larger or brighter in relation to its background. In the given picture the the blue dot is brighter compare to the background. In the first picture the blue dot appears larger to background and vice versa in second picture.



### Adaptability perception

Consciously attended visual information and passively seen unconscious information are intermixed



### Contour perception

- **Principle of contour** We perceive a figure in its contour an it is the boundary between a figure and background. We can perceive different figures and sketches with their appearance, sizes and colours only when they have been marked separate. In the given we cannot separate the margin of colours as they lack contour.



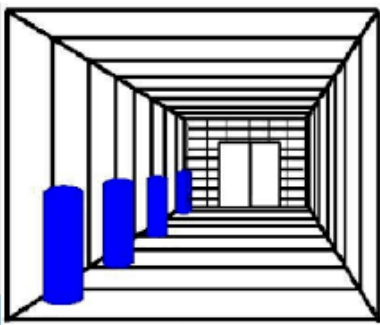
## 2. Perceptual Constancy:

- This refers to stability in perception. We have a tendency to perceive the objects as relatively stable and unchanging in shape and size, in spite of a change in the image that we receive.
- For example, when we see a person from 5' distance, the size of the image in our eyes differs from the image of the same person from 100' distance.
- Even then we perceive him as the same person. When we see people and houses from the top of a hill, the images will be very small like Lilliputs. But we do not get confused by this. We perceive them correctly according to their actual size.
- Perceptual constancy depends upon several factors like past experience, expectancy, habits, motivations, cognitive styles, learning, imagination, etc.

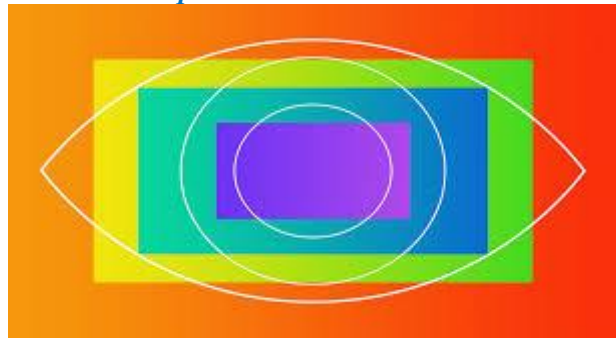
### Types of perceptual constancy:

There are different types of perceptual constancies. They are,

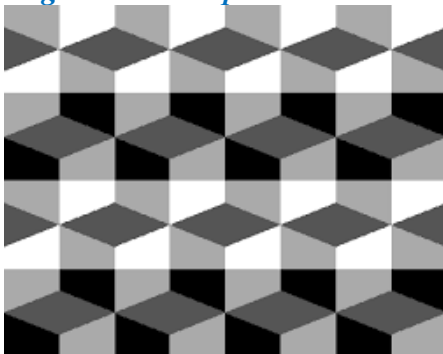
#### Size Perception



#### Colour Perception



#### Brightness Perception



#### Space Perception

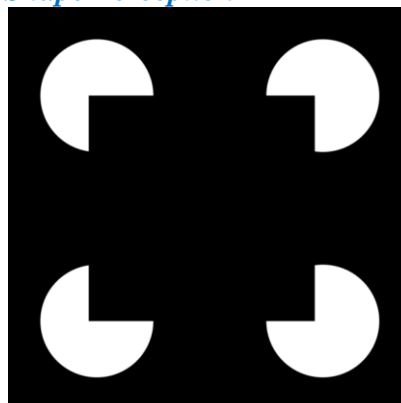


#### Distance and Direction Perception

Linear perspective



#### Shape Perception



### Depth Perception:

Ability of a person to perceive the distance is known as depth perception. This is very important ability to judge the distance between us and other people, objects and vehicles



moving particularly when we are on roads. This is also known as third dimension. The other two dimensions are left and right, and above and below.

### **Factors Affecting Perception:**

There are individual differences in perceptual abilities. Two people may perceive the same stimulus differently.

**The factors affecting the perceptions of people are:**

#### *a. Perceptual learning:*

Based on past experiences or any special training that we get, every one of us learns to emphasise some sensory inputs and to ignore others. For example, a person who has got training in some occupation like artistry or other skilled jobs can perform better than other untrained people. Experience is the best teacher for such perceptual skills.

For example, blind people identify the people by their voice or by sounds of their footsteps.

#### *b. Mental set:*

Set refers to preparedness or readiness to receive some sensory input. Such expectancy keeps the individual prepared with good attention and concentration. For example, when we are expecting the arrival of a train, we listen to its horn or sound even if there is a lot of noise disturbance.

#### *c. Motives and needs:*

Our motives and needs will definitely influence our perception. For example, a hungry person is motivated to recognise only the food items among other articles. His attention cannot be directed towards other things until his motive is satisfied.

#### *d. Cognitive styles:*

People are said to differ in the ways they characteristically process the information. Every individual will have his or her own way of understanding the situation. It is said that the people who are flexible will have good attention and they are less affected by interfering influences and to be less dominated by internal needs and motives than or people at the constricted end.

### **Extrasensory Perception (ESP):**

Is there any way of knowing about the world in which the information does not come through the senses? Some people believe that is possible. But there are some instances reported by people that they have experienced some perceptions without the aid of their sense organs. Psychologists have named the perception that occurs without sensory stimulation as 'Extrasensory perception' (ESP).

This is otherwise known as sixth sense in common man's view. Some of the common phenomena in ESP are clairvoyance, telepathy, meeting the souls, precognition, psychokinesis, reincarnation, etc.

Though research is going on, the researchers are unable to confirm them, because these experiences are not repeatable for verification. In many instances they remain as coincidences.

### **Errors in Perception:**

As seen above perception is process of analysing and understanding a stimulus as it is. But it may not be always possible to perceive the stimuli as they are. Knowingly or unknowingly, we mistake the stimulus and perceive it wrongly.

It may be due to defect in our sense organs or defective functioning of the brain. Many times the prejudices in the individual, time of perception, unfavourable background, lack of clarity of stimulus, confusion, conflict in mind and such other factors are responsible for errors in perception. There are two kinds of errors:

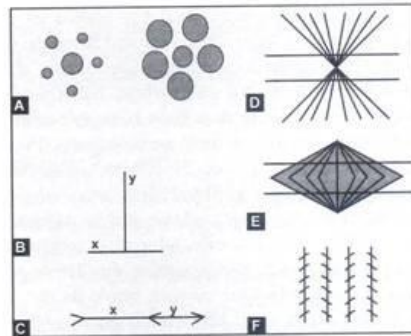
#### *a. Illusion:*

Illusion is a false perception. Here the person will mistake a stimulus and perceive it wrongly. For example, in the dark, a rope is mistaken as a snake or vice versa. The voice of



an unknown person is mistaken as a friend's voice. A person standing at a distance who is not known may be perceived as a known person.

Most of our illusions are visual and auditory. But illusions pertaining to other senses are also possible. See Figure 3.10 for some of the examples of visual illusions.



Figs 3.10A to F: (A) both the circles in the middle are same in size, but appear to vary. (B) Both horizontal and vertical lines are equal in length. (C) Both feather headed and arrow headed lines are equal in length. (D & E) The horizontal lines are straight. (F) The space between vertical lines, is equal

### ***b. Hallucination:***

Sometimes we come across instances where the individual perceives some stimulus, even when it is not present. This phenomenon is known as hallucination. The person may see an object, person, etc. or he may listen to some voice though there are no objects and sounds in reality.

Hallucinations pertain to all the sensations appear in people, but visual and auditory hallucinations are more common. Usually persons with unsound mind, emotionally disturbed, alcoholics and those who are in confused states may experience hallucinations. However, among abnormal people and intoxicated persons hallucinations are very common.

In addition to these errors, there are some abnormalities in our sense perceptions called anaesthesia (no sensation), hyperesthesia (excessive sensitivity) and paraesthesia (distorted or wrongly localised sensation). In these cases the tactile (skin) sensation is wrongly perceived.

### **Learning: Meaning and Definition**

- Learning is a key process in human behaviour. All living is learning. If we compare the simple, crude ways in which a child feels and behaves, with the complex modes of adult behaviour, his skills, habits, thought, sentiments and the like- we will know what difference learning has made to the individual.
- The individual is constantly interacting with and influenced by the environment. This experience makes him to change or modify his behaviour in order to deal effectively with it. Therefore, learning is a change in behaviour, influenced by previous behaviour. As stated above the skills, knowledge, habits, attitudes, interests and other personality characteristics are all the result of learning.

**Learning is defined** as “any relatively permanent change in behaviour that occurs as a result of practice and experience”. This definition has three important elements.

- a. Learning is a change in behaviour—better or worse.
- b. It is a change that takes place through practice or experience, but changes due to growth or maturation are not learning.
- c. This change in behaviour must be relatively permanent, and it must last a fairly long time.

All learning involves activities. These activities involve either physical or mental activities. They may be simple mental activities or complex, involving various muscles, bones, etc. So also the mental activities may be very simple involving one or two activities of mind or complex which involve higher mental activities.

What activities are learned by the individual refer to types of learning. For example, habits, skills, facts, etc. There are different types of learning. Some of the important and common learning activities are explained here.

### **Nature of Learning:**

1. **Learning is adaptation or adjustment:** All persons continuously interact with their environment. We often make adjustment and adapt to our social environment. Through a process of continuous learning, the individual prepares himself for necessary adjustment or adaptation. That is why learning is also described as a process of progressive adjustment to ever changing conditions, which one encounters.
2. **Learning is improvement:** Learning is often considered as a process of improvement with practice or training. We learn many things, which help us to improve our performance.
3. **Learning is organizing experience:** Learning is not mere addition of knowledge. It is the reorganization of experience.
4. **Learning brings behavioural changes:** Whatever the direction of the changes may be, learning brings progressive changes in the behaviour of an individual. That is why he is able to adjust to changing situations.
5. **Learning is active:** Learning does not take place without a purpose and self-activity. In any teaching learning process, the activity of the learner counts more than the activity of a teacher.
6. **Learning is goal directed:** When the aim and purpose of learning is clear, an individual learns immediately. It is the purpose or goal, which determines what, the learner sees in the learning situations and how he acts. If there is no purpose or goal, learning can hardly be seen.
7. **Learning is universal and continuous:** All living creatures learn. Every moment the individual engages himself to learn more and more. Right from the birth of a child till the death, learning continues.

### **Characteristics of learning**

Yoakum & Simpson have stated the following general characteristics of learning: Learning is growth, adjustment, organisation of experience, purposeful, both individual and social product of the environment.

**According to W.R McLaw learning has the following characteristics.**

- i. Learning is a continuous modification of behaviour which continues throughout life
- ii. Learning is pervasive. It reaches into all aspects of human life.
- iii. Learning involves the whole person, socially, emotionally & intellectually.
- iv. Learning is often a change in the organization of behaviour.
- v. Learning is development. Time is one of its dimensions.
- vi. Learning is responsive to incentives. In most cases positive incentives such as rewards are most effective than negative incentives such as punishments.
- vii. Learning is always concerned with goals. These goals can be expressed in terms of observable behaviour.
- viii. Interest & learning are positively related. The individual learns best those things, which he is interested in learning. Most boys find learning to play football easier than learning to add fractions.
- ix. Learning depends on maturation and motivation.

### **Types of Learning:**

1. Cognitive
2. Sensory
3. Motor

#### 4. Verbal

### **Types of Learning:**

#### *1. Motor learning:*

Most of our activities in our day-to-days life refer to motor activities. The individual has to learn them in order to maintain his regular life, for example walking, running, skating, driving, climbing, etc. All these activities involve the muscular coordination.

#### *2. Verbal learning:*

This type of learning involves the language we speak, the communication devices we use. Signs, pictures, symbols, words, figures, sounds, etc, are the tools used in such activities. We use words for communication.

#### *3. Concept learning or Cognitive learning*

It is the form of learning which requires higher order mental processes like thinking, reasoning, intelligence, etc. we learn different concepts from childhood. For example, when we see a dog and attach the term 'dog', we learn that the word dog refers to a particular animal. Concept learning involves two processes, viz. abstraction and generalisation. This learning is very useful in recognising, identifying things.

#### *4. Sensory Learning*

The Sensory Learning Style, also known as the VAK, uses the three main sensory receivers: visual, auditory, and kinesthetic. Students often prefer one style of learning, which defines the best way for that student to learn new information. Sensory Learning Styles indicate that 35% of people are mainly visual learners, 25% are auditory learners, and 40% are kinesthetic learners.

**Visual Learners** process information through what they see. They understand and remember best what they see. In the classroom, to appeal to this learner type, incorporate arts and crafts, visualizations, spatial activities, demonstrations, diagrams, mind mapping, videos, flashcards, and pictures.

**Auditory Learners** processes information through what they hear. They like to listen and talk things through. In the classroom, to appeal to this learner type, incorporate lectures, group discussions, oral reports, guest speakers, flashcards, and mnemonics.

**Kinesthetic Learners** process information from the physical experience of doing and touching. They prefer to be involved physically and manipulate things for themselves. In the classroom, get students up and out of their chairs, add in role-playing, hands-on activities, and focus on refining motor skills, physical movement or motions.

Sensory Learning Styles may best be summed up by the ancient sage Confucius who said "I hear and I forget, I see and I remember, I do and I understand." As educators, we need to present information using all three styles to engage all types of learners within our classrooms and student salons.

#### *5. Discrimination learning:*

Learning to differentiate between stimuli and showing an appropriate response to these stimuli is called discrimination learning. Example, sound horns of different vehicles like bus, car, ambulance, etc.

#### *6. Attitude learning:*

Attitude is a predisposition which determines and directs our behaviour. We develop different attitudes from our childhood about the people, objects and everything we know. Our behaviour may be positive or negative depending upon our attitudes. Example: attitudes of nurse towards her profession, patients, etc.

# Theories of Pavlov

## Pavlov Classical Conditioning

### Before conditioning:

The unconditioned stimulus automatically causes an unconditioned response.

US (Food) → UR (Drool)

The neutral stimulus causes no response.

NS (Bell) → Nothing

### During conditioning:

The neutral stimulus is repeatedly paired with the unconditioned stimulus.

NS (Bell) + US (Food) → UR (Drool)

### After conditioning:

The neutral stimulus becomes a conditioned stimulus, which evokes a conditioned response.

CS (Bell) → CR (Drool)

#### 1. Before Conditioning



Neutral Stimulus:  
Bell rings

No notable response.

#### 2. Before Conditioning



Unconditioned Stimulus

Salivation (Unconditioned Response)

#### 3. During Conditioning



Salivation (Unconditioned Response)

#### 4. After Conditioning

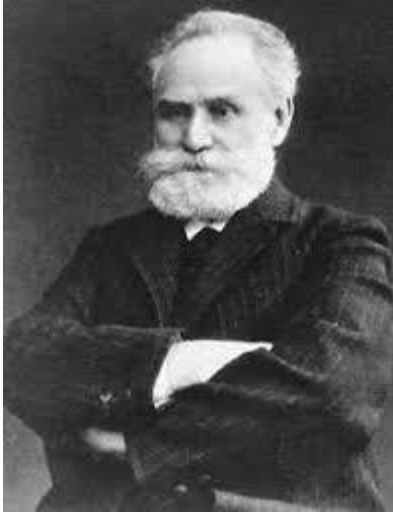


Conditioned Stimulus

Salivation (Conditioned Response)

## Pavlov Classical conditioning theory

Classical conditioning (also known as Pavlovian conditioning) is learning through association and was discovered by [Pavlov](#), a Russian physiologist. In simple terms two stimuli are linked together to produce a new learned response in a person or animal.



John Watson proposed that the process of classical conditioning (based on [Pavlov's observations](#)) was able to explain all aspects of human psychology.

Everything from speech to emotional responses was simply patterns of stimulus and response. Watson denied completely the existence of the mind or consciousness. Watson believed that all individual differences in behavior were due to different experiences of learning. He famously said:

"Give me a dozen healthy infants, well-formed, and my own specified world to bring them up in and I'll guarantee to take any one at random and train him to become any type of specialist I might select - doctor, lawyer, artist, merchant-

chief and, yes, even beggar-man and thief, regardless of his talents, penchants, tendencies, abilities, vocations and the race of his ancestors" (Watson, 1924, p. 104).

### Classical Conditioning Examples

There are three stages of classical conditioning. At each stage the stimuli and responses are given special scientific terms:

#### *Stage 1: Before Conditioning:*

In this stage, the **unconditioned stimulus (UCS)** produces an **unconditioned response (UCR)** in an organism.

In basic terms, this means that a stimulus in the environment has produced a behavior / response which is unlearned (i.e., unconditioned) and therefore is a natural response which has not been taught. In this respect, no new behavior has been learned yet.

For example, a stomach virus (UCS) would produce a response of nausea (UCR). In another example, a perfume (UCS) could create a response of happiness or desire (UCR).

This stage also involves another stimulus which has no effect on a person and is called the **neutral stimulus (NS)**. The NS could be a person, object, place, etc.

The neutral stimulus in classical conditioning does not produce a response until it is paired with the unconditioned stimulus.

#### *Stage 2: During Conditioning:*

During this stage a stimulus which produces no response (i.e., neutral) is associated with the unconditioned stimulus at which point it now becomes known as the **conditioned stimulus (CS)**.

For example, a stomach virus (UCS) might be **associated** with eating a certain food such as chocolate (CS). Also, perfume (UCS) might be **associated** with a specific person (CS).

For classical conditioning to be effective, the conditioned stimulus should occur before the unconditioned stimulus, rather than after it, or during the same time. Thus, the conditioned stimulus acts as a type of signal or cue for the unconditioned stimulus.

Often during this stage, the UCS must be associated with the CS on a number of occasions, or trials, for learning to take place. However, one trial learning can happen on certain occasions when it is not necessary for an association to be strengthened over time (such as being sick after food poisoning or drinking too much alcohol).

#### *Stage 3: After Conditioning:*

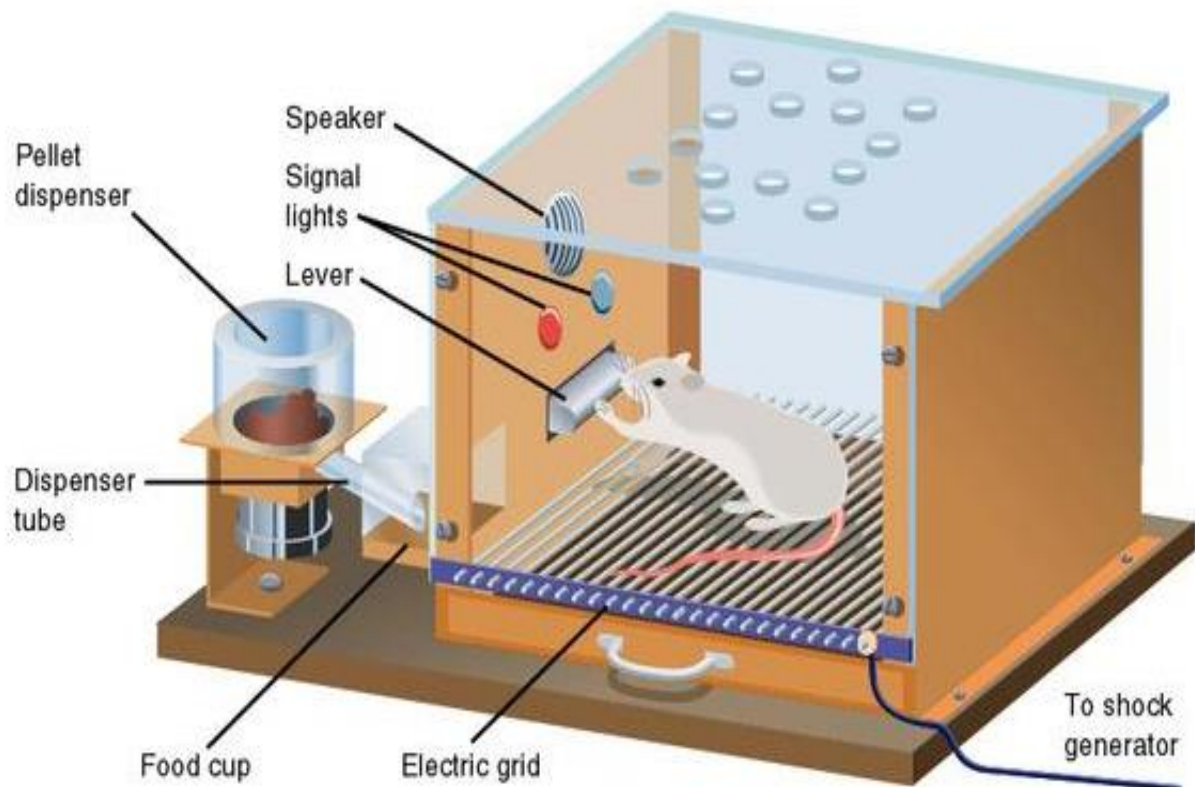


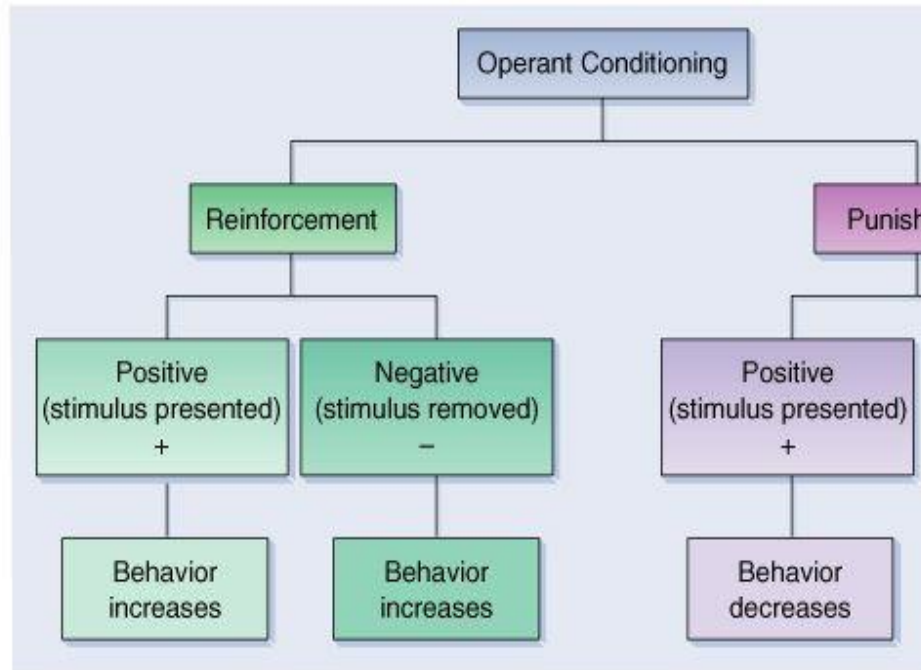
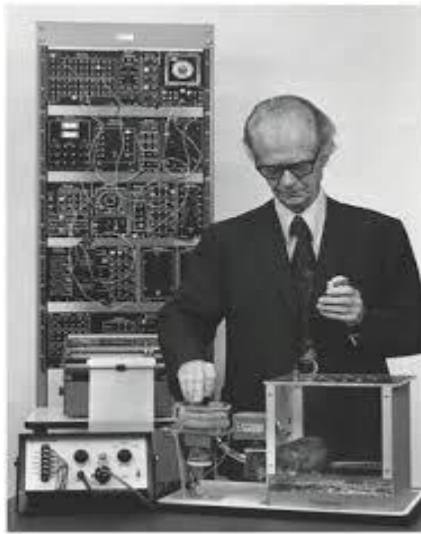
Now the conditioned stimulus (CS) has been associated with the unconditioned stimulus (UCS) to create a new conditioned response (CR).

For example, a person (CS) who has been associated with nice perfume (UCS) is now found attractive (CR). Also, chocolate (CS) which was eaten before a person was sick with a virus (UCS) now produces a response of nausea (CR).

## Theories of Skinner

### Skinner - Operant Conditioning





Operant conditioning is a method of learning that occurs through rewards and punishments for behavior. Through operant conditioning, an individual makes an association between a particular behavior and a consequence (Skinner, 1938).

By the 1920s, John B. Watson had left academic psychology, and other [behaviorists](#) were becoming influential, proposing new forms of learning other than [classical conditioning](#). Perhaps the most important of these was Burrhus Frederic Skinner. Although, for obvious reasons, he is more commonly known as B.F. Skinner.

Skinner's views were slightly less extreme than those of [Watson](#) (1913). Skinner believed that we do have such a thing as a mind, but that it is simply more productive to study observable behavior rather than internal mental events.

The work of Skinner was rooted in a view that classical conditioning was far too simplistic to be a complete explanation of complex human behavior. He believed that the best way to understand behavior is to look at the causes of an action and its consequences. He called this approach operant conditioning.

### **BF Skinner: Operant Conditioning**

Skinner is regarded as the father of Operant Conditioning, but his work was based on [Thorndike's \(1898\) law of effect](#). According to this principle, behavior that is followed by pleasant consequences is likely to be repeated, and behavior followed by unpleasant consequences is less likely to be repeated.

Skinner introduced a new term into the Law of Effect - Reinforcement. Behavior which is reinforced tends to be repeated (i.e., strengthened); behavior which is not reinforced tends to die out-or be extinguished (i.e., weakened).

Skinner (1948) studied operant conditioning by conducting experiments using animals which he placed in a '*Skinner Box*' which was similar to Thorndike's puzzle box.

Skinner identified three types of responses, or operant, that can follow behavior.

- **Neutral operants:** responses from the environment that neither increase nor decrease the probability of a behavior being repeated.
- **Reinforcers:** Responses from the environment that increase the probability of a behavior being repeated. Reinforcers can be either positive or negative.

- **Punishers:** Responses from the environment that decrease the likelihood of a behavior being repeated. Punishment weakens behavior.

We can all think of examples of how our own behavior has been affected by reinforcers and punishers. As a child you probably tried out a number of behaviors and learned from their consequences.

For example, if when you were younger you tried smoking at school, and the chief consequence was that you got in with the crowd you always wanted to hang out with, you would have been positively reinforced (i.e., rewarded) and would be likely to repeat the behavior.

If, however, the main consequence was that you were caught, caned, suspended from school and your parents became involved you would most certainly have been punished, and you would consequently be much less likely to smoke now.

### **Memory: Definition and Nature**

“Memory is the process of maintaining information over time.”

- (Matlin, 2005)

“Memory is the means by which we draw on our past experiences in order to use this information in the present”

- (Sternberg, 1999)

- Memory is the term given to the [structures](#) and [processes](#) involved in the storage and subsequent retrieval of information.
- Memory is essential to all our lives. Without a memory of the past, we cannot operate in the present or think about the future. We would not be able to remember what we did yesterday, what we have done today or what we plan to do tomorrow. Without memory, we could not learn anything.
- Memory is involved in processing vast amounts of information. This information takes many different forms, e.g. images, sounds or meaning.

### **Characteristics of Memory**

#### **Main Characteristics of the Short-term Memory**

**Short-term memory has 3 main characteristics:**

1. **Brief duration** that can only last up to 20 seconds.
2. Its **capacity** is limited to  $7 \pm 2$  chunks of independent information (Miller’s Law) and is vulnerable to interference and interruption.
3. Its **weakening** (due to many reasons, such as medication, sleep deprivation, a stroke, or a head injury, for example) is the first step to memory loss.

**Short-term memory is responsible for 3 operations:**

1. **Iconic**, which is the ability to store images.
2. **Acoustic**, which is the ability to store sounds.
3. **Working Memory**, which is the ability to store information until it’s put to use. For some scientists, working memory is synonymous to short-term memory, but truth is that working memory is not only used for information storage, but also for the manipulation of information. What’s important is that it’s flexible, dynamic and makes all the difference in successful learning.

#### **Main Characteristics of the Long-term Memory**

Information in **Long-term memory** is stored as a network of schemas, which then converts into knowledge structures. This is exactly why we recall relevant knowledge when we stumble upon similar information. The challenge for an **instructional designer** is to activate those existing structures before presenting new information and that can be achieved in a variety of ways, like with graphics, movies, curiosity-provoking questions, etc.



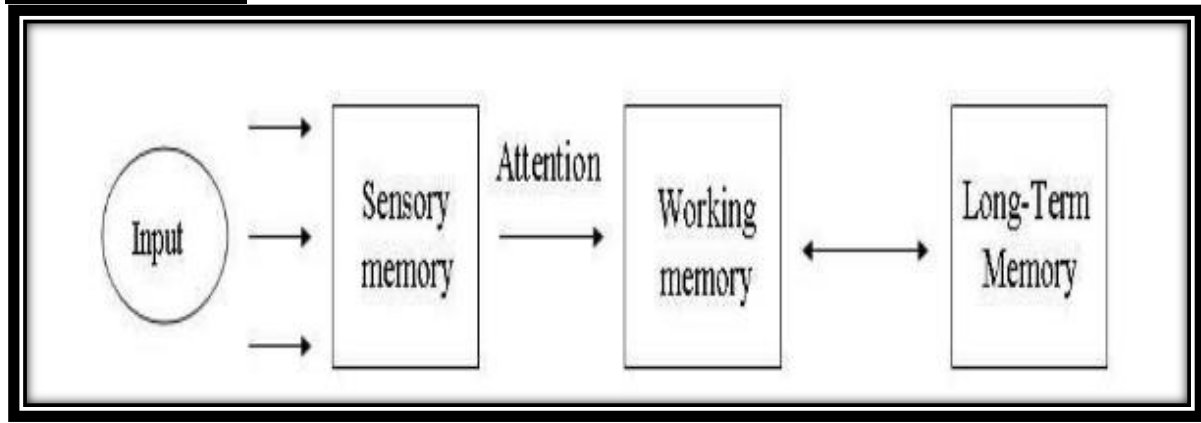
## 2 Types of Long-term memory

1. **Explicit:** Conscious memories that include our perception of the world, as well as our own personal experiences.
2. **Implicit:** Unconscious memories that we use without realizing it.

**Long-term memory** is responsible for **3 operations**

1. **Encoding**, which is the ability to convert information into a knowledge structure.
2. **Storage**, which is the ability to accumulate chunks of information.
3. **Retrieval**, which is the ability to recall things we already know.

## Types of Memory



### Sensory Memory

Sensory memory allows individuals to retain impressions of sensory information after the original stimulus has ceased. One of the most common examples of sensory memory is fast-moving lights in darkness: if you've ever lit a sparkler on the Fourth of July or watched traffic rush by at night, the light appears to leave a trail. This is because of "iconic memory," the visual sensory store. Two other types of sensory memory have been extensively studied: echoic memory (the auditory sensory store) and haptic memory (the tactile sensory store). Sensory memory is not involved in higher cognitive functions like short- and long-term memory; it is not consciously controlled. The role of sensory memory is to provide a detailed representation of our entire sensory experience for which relevant pieces of information are extracted by short-term memory and processed by working memory.

### Short-Term Memory

Short-term memory is also known as *working memory*. It holds only a few items (research shows a range of 7 +/- 2 items) and only lasts for about 20 seconds. However, items can be moved from short-term memory to long-term memory via processes like *rehearsal*. An example of rehearsal is when someone gives you a phone number verbally and you say it to yourself repeatedly until you can write it down. If someone interrupts your rehearsal by asking a question, you can easily forget the number, since it is only being held in your short-term memory.

### Long-Term Memory

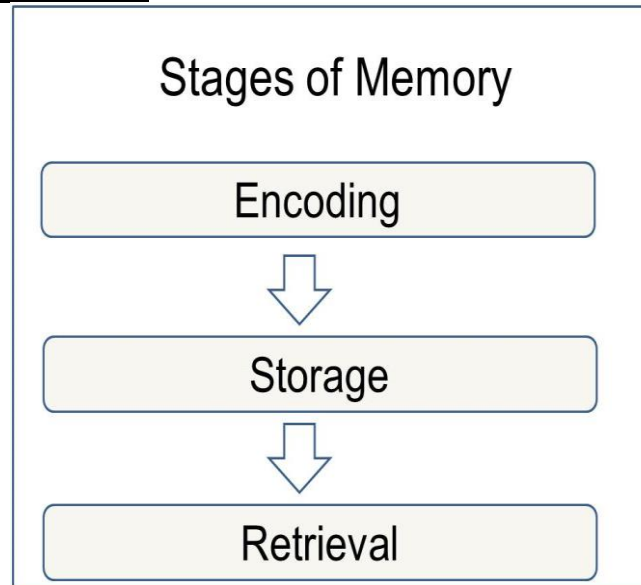
Long-term memories are all the memories we hold for periods of time longer than a few seconds; long-term memory encompasses everything from what we learned in first grade to our old addresses to what we wore to work yesterday. Long-term memory has an incredibly vast storage capacity, and some memories can last from the time they are created until we die.

There are many types of long-term memory. *Explicit* or *declarative* memory requires conscious recall; it consists of information that is consciously stored or retrieved. Explicit memory can be further subdivided into *semantic* memory (facts taken out of context, such as

“Paris is the capital of France”) and *episodic* memory (personal experiences, such as “When I was in Paris, I saw the *Mona Lisa*“).

In contrast to explicit/declarative memory, there is also a system for procedural/implicit memory. These memories are not based on consciously storing and retrieving information, but on implicit learning. Often this type of memory is employed in learning new motor skills. An example of implicit learning is learning to ride a bike: you do not need to consciously remember how to ride a bike, you simply do. This is because of implicit memory.

### Process and Stages of Memory



For psychologists the term memory covers three important aspects of information processing:

#### **1. Memory Encoding**

When information comes into our memory system (from sensory input), it needs to be changed into a form that the system can cope with, so that it can be stored.

Think of this as similar to changing your money into a different currency when you travel from one country to another. For example, a word which is seen (in a book) may be stored if it is changed (encoded) into a sound or a meaning (i.e. semantic processing).

There are three main ways in which information can be encoded (changed):

- 1. Visual (picture)**
- 2. Acoustic (sound)**
- 3. Semantic (meaning)**

For example, how do you remember a telephone number you have looked up in the phone book? If you can see it then you are using visual coding, but if you are repeating it to yourself you are using acoustic coding (by sound).

Evidence suggests that this is the principle coding system in short-term memory (STM) is acoustic coding. When a person is presented with a list of numbers and letters, they will try to hold them in STM by rehearsing them (verbally).

Rehearsal is a verbal process regardless of whether the list of items is presented acoustically (someone reads them out), or visually (on a sheet of paper).

The principle encoding system in long-term memory (LTM) appears to be semantic coding (by meaning). However, information in LTM can also be coded both visually and acoustically.

#### **2. Memory Storage**

This concerns the nature of memory stores, i.e., where the information is stored, how long the memory lasts for (duration), how much can be stored at any time (capacity) and what kind of information is held.

The way we store information affects the way we retrieve it. There has been a significant amount of research regarding the differences between [Short Term Memory](#) (STM) and [Long Term Memory](#) (LTM).

Most adults can store between 5 and 9 items in their short-term memory. Miller (1956) put this idea forward and he called it the magic number 7. He thought that short-term memory capacity was 7 (plus or minus 2) items because it only had a certain number of “slots” in which items could be stored.

However, Miller didn’t specify the amount of information that can be held in each slot. Indeed, if we can “chunk” information together we can store a lot more information in our short-term memory. In contrast, the capacity of LTM is thought to be unlimited.

Information can only be stored for a brief duration in STM (0-30 seconds), but LTM can last a lifetime.

### 3. Memory Retrieval

This refers to getting information out storage. If we can’t remember something, it may be because we are unable to retrieve it. When we are asked to retrieve something from memory, the differences between STM and LTM become very clear.

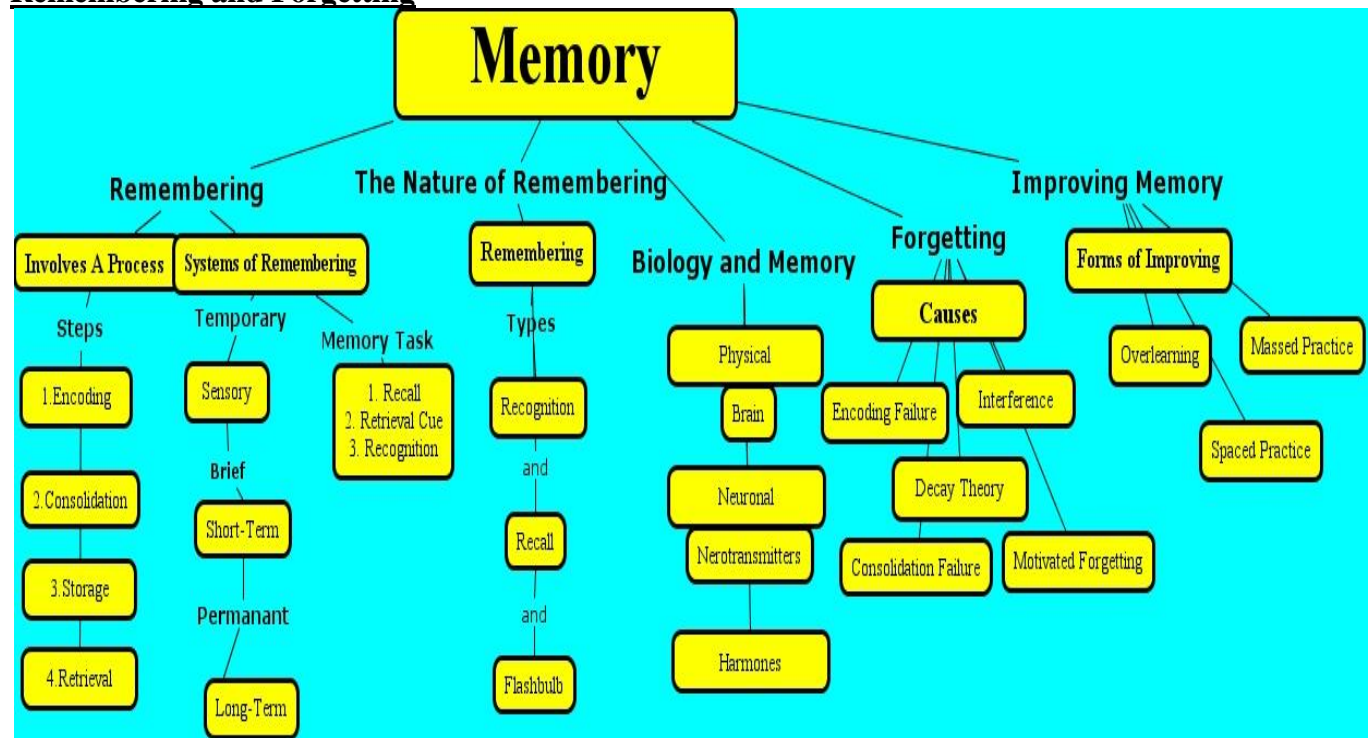
STM is stored and retrieved sequentially. For example, if a group of participants are given a list of words to remember, and then asked to recall the fourth word on the list, participants go through the list in the order they heard it in order to retrieve the information.

LTM is stored and retrieved by association. This is why you can remember what you went upstairs for if you go back to the room where you first thought about it.

Organizing information can help aid retrieval. You can organize information in sequences (such as alphabetically, by size or by time). Imagine a patient being discharged from hospital whose treatment involved taking various pills at various times, changing their dressing and doing exercises.

If the doctor gives these instructions in the order which they must be carried out throughout the day (i.e., in the sequence of time), this will help the patient remember them.

### Remembering and Forgetting



## **Why We Remember What We Remember**

**Short Term Memory.** There are typically six reasons why information is stored in our short term memory.

**Primacy effect** – information that occurs first is typically remembered better than information occurring later. When given a list of words or numbers, the first word or number is usually remembered due to rehearsing this more than other information.

**Recency effect** – often the last bit of information is remembered better because not as much time has past; time which results in forgetting.

**Distinctiveness** – if something stands out from information around it, it is often remembered better. Any distinctive information is easier to remember than that which is similar, usual, or mundane.

**Frequency effect** – rehearsal, as stated in the first example, results in better memory. Remember trying to memorize a formula for your math class. The more you went over it, the better you knew it.

**Associations** – when we associate or attach information to other information it becomes easier to remember. Many of us use this strategy in our professions and everyday life in the form of acronyms.

**Reconstruction** – sometimes we actually fill in the blanks in our memory. In other words, when trying to get a complete picture in our minds, we will make up the missing parts, often without any realization that this is occurring.

**Long Term Memory.** Information that passes from our short term to our long term memory is typically that which has some significance attached to it. Imagine how difficult it would be to forget the day you graduated, or your first kiss. Now think about how easy it is to forget information that has no significance; the color of the car you parked next to at the store or what shirt you wore last Thursday. When we process information, we attach significance to it and information deemed important is transferred to our long term memory.

There are other reasons information is transferred. As we all know, sometimes our brains seem full of insignificant facts. Repetition plays a role in this, as we tend to remember things more the more they are rehearsed. Other times, information is transferred because it is somehow attached to something significant. You may remember that it was a warm day when you bought your first car. The temperature really plays no important role, but is attached to the memory of buying your first car.

### **Forgetting**

You can't talk about remembering without mentioning its counterpart. It seems that as much as we do remember, we forget even more. Forgetting isn't really all that bad, and is in actuality, a pretty natural phenomenon. Imagine if you remembered every minute detail of every minute or every hour, of every day during your entire life, no matter how good, bad, or insignificant. Now imagine trying to sift through it all for the important stuff like where you left your keys.

There are many reasons we forget things and often these reasons overlap. Like in the example above, some information never makes it to LTM. Other times, the information gets there, but is lost before it can attach itself to our LTM. Other reasons include decay, which means that information that is not used for an extended period of time decays or fades away over time. It is possible that we are physiologically preprogrammed to eventually erase data that no longer appears pertinent to us.

**Failing to remember** something doesn't mean the information is gone forever though. Sometimes the information is there but for various reasons we can't access it. This could be caused by distractions going on around us or possibly due to an error of association (e.g., believing something about the data which is not correct causing you to attempt to retrieve information that is not there). There is also the phenomenon of repression, which

means that we purposefully (albeit subconsciously) push a memory out of reach because we do not want to remember the associated feelings. This is often cited in cases where adults ‘forget’ incidences of sexual abuse when they were children. And finally, amnesia, which can be psychological or physiological in origin.

### **Motivation: Meaning**

Motivation describes the wants or needs that direct behavior toward a goal. It is an urge to behave or act in a way that will satisfy certain conditions, such as wishes, desires, or goals. Older theories of motivation stated that rational thought and reason were the guiding factors in human motivation; however, psychologists now believe that motivation may be rooted in basic impulses to optimize well-being, minimize physical pain, and maximize pleasure.

Motivation is defined as the process that initiates, guides, and maintains goal-oriented behaviors. Motivation is what causes you to act, whether it is getting a glass of water to reduce thirst or reading a book to gain knowledge.

Motivation involves the biological, emotional, social, and cognitive forces that activate behavior. In everyday usage, the term motivation is frequently used to describe *why* a person does something. For example, you might say that a student is so motivated to get into a [clinical psychology](#) program that she spends every night studying.

‘Motivation is a predisposition to act in a specific goal-directed way’.

- *Zedeek and M. Blood*

"The term **motivation** refers to factors that activate, direct, and sustain goal-directed behavior... Motives are the 'whys' of behavior—the needs or wants that drive behavior and explain what we do. We don't actually observe a motive; rather, we infer that one exists based on the behavior we observe."

- *(Nevid, 2013)*

### **Drives and Motives**

Motivations are commonly separated into drives and motives. *Drives* are primarily biological, like thirst, hunger, sleepiness, and the need to reproduce—all of which lead us to seek out and take part in certain activities. Drives are believed to originate within a person and may not require external stimuli to encourage behavior. *Motives*, on the other hand, are primarily driven by social and psychological mechanisms, such as work, family, and relationships. They include factors like praise and approval.

Both drives and motives can be manipulated by stimulation and deprivation. Motivation can be *stimulated* by uncomfortable or aversive conditions or events (shocks, loud noise, or excessive heat or cold can motivate us to seek better conditions) or by attractions to positive or pleasurable conditions or events (such as food or sex). We also become motivated when we're *deprived* of something that we want or need, like adequate nutrition or social contact.

### **Nature of Motivation**

#### **Nature of Motivation**

- A Psychological concept.
- It is total and not piece-meal.
- It may be financial or non-financial.
- It may be positive or negative.
- It is a continuous process.
- It is need based.
- It differs from one person to another.
- It is a complex process.



## Components of Motivation

Anyone who has ever had a goal (like wanting to lose 20 pounds or run a marathon) probably immediately realizes that simply having the desire to accomplish something is not enough. Achieving such a goal requires the ability to **persist through obstacles** and endurance to **keep going in spite of difficulties**.

There are three major components to motivation: activation, persistence, and intensity.

1. **Activation** involves the decision to initiate a behavior, such as enrolling in a psychology class.
2. **Persistence** is the continued effort toward a goal even though obstacles may exist. An example of persistence would be taking more [psychology courses](#) in order to earn a degree although it requires a significant investment of time, energy, and resources.
3. **Intensity** can be seen in the concentration and vigor that goes into pursuing a goal. For example, one student might coast by without much effort, while another student will study regularly, participate in discussions, and take advantage of research opportunities outside of class. The first student lacks intensity, while the second pursues his educational goals with greater intensity.

## Characteristics of Motivation

### NATURE AND CHARACTERISTICS OF MOTIVATION

- Component of directing
- Psychological aspect
- Goals directed
- Continuous process
- Integrated
- Positive or negative
- Complex and Dynamic process
- Financial or non-financial

### CHARACTERISTICS OR FEATURES OF MOTIVATION

1. Personal and Internal Feeling
2. Art of Stimulating Someone Or Oneself
3. Produces Goal - Directed Behaviour
4. Motivation can be either Positive or Negative
5. The Central Problem of Motivation is HOW
6. Motivation is System Oriented

### 1. Motivation is Personal and Psychological Concept

Motivation is a personal as well as a psychological concept; hence, the managers have to study the mental and psychological aspects of the individual. Motivating factors are always unconscious but they are to be aroused by managerial action.

### 2. Motivation is a Process

Motivation is a process of inspiring, energizing, reducing and activating the employees to a higher level of performance. This process starts with unsatisfied needs, moves through tension, drives and goal achievement, finally, it ends with the reduction of tension aroused by unsatisfied needs.

### 3. Motivation is a Continuous Process

Motivation is a continuous on-going process rather than one shot affair. Because an individual has unlimited wants and needs. Motivation is an unending process. Wants are innumerable and cannot be satisfied at one time. As satisfaction of needs is an unending process, so the process of motivation is also unending. As soon as the existing need is fulfilled, another will appear. Hence, motivation should go continuously.

### 4. Motivation is a Complex Subject

Motivation is a complex subject in the sense that the individual's needs and wants may be unpredictable. The level of need of a person depends on his/her psychological and physiological aspects.

#### 5. Motivation is Goal Oriented

Motivation should be directed towards the achievement of stated goals and objectives. Motivation causes goal-directed behavior, feeling of need by the person causes him to behave in such a way that he tries to satisfy himself. From the viewpoint of the organization, the goal is to achieve high productivity through better job performance.

#### 6. Intrinsic and Extrinsic Motivation

As an individual can be motivated either by intrinsic factors or extrinsic factors. The intrinsic factors include recognition, social status, self-esteem and self-actualization needs which are related to inner aspects of an individual. On the other hand, the extrinsic factors are physiological and social needs such as food, shelter, health, education, salary, and benefits etc.

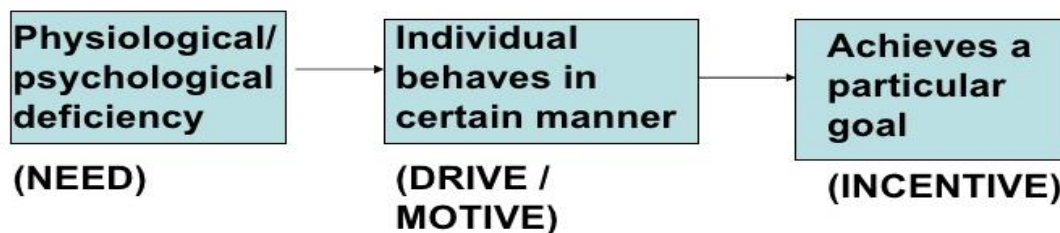
#### 7. Positive and Negative Motivation

By the term motivation, we mean positive motivation which is related to the process of stimulating employees for good performance. But it is not necessary that all the time motivation must be positive, rather sometimes it can be negative also. The negative motivation is also known as punishment which is not desired by the employees.

#### 8. Motivation is Behavior-oriented

As motivation is person specific, it is related to the personal behavior of an employee. Behavior is a series of activities undertaken by an individual in the organizational workplace. The behavior is directed towards the attainment of goals and objectives.

### Process of Motivation



### Types of Motivation

1. **Intrinsic Motivation** (arising from internal factors)

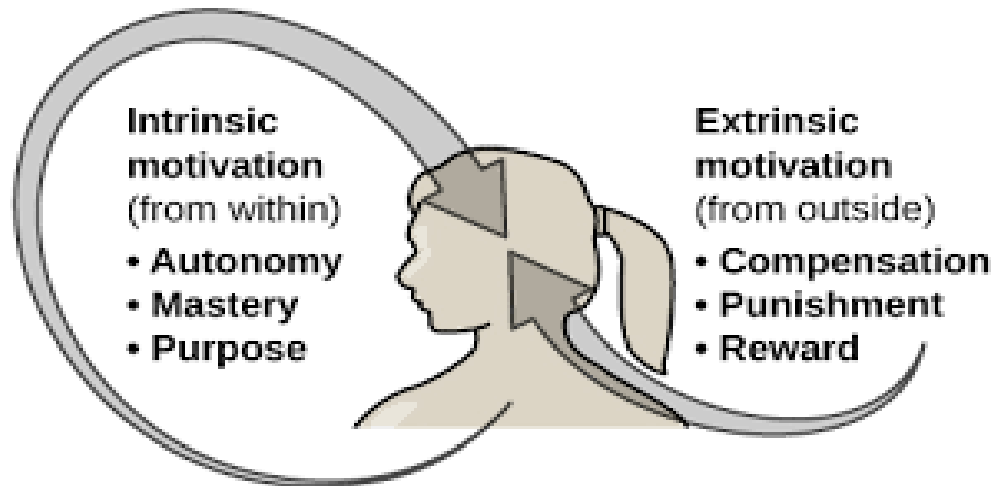
2. **Extrinsic Motivation** (arising from external factors)

Extrinsic motivations are those that arise from outside of the individual and often involve rewards such as trophies, money, social recognition, or praise. Intrinsic motivations are those that arise from within the individual, such as doing a complicated crossword puzzle purely for the personal gratification of solving a problem.

➤ ***Intrinsically-motivated behaviors*** are generated by the sense of personal satisfaction that they bring. They are driven by an interest or enjoyment in the task itself that comes from the individual, not society. For example, if you are in college because you enjoy learning and want to make yourself a more well-rounded individual, you are intrinsically motivated. Intrinsic motivation is a critical element in cognitive, social, and physical development; those individuals who are intrinsically motivated are likely to perform better and improve their skills at a given task.

➤ ***Extrinsically-motivated behaviors***, in contrast, are performed in order to receive something from others. They do not come from within the individual, but from society—other people. For example, employees might do their work because they want the company to pay them, not because they love the work. Many athletes are

driven by the goal of winning, beating the competition, and receiving praise from fans; they are not driven by the intrinsic satisfaction they get from playing the sport. Similarly, if you are in college because you want to make yourself more marketable for a high-paying career or to satisfy the demands of your parents, then your motivation is more extrinsic in nature.



**Intrinsic and Extrinsic Motivation:** Intrinsic motivation comes from within the individual and results in a sense of autonomy, mastery, and purpose. Extrinsic motivation such as punishments, rewards, and other types of compensation, come from outside the individual.

In reality, our motivations are often a mix of both intrinsic and extrinsic factors, and the nature of the mix can change over time. For example, say cooking is one of your favorite hobbies: you love to cook for others whenever you get a chance, and you can easily spend hours in the kitchen. You are *intrinsically* motivated to cook. Then you decide to go to culinary school and eventually get a job working as a chef in a good restaurant. You are now getting extrinsic reinforcement (e.g., getting paid) for your work, and may over time become more extrinsically than intrinsically motivated. Sometimes, intrinsic motivation can diminish when extrinsic motivation is given—a process known as the *overjustification effect*. This can lead to extinguishing the intrinsic motivation and creating a dependence on extrinsic rewards for continued performance.

#### Motives for Survival

The goal here may be fulfillment of a want or a need. Whenever a need arises the organism is driven to fulfil that want or need. If there is no need in the organism, there will be no behaviour. For example, Horse and water. Horse does not drink water unless it has thirst or if it is not motivated. Unlike the external stimuli, the motives are limited.

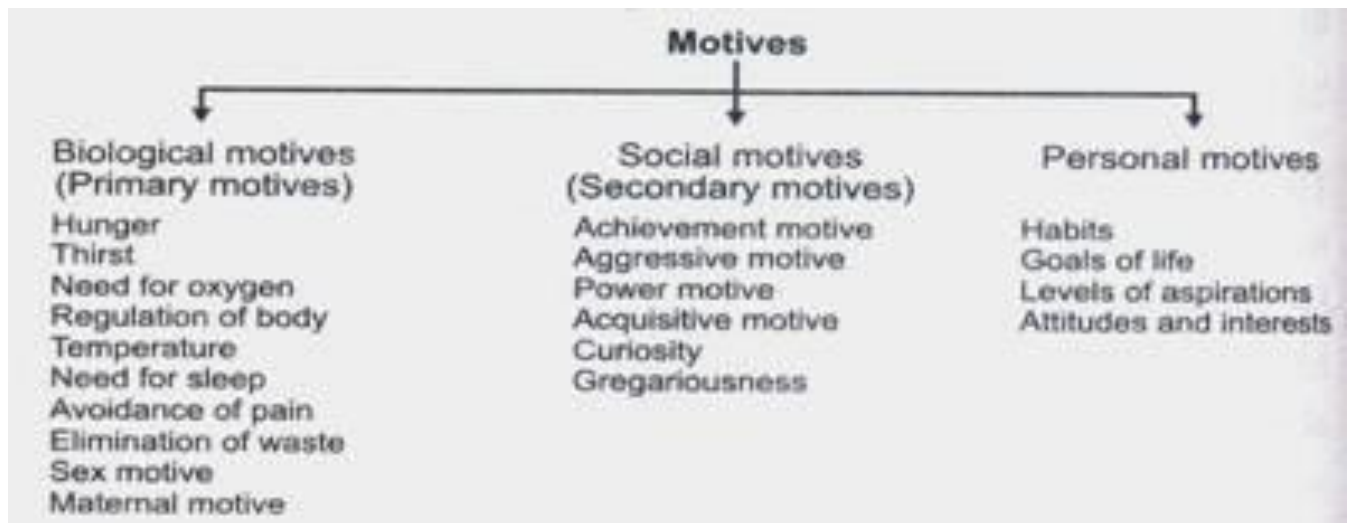
The behaviour to fulfil such needs is mechanical and alike in all the organisms. Hunger is a motive which stimulates the organism to have food. We develop hunger when the food that was taken earlier is exhausted.

The need for food drives us to go in search of food and to have it. Here the hunger motive not only initiated the action, but also continued until the goal (having food) is reached. The motives are powerful forces.

They do not allow us to stop our action or behaviour until the need is satisfied. Hence, they are called the ‘dynamios’ of behaviour.



## Types of Motives:



### *Biological Motivation and Homeostasis:*

Biological motives are called as physiological motives. These motives are essential for the survival of the organism. Such motives are triggered when there is imbalance in the body. The body always tends to maintain a state of equilibrium called “Homeostasis”- in many of its internal physiological processes.

This balance is very essential for the normal life. Homeostasis helps to maintain internal physiological processes at optimal levels. The nutritional level, fluid level, temperature level, etc., are maintained at certain optimal level or homeostasis levels. When there is some variation in these levels the individual is motivated for restoring the state of equilibrium.

#### **I) Physiological Motives:**

##### *a. Hunger motive:*

We eat to live. The food we take is digested and nutritional substances are absorbed. The biochemical processes get their energy from the food in order to sustain life. When these substances are exhausted, some imbalance exists.

We develop hunger motive in order to maintain homeostasis. This is indicated by contraction of stomach muscles causing some pain or discomfort called hunger pangs. Psychologists have demonstrated this phenomenon by experiments.

##### *b. Thirst motive:*

In our daily life regularly we take fluids in the form of water and other beverages. These fluids are essential for our body tissues for normal functioning. When the water level in the body decreases we develop motive to drink water.

Usually thirst motive is indicated by dryness of mouth. Experiments by psychologists have shown that just dried mouth getting wetted is not enough. We need to drink sufficient quantity of water to satiate our thirst.

##### *c. Need for oxygen:*

Our body needs oxygen continuously. We get it through continuous respiration. Oxygen is necessary for the purification of blood. We cannot survive without regular supply of oxygen. Lack of oxygen supply may lead to serious consequences like damage to brain or death.

##### *d. Motive for regulation of body temperature:*

Maintenance of normal body temperature (98.6°F or 37.0°C) is necessary. Rise or fall in the body temperature causes many problems. There are some automatic mechanisms to regulate body temperature, like sweating when the temperature rises above normal or, shivering when it falls below normal.

These changes motivate us to take necessary steps. For example, opening of windows, put on fans, take cool drinks, remove clothes, etc., when the temperature increases to above normal level; and closing doors and windows, wear sweaters, take hot beverages when temperature falls down. In this way we try to regulate the body temperature.

*e. Need for sleep:*

Sleep is an essential process for normal functioning of body and mind. When our body and mind are tired they need rest for rejuvenation of energy. It is observed that there is excess accumulation of a toxin called 'Lactic acid' when tired.

After sleep it disappears and the person becomes active. Sleep deprivation also leads to psychological problems like confusion, inability to concentrate, droopy eyelids, muscle tremors, etc.

*f. Need for avoidance of pain:*

No organism can continue to bear pain. Whenever we experience pain we try to avoid it. We are motivated to escape from painful stimulus. For example, when we are under hot sun we go to shade. When something is pinching we avoid it.

*g. Drive for elimination of waste:*

Our body cannot bear anything excess or anything waste. Excess water is sent out in the form of urine or sweat. So also digested food particles after absorption of nutritional substances are sent out in the form of stools. We experience discomfort until these wastes are eliminated.

*h. Sex motive:*

This is a biological motive, arises in the organism as a result of secretion of sex hormones-like androgens and estrogens. Sex need is not essential for the survival of the individual, but it is essential for the survival of the species. However, fulfillment of the sex need is not like satisfying hunger or thirst.

The society and the law exercise certain codes of conduct. Human being has to adhere to these rules. Usually this need is fulfilled through marriage.

*i. Maternal drive:*

This is an instinct or an inborn tendency. Every normal woman aspires to become a mother. Psychologists have

Motivation, Emotion and Attitudinal Processes 123 learnt from related studies that, this is a most powerful drive. That is why in many cases the women who cannot bear children of their own, will sublimate that motive and satisfy it through socially acceptable ways, like working in orphan schools, baby sittings or adopting other's children.

**II) Social Motives:**

Physiological motives discussed above pertain to both animals as well as human beings, but the social motives are specific only to human beings. These are called social motives, because they are learnt in social groups as a result of interaction with the family and society. That is why their strength differs from one individual to another. Many social motives are recognised by psychologists. Some of the common social motives are:

*a. Achievement motive:*

Achievement motivation refers to a desire to achieve some goal. This motive is developed in the individual who has seen some people in the society attaining high success, reaching high positions and standards.

He/she develops a concern to do better, to improve performance. David C Mc Clelland who conducted a longitudinal study on characteristics of high and low achievers found that the high achievers choose and perform better at challenging tasks, prefers personal responsibility, seeks and utilizes feedback about the performance standard, having innovative ideas to improve performance.

On the other hand, low achievers do not accept challenges, puts on average standards and accepts failures easily. Parents must try to inculcate leadership qualities in children for better achievement in their future life.

They must allow children to take decisions independently, and guide them for higher achievement from the childhood, so that the children develop high achievement motivation.

***b. Aggressive motive:***

It is a motive to react aggressively when faced frustrations. Frustration may occur when a person is obstructed from reaching a goal or when he is insulted by others. Even in a fearful and dangerous do or die situation the individual may resort to aggressive behaviour. Individual expresses such behaviour to overcome opposition forcefully, which may be physical or verbal aggression.

***c. Power motive:***

People with power motive will be concerned with having an impact on others. They try to influence people by their reputation. They expect people to bow their heads and obey their instructions.

Usually people with high power motive choose jobs, where they can exert their powers. They want people as followers. They expect high prestige and recognition from others. For example, a person may aspire to go for jobs like Police Officer, Politician, Deputy Commissioner, etc.

***d. Acquisitive motive:***

This motive directs the individual for the acquisition of material property. It may be money or other property. This motive arises as we come across different people who have earned a lot of money and leading a good life. It is a human tendency to acquire all those things which appear attractive to him.

***e. Curiosity motive:***

This is otherwise called stimulus and exploration motive. Curiosity is a tendency to explore and know new things. We see people indulge in a travelling to look at new places, new things and new developments taking place outside their environment.

People want to extend their knowledge and experiences by exploring new things. Curiosity motive will be very powerful during childhood. That is why they do not accept any toy or other articles unless they examine them from different angles, even at the cost of spoiling or breaking the objects.

***f. Gregariousness:***

This is also known as affiliation need. Gregariousness is a tendency to associate oneself with other members of the group or same species. The individual will be interested in establishing, maintaining and repairing friendly relationships and will be interested in participating in group activities.

Individual will conform to social norms, mores and other ethical codes of the groups in which he/she is interested. To the greater extent gregariousness is developed because many of the needs like basic needs, safety and security needs are fulfilled.

In addition to the above there are some other social motives like need for self-esteem, social approval, self-actualization, autonomy, master motive, combat, defense, abasement, etc.

**III) Personal Motives:**

In addition to the above said physiological and social motives, there are some other motives which are allied with both of the above said motives. These are highly personalized and very much individualized motives. The most important among them are:

***a. Force of habits:***

We see different people having formed different habits like chewing tobacco, smoking, alcohol consumption, etc. There may be good habits also like regular exercising, reading newspapers, prayers, meditations, etc. Once these habits are formed, they act as

drivers and compel the person to perform the act. The specialty of habits is that, they motivate the individual to indulge in that action automatically.

#### ***b. Goals of life:***

Every normal individual will have some goals in the life. They may be related to education, occupation, income, sports, acquisition of property, public service, social service, etc. Once a goal is set, he will be motivated to fulfil that goal. The goals people set, depend upon various factors like knowledge, information, guidance, support, personality, facilities available, aspirations, family and social background, etc.

#### ***c. Levels of aspirations:***

Aspiration is aspiring to achieve or to get something or a goal. But such achievement depends upon the level of motivation the individual has. Every individual will have a goal in his life and strive to reach that goal. But the effort to attain that goal varies from one individual to another. The amount of satisfaction he gains depends upon his level of aspiration.

For example, if a student is expecting 80% of marks in examination, gets only 75%, he may be unhappy. On the other hand, a student expecting failure may feel very happy if he gets just 35% passing marks, because, the student with high level of aspiration works hard, whereas the student with low level may not.

Hence, always higher level of aspiration is advisable. However, it should be on par with his abilities also. Because, if an individual aspires for higher level of achievement without possessing required ability, he will have to face frustration and disappointment.

#### ***d. Attitudes and interests:***

Our attitudes and interests determine our motivation. These are specific to individual. For example, a person within the family, may have positive attitude towards family planning and all others having negative attitudes.

So also, interests differ from one individual to another. Example, interest in sports, T.V, etc. Whenever we have a positive attitude, we will have motivation to attain. In negative attitude, we will be motivated to avoid. If a person is interested in music, he will be motivated to learn it. In this way, our personal motives determine our behaviour.

#### **Unconscious motivation:**

Sigmund Freud, the famous psychologist has explained elaborately about unconscious motivation. According to him, there are certain motives of which we are unaware, because they operate from our unconscious.

These motives or desires which are repressed by our conscious remain in our unconscious and will be influencing our behaviour.

Our irrational behaviour, the slip of tongue, slip of pen, amnesia, multiple personality, somnambulism, etc., are some examples of such behaviours for which we do not have answers apparently.

These motives can be delineated only by psychoanalysis. Many times psychosomatic disorders like paralysis, headaches, gastric ulcers, etc., also may be due to unconscious motivation.

#### **Maslow Hierarchy of Needs**

Maslow (1943, 1954) stated that people are motivated to achieve certain needs and that some needs take precedence over others. Our most basic need is for physical survival, and this will be the first thing that motivates our behavior. Once that level is fulfilled the next level up is what motivates us, and so on.

1. **Physiological needs** - these are biological requirements for human survival, e.g. air, food, drink, shelter, clothing, warmth, sex, sleep.

If these needs are not satisfied the human body cannot function optimally. Maslow considered physiological needs the most important as all the other needs become secondary until these needs are met.

2. **Safety needs** - protection from elements, security, order, law, stability, freedom from fear.

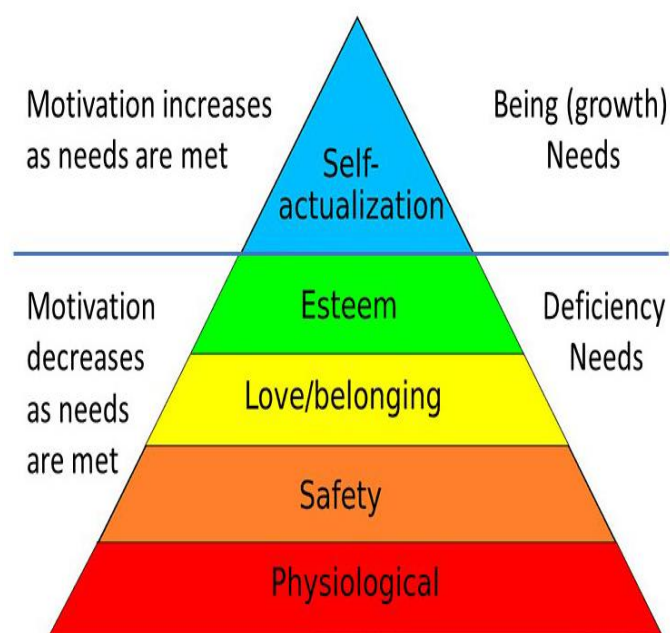
3. **Love and belongingness needs** - after physiological and safety needs have been fulfilled, the third level of human needs is social and involves feelings of belongingness. The need for interpersonal relationships motivates behavior

Examples include friendship, intimacy, trust, and acceptance, receiving and giving affection and love. Affiliating, being part of a group (family, friends, work).

4. **Esteem needs** - which Maslow classified into two categories: (i) esteem for oneself (dignity, achievement, mastery, independence) and (ii) the desire for reputation or respect from others (e.g., status, prestige).

Maslow indicated that the need for respect or reputation is most important for children and adolescents and precedes real self-esteem or dignity.

5. **Self-actualization needs** - realizing personal potential, self-fulfillment, seeking personal growth and peak experiences. A desire “to become everything one is capable of becoming”(Maslow, 1987, p. 64).



## UNIT – V

**Intelligence:** Definition, Measurement of I.Q, I.Q tests. #Attitude: Formation of Attitudes and Attitude Change#, Adjustment: Concepts of Adjustment and Maladjustment, Stress, Frustration, Conflict: Nature and Types - Coping Mechanisms, meaning and Types.

### INTELLIGENCE

**Intelligence** has been defined in many different ways including one's capacity for logic, abstract thought, understanding, self-awareness, communication, learning, emotional knowledge, memory, planning, creativity and problem solving. It can be more generally described as the ability to perceive information, and retain it as knowledge to be applied towards adaptive behaviors within an environment.

Intelligence is most widely studied in humans, but has also been observed in non-human animals and in plants. Artificial intelligence is intelligence in machines.

Within the discipline of psychology, various approaches to human intelligence have been adopted. The psychometric approach is especially familiar to the general public, as well as being the most researched and by far the most widely used in practical settings.

### DEFINITIONS

The definition of intelligence is controversial. Some groups of psychologists have suggested the following definitions:

From "Mainstream Science on Intelligence" (1994), an op-ed statement in the Wall Street Journal signed by fifty-two researchers (out of 131 totals invited to sign)

A very general mental capability that, among other things, involves the ability to reason, plan, solve problems, think abstractly, comprehend complex ideas, learn quickly and learn from experience. It is not merely book learning, a narrow academic skill, or test-taking smarts. Rather, it reflects a broader and deeper capability for comprehending our surroundings—"catching on," "making sense" of things, or "figuring out" what to do.

From "Intelligence: Knowns and Unknowns" (1995), a report published by the Board of Scientific Affairs of the American Psychological Association:

Individuals differ from one another in their ability to understand complex ideas, to adapt effectively to the environment, to learn from experience, to engage in various forms of reasoning, to overcome obstacles by taking thought. Although these individual differences can be substantial, they are never entirely consistent: a given person's intellectual performance will vary on different occasions, in different domains, as judged by different criteria. Concepts of "intelligence" are attempts to clarify and organize this complex set of phenomena. Although considerable clarity has been achieved in some areas, no such conceptualization has yet answered all the important questions, and none commands universal assent. Indeed, when two dozen prominent theorists were recently asked to define intelligence, they gave two dozen, somewhat different, definitions.

### THE NINE TYPES OF INTELLIGENCE

#### 1. Naturalist Intelligence (“Nature Smart”)

Designates the human ability to discriminate among living things (plants, animals) as well as sensitivity to other features of the natural world (clouds, rock configurations). This ability was clearly of value in our evolutionary past as hunters, gatherers, and farmers; it continues to be central in such roles as botanist or chef. It is also speculated that much of our consumer society exploits the naturalist intelligences, which can be mobilized in the discrimination among cars, sneakers, kinds of makeup, and the like.

#### 2. Musical Intelligence (“Musical Smart”)

Musical intelligence is the capacity to discern pitch, rhythm, timbre, and tone. This intelligence enables us to recognize, create, reproduce, and reflect on music, as demonstrated by composers, conductors, musicians, vocalist, and sensitive listeners. Interestingly, there is often an affective connection between music and the emotions; and mathematical and musical



intelligences may share common thinking processes. Young adults with this kind of intelligence are usually singing or drumming to themselves. They are usually quite aware of sounds others may miss.

### **3. Logical-Mathematical Intelligence (Number/Reasoning Smart)**

Logical-mathematical intelligence is the ability to calculate, quantify, consider propositions and hypotheses, and carry out complete mathematical operations. It enables us to perceive relationships and connections and to use abstract, symbolic thought; sequential reasoning skills; and inductive and deductive thinking patterns. Logical intelligence is usually well developed in mathematicians, scientists, and detectives. Young adults with lots of logical intelligence are interested in patterns, categories, and relationships. They are drawn to arithmetic problems, strategy games and experiments.

### **4. Existential Intelligence**

Sensitivity and capacity to tackle deep questions about human existence, such as the meaning of life, why do we die, and how did we get here.

### **5. Interpersonal Intelligence (People Smart)**

Interpersonal intelligence is the ability to understand and interact effectively with others. It involves effective verbal and nonverbal communication, the ability to note distinctions among others, sensitivity to the moods and temperaments of others, and the ability to entertain multiple perspectives. Teachers, social workers, actors, and politicians all exhibit interpersonal intelligence. Young adults with this kind of intelligence are leaders among their peers, are good at communicating, and seem to understand others' feelings and motives.

### **6. Bodily-Kinesthetic Intelligence ("Body Smart")**

Bodily kinesthetic intelligence is the capacity to manipulate objects and use a variety of physical skills. This intelligence also involves a sense of timing and the perfection of skills through mind-body union. Athletes, dancers, surgeons, and craftspeople exhibit well-developed bodily kinesthetic intelligence.

### **7. Linguistic Intelligence (Word Smart)**

Linguistic intelligence is the ability to think in words and to use language to express and appreciate complex meanings. Linguistic intelligence allows us to understand the order and meaning of words and to apply meta-linguistic skills to reflect on our use of language. Linguistic intelligence is the most widely shared human competence and is evident in poets, novelists, journalists, and effective public speakers. Young adults with this kind of intelligence enjoy writing, reading, telling stories or doing crossword puzzles.

### **8. Intra-personal Intelligence (Self Smart)**

Intra-personal intelligence is the capacity to understand oneself and one's thoughts and feelings, and to use such knowledge in planning and directioning one's life. Intra-personal intelligence involves not only an appreciation of the self, but also of the human condition. It is evident in psychologist, spiritual leaders, and philosophers. These young adults may be shy. They are very aware of their own feelings and are self-motivated.

### **9. Spatial Intelligence ("Picture Smart")**

Spatial intelligence is the ability to think in three dimensions. Core capacities include mental imagery, spatial reasoning, image manipulation, graphic and artistic skills, and an active imagination. Sailors, pilots, sculptors, painters, and architects all exhibit spatial intelligence. Young adults with this kind of intelligence may be fascinated with mazes or jigsaw puzzles, or spend free time drawing or daydreaming.

## **INTELLIGENCE QUOTIENT**

An **intelligence quotient (IQ)** is a total score derived from one of several standardized tests designed to assess human intelligence. The abbreviation "IQ" was coined



by the psychologist William Stern for the German term *Intelligenzquotient*, his term for a scoring method for intelligence tests he advocated in a 1912 book. When current IQ tests are developed, the median raw score of the norming sample is defined as IQ 100 and scores each standard deviation (SD) up or down are defined as 15 IQ points greater or less, although this was not always so historically. By this definition, approximately two-thirds of the population scores between IQ 85 and IQ 115. About 5 percent of the population scores above 125, and 5 percent below 75.

IQ scores have been shown to be associated with such factors as morbidity and mortality,<sup>[5][6]</sup> parental social status, and, to a substantial degree, biological parental IQ. While the heritability of IQ has been investigated for nearly a century, there is still debate about the significance of heritability estimates and the mechanisms of inheritance.

IQ scores are used for educational placement, assessment of intellectual disability, and evaluating job applicants. Even when students improve their scores on standardized tests, they don't always improve their cognitive abilities, such as memory, attention and speed. In research contexts they have been studied as predictors of job performance, and income. They are also used to study distributions of psychometric intelligence in populations and the correlations between it and other variables. Raw scores on IQ tests for many populations have been rising at an average rate that scales to three IQ points per decade since the early 20th century, a phenomenon called the Flynn effect. Investigation of different patterns of increases in subtest scores can also inform current research on human intelligence.

## INDIVIDUAL VERSUS GROUP INTELLIGENCE TYPES OF TESTS

Individual versus Group Intelligence Tests (adapted from the Indiana University website)

There are two major types of intelligence test, those administered to individuals and those administered to groups. The two main individual intelligence tests are the Stanford-Binet Intelligence Test and the Wechsler tests, i.e. Wechsler Intelligence Test for Children (WISC) and the Wechsler Adult Intelligence Scale (WAIS) for adults. The individual intelligence tests require one-on-one consultation. A list of some of the more commonly used intelligence measures is given below. Note that some of these are "nonverbal" instruments. These tests rely on little or no verbal expression and are useful for a number of populations, such as non-native speakers, children with poor expressive abilities, or students with loss.

For each test, the three part listing includes:

Test

Age Range

Description

**Test = Stanford-Binet Intelligence Scale, Fifth Edition (SBIS-V)**

Age range = 2 – 90+

Description = An update of the SB-IV. In addition to providing a Full Scale score, it assesses Fluid Reasoning, Knowledge, Quantitative Reasoning, Visual-Spatial Processing, and Working Memory as well as the ability to compare verbal and nonverbal performance.

**Wechsler Intelligence Scale for Children, Fourth Edition (WISC-IV)**

6 – 16-11

An update of the WISC-III, this test yields a Full Scale score and scores for Verbal Comprehension, Working Memory, Perceptual Reasoning, and Processing speed.

**Woodcock-Johnson III Tests of Cognitive Abilities**

2 – 90+

This test gives a measure of general intellectual ability, as well as looking at working memory

and executive function skills.

**Cognitive Assessment System (CAS)**

5 - 17

Based on the “PASS” theory, this test measures ‘Planning, ‘Attention, ‘Simultaneous, and ‘Successive cognitive processes.

**Wechsler Adult Intelligence Scale (WAIS)**

16 - 89

An IQ test for older children and adults, the WAIS provides a Verbal, Performance, and Full Scale score, as well as scores for verbal comprehension, perceptual organization, working memory, and processing speed.

**Comprehensive Test of Nonverbal Intelligence (CTONI)**

6 – 18-11

Designed to assess children who may be disadvantaged by traditional tests that put a premium on language skills, the CTONI is made up of six subtests that measure different nonverbal intellectual abilities.

**Universal Nonverbal Intelligence Test (UNIT)**

5 - 17

Designed to assess children who may be disadvantaged by traditional tests that put a premium on language skills, this test is entirely nonverbal in administration and response style.

**Kaufman Assessment Battery for Children (KABC)**

2-6 to 12-5

This test measures simultaneous and sequential processing skills, and has subscales that measure academic achievement as well.

Group-administered intelligence tests involve a series of different problems and are generally used in mass testing situations such as the military and schools. Examples of group tests are:

Multidimensional Aptitude Battery

The Cognitive Abilities test

**Scholastic Assessment Tests**

There has been a trend towards the use of multiple choice items. Many of these tests have separately timed sub-tests. A major distinction made between types of items is verbal and non-verbal. In recent years there has been a trend away from verbal and mathematical items towards non-verbal represented problems in pictures.

Advantages of group tests:

- \*can be administered to very large numbers simultaneously
- \*simplified examiner role
- \*scoring typically more objective
- \*large, representative samples often used leading to better established norms

**Disadvantages of group tests:**

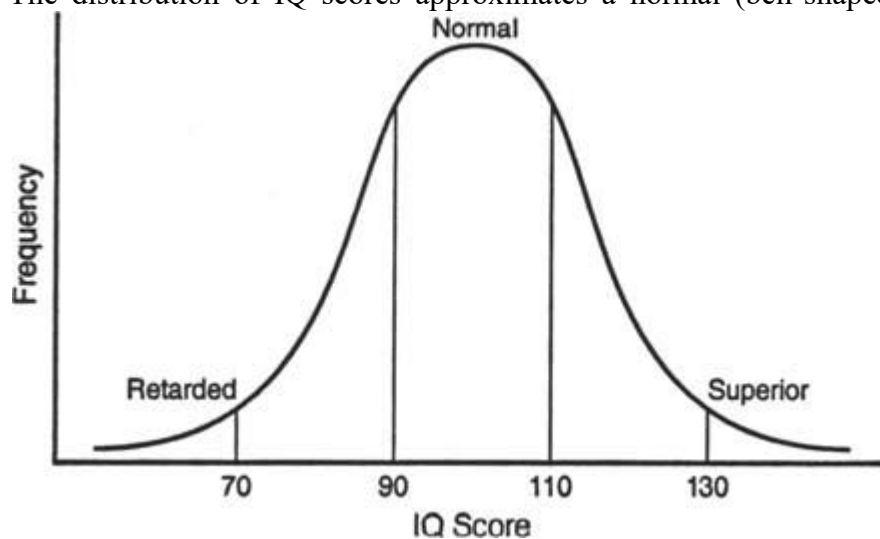
- \*examiner has less opportunity to obtain cooperation and maintain interest
- \*not readily detected if examinee tired, anxious, unwell
- \*evidence that emotionally disturbed children do better on individual than group tests
- \*examinee’s responses are more restricted
- \*normally an individual is tested on all items in a group test and may become bored over easy items and frustrated or anxious over difficult items
- \*individual tests typically provide for the examiner to choose items based on the test takers prior responses - moving onto quite difficult items or back to easier items. So individual tests offer more flexibility.

## MEASURES OF INTELLIGENCE

- Sir Francis Galton, a pioneer in the measurement of **individual differences** in late nineteenth-century England, was particularly concerned with sensory responses (visual and auditory acuity and reaction times) and their relationship to differences in ability.
- Several **individual tests** have been used to test intelligence.
- The **Binet-Simon intelligence scale**, developed by French psychologists Alfred Binet and Theodore Simon, was administered to children to evaluate their performance (**mental age**) at a given **chronological age**. The mental age/chronological age measure, called a **mental quotient**, was used to evaluate a child's learning potential.
- Lewis Terman of Stanford University revised the Binet scale in 1916. The revised scale, called the **Stanford-Binet intelligence scale**, although it retained the concept of mental and chronological ages, introduced the concept of the **intelligence quotient (IQ)** arrived at by the following widely used formula, which allows comparison between children of different ages.

$$\text{intelligence quotient (IQ)} = \frac{\text{mental age}}{\text{chronological age}} \times 100$$

- The 1986 revision of the test, the latest of several, varies the calculation so that the test is useful for adults as well as for children. An individual's score for correct answers is compared to a table of scores of test takers of the same age (with the average score always scaled to 100). Scores between 90 and 110 are labeled as "normal," above 130 as "superior," and below 70 as mentally deficient, or "retarded." The distribution of IQ scores approximates a normal (bell-shaped) curve (Figure).



**Figure 1**

The Normal IQ Distribution

- David Wechsler developed the **Wechsler Adult Intelligence Scale (WAIS)** in 1939, revised as the **WAIS-R**. Wechsler also developed the **Wechsler Intelligence Scale for Children (WISC)**, revised as the **WISC-R**. The revised forms of these scales are still widely used. They contain two sub-scales, **verbal** and **performance**, which provide a **verbal IQ** and a **performance IQ**; the subscales are combined for the **total IQ**. Test score combinations may reveal other strengths and weaknesses to a skilled examiner.

**Tests of aptitude and achievement. Group tests** (such as the California Achievement Tests and the SAT, the Scholastic Assessment Test) are often used to measure **aptitude**, the capacity to learn (including both verbal and performance aptitudes) and **achievement**, what has been learned.

**Ranges of intelligence scores.** The two extremes of levels of intellectual functioning are known as developmentally disabled and gifted.

- Those identified as **mentally retarded** (sometimes described as **developmentally disabled**) have IQ scores of 70 or below. Severity of disability and corresponding IQ scores are mild (50 to 70), moderate (35 to 50), severe (20 to 35), and profound (below 20). Some, but not all, of the causes of mental retardation are known and include Down syndrome, a genetic disorder; phenylketonuria, a metabolic disorder; and developmental disability due to anoxia (lack of oxygen) during gestation.

The gifted usually fall within the upper 2% to 3% of the IQ score distribution (between 130 and 145). Louis Terman's well-known longitudinal study of the gifted, which will not be complete until 2010, found that gifted children are generally superior to average-IQ peers in health, achievement, and adjustment to life stresses. Currently, gifted children are identified not only by IQ but also by superior potential in any of six areas: general intelligence, specific aptitudes (math, for example), creativity, leadership, performing arts, and athletics.

### **IQ SCALE**

What does the IQ scale measure? What is an average score? How high can an IQ be? Here are some answers to these and other questions.

First of all, the concept of IQ was developed by either the German psychologist and philosopher Wilhelm Stern in 1912, or by Lewis Terman in 1916, depending on which sources you consult. Intelligence testing was first done on a large scale before either of these dates. In 1904 psychologist Alfred Binet was commissioned by the French government to create a testing system to differentiate intellectually normal children from those who were inferior.

From Binet's work the IQ scale called the "Binet Scale," (and later the "Simon-Binet Scale") was developed. Sometime later, "intelligence quotient," or "IQ," entered our vocabulary. Lewis M. Terman revised the Simon-Binet IQ Scale, and in 1916 published the Stanford Revision of the Binet-Simon Scale of Intelligence (also known as the Stanford-Binet). The following scale resulted for classifying IQ scores:

#### **IQ Scale**

Over 140 - Genius or almost genius  
120 - 140 - Very superior intelligence  
110 - 119 - Superior intelligence  
90 - 109 - Average or normal intelligence  
80 - 89 - Dullness  
70 - 79 - Borderline deficiency in intelligence  
Under 70 - Feeble-mindedness

#### **Normal Distribution of IQ Scores**

50% of IQ scores fall between 90 and 110  
70% of IQ scores fall between 85 and 115  
95% of IQ scores fall between 70 and 130  
99.5% of IQ scores fall between 60 and 140

#### **Low IQ & Mental Retardation**

An IQ under 70 is considered as "mental retardation" or limited mental ability. 5% of the population falls below 70 on IQ tests. The severity of the mental retardation is commonly broken into 4 levels:

50-70 - Mild mental retardation (85%)  
35-50 - Moderate mental retardation (10%)

20-35 - Severe mental retardation (4%)  
IQ < 20 - Profound mental retardation (1%)

### **High IQ & Genius IQ**

Genius or near-genius IQ is considered to start around 140 to 145. Less than 1/4 of 1 percent fall into this category. Here are some common designations on the IQ scale:

115-124 - Above average  
125-134 - Gifted  
135-144 - Very gifted  
145-164 - Genius  
165-179 - High genius  
180-200 - Highest genius

### **CURRENT IQ TESTS**

Normalized IQ distribution with mean 100 and standard deviation 15.

There are a variety of individually administered IQ tests in use in the English-speaking world. The most commonly used individual IQ test series is the Wechsler Adult Intelligence Scale for adults and the Wechsler Intelligence Scale for Children for school-age test-takers. Other commonly used individual IQ tests (some of which do not label their standard scores as "IQ" scores) include the current versions of the Stanford-Binet, Woodcock-Johnson Tests of Cognitive Abilities, the Kaufman Assessment Battery for Children, the Cognitive Assessment System, and the Differential Ability Scales.

IQ tests measuring adult intelligence also includes:

1. Stanford-Binet Intelligence Scales
2. Woodcock-Johnson Tests of Cognitive Abilities
3. Raven's Progressive Matrices
4. Wechsler Adult Intelligence Scale
5. Cattell Culture Fair III
6. Reynolds Intellectual Assessment Scales
7. Thurstone's Primary Mental Abilities <sup>[35][36]</sup>
8. Differential Ability Scales
9. Kaufman Brief Intelligence Test
10. Multidimensional Aptitude Battery II
11. Das-Naglieri cognitive assessment system

IQ scales are ordinally scaled.<sup>[38][39][40][41][42]</sup> While one standard deviation is 15 points, and two SDs are 30 points, and so on, this does not imply that mental ability is linearly related to IQ, such that IQ 50 means half the cognitive ability of IQ 100. In particular, IQ points are not percentage points.

On a related note, this fixed standard deviation means that the proportion of the population who have IQs in a particular range is theoretically fixed, and current Wechsler tests only give Full Scale IQs between 40 and 160. This should be borne in mind when considering reports of people with much higher IQs.

### **ATTITUDE**

In psychology, an **attitude** is an expression of favor or disfavor toward a person, place, thing, or event (the **attitude object**). Prominent psychologist Gordon Allport once described attitudes "the most distinctive and indispensable concept in contemporary social psychology." Attitude can be formed from a person's past and present. Key topics in the study of attitudes include attitude measurement, attitude change, consumer behavior, and attitude-behavior relationships.

### **ATTITUDE FORMATION AND CHANGES**

#### **I. Attitudes**

## A. Three components

1. Emotional component (How do you feel about it?)
2. Cognitive component (What do you think about it?)
3. Behavioral component (Are you walking the walk or just talking the talk?)
  - a. 1934 Chinese couple study (Richard LaPiere)
    1. stopped at 250 restaurants and lodgings: only one refused service
    2. when contacted later: 92% did not take a reservation (including non-responses)
  - b. What influences behavior-attitude relation?
    1. degree of attitude specificity
    2. constraints on behavior

## B. Measurement

1. Open-ended interviews
2. Yes-No scales (e.g., social distance scale, locus of control)
3. Likert-type scales (e.g., values profile, self esteem)

## C. ATTITUDE FORMATION/CHANGE

### 1. Social perception

- a. primacy effect
- b. positivity and negativity bias
- c. influenced by context, culture, and expectations
- d. heuristics (mental short-cuts)
  1. group stereotypes (prototype of group member that is generalized)
    - a. illusory correlations (misinformation due to exposure or selective attention)
    - b. kernel of truth (real differences but no understanding of cause)
  2. in-group favoritism
  3. out-group homogeneity effect

### 2. Attribution theory

- a. fundamental attribution error =  
**the tendency to attribute others' behavior to dispositional qualities while underestimating situational factors**
  1. actor-observer bias (you fell; I was pushed)
  2. self-serving bias (I can do no wrong, but you can do no right)
  3. **the effects of culture**
- b. situational demands and discounting/augmenting
- c. double standards
- d. self-handicapping

### 3. Socialization (long-term influence)

- a. instrumental conditioning (e.g., child rearing, peer pressure)
- b. social learning theory
- c. classical conditioning

### 4. Persuasion (short-term influence)

- a. *Characteristics that affect persuasion*
  1. messenger
    - a. **credibility** (is messenger an expert?)
    - b. **trustworthiness** (does messenger have something to gain?)
    - c. **likeability** (is messenger likeable?)
  2. message
    - a. one vs. two-sided argument?
    - b. facts and stats vs. appeal to emotion?
  3. audience (individual differences)
    - a. Do you **care**? (central vs. peripheral route to persuasion)

- b. How **discrepant** is the message?
- c. Are **others present**? Do they agree with the messenger?
- d. Can the messenger get you to **do anything**?

b. *Cognitive dissonance (the process)*

- 1. examples
  - a. smoking (Does this actually happen?)
  - b. getting older
- 2. Leon Festinger's "boring task" study on forced compliance
  - a. details
  - b. results
  - c. conclusions
- 3. explains fraternity hazing (justification of effort)
- 4. explains tendency to blame the victim (just world hypothesis)

"The Jews must have been awful people to warrant such treatment." -- German citizen after WWII

- 5. explains why people sometimes change their attitudes
- 6. explains why people sometimes resist attitude change ("All in the Family" [theme song](#) | [videos](#) | [quotes](#) )

5. *Group membership*

a. *Conformity pressures (more later)*

b. *Social Identity Theory*

- 1. *Individual identity derived from group membership*
- 2. *Self-esteem effects (positive identity from favorable comparisons with outgroup)*
- 3. *Physiological effects (same as competitors)*
- 4. *in-group bias*

a. even in minimal groups (offend maximizing difference motive, not absolute in-group gain)

- b. favoritism, but not hostility
- c. complements Realistic Group Conflict Theory (more later)
- d. higher in high-status groups
- e. in lower-status group: depends on perception of out-group
  - 1. Illegitimate, firm boundaries
  - 2. Relative Deprivation Theory (discrepancy between what is and what group is entitled to)

5. *group interests better predictor of political opinions than self-interest*

- a. political activism motivated by group disadvantage, not personal disadvantage
- b. opposition to social benefits caused by hostility toward poor

6. *stereotypes*

- a. not just faulty distortions
- b. outgroups usually perceived as more homogeneous, but
- c. minority in-group homogeneity (on dimensions associated with group identity)

7. *Contact Theory (more later)*

c. *Tendency toward increasingly extreme attitudes (see lecture on identity)*

**ADJUSTMENT**

In psychology, **adjustment** refers to the behavioural process of balancing conflicting needs, or needs against obstacles in the environment. Humans and animals regularly do this, for example, when they are stimulated by their physiological state to seek food, they eat (if possible) to reduce their hunger and thus adjust to the hunger stimulus. Adjustment disorder occurs when there is an inability to make a normal adjustment to some need or stress in the environment.



In general, the adjustment process involves four parts:

- (1) A need or motive in the form of a strong persistent stimulus,
- (2) The thwarting or no fulfillment of this need,
- (3) Varied activity, or exploratory behaviour accompanied by problem solving, and
- (4) some response that removes or at least reduces the initiating stimulus and completes the adjustment.

Social and cultural adjustments are similar to physiological adjustments. People strive to be comfortable in their surroundings and to have their psychological needs (such as love or affirmation) met through the social networks they inhabit. When needs arise, especially in new or changed surroundings, they impel interpersonal activity meant to satisfy those needs. In this way, people increase their familiarity and comfort with their environments, and they come to expect that their needs will be met in the future through their social networks. Ongoing difficulties in social and cultural adjustment may be accompanied by anxiety or depression.

### **ONCEPT OF ADJUSTMENT**

Adjustment is the relationship which comes to be established between the individual and the environment. Every individual plays certain position in his social relations. He is trained to play his role in such a way that his maximum needs will be fulfilled. So, he should play his role properly and get maximum satisfaction. If he does not play his role according to standards and training Home Environment received his needs may not be fulfilled and he may get frustrated.

### **TYPES OF ADJUSTMENT**

- Normal Adjustment
- Abnormal adjustment

### **NORMAL ADJUSTMENT**

When a relationship between an individual and his environment is according to established norms then that relationship is considered as normal adjustment. A child who obey his parents, who is not unduly stubborn; who studies regularly and has neat habit is considered adjusted.

### **ABNORMAL ADJUSTMENT**

Abnormal Adjustment means problem behavior or popular speaking maladjustment. Maladjustment takes place when the relationship between an individual and his environment is not according to established standards or norms. A delinquent child adjusts with his environment but he is a maladjusted child because he is violating certain moral codes.

### **MALADJUSTMENT**

Is the common term used to describe an inability to maintain a stable relationship or adjust to changing the environments.

**MALADJUSTMENT:** "Some individuals are incapable of maintaining a steady relationship and suffer form maladjustment."

### **Maladjustment**

Maladjustment is the inability by individuals, family, groups, community or society to be in sync with other individuals, family, group, community or society on differences and conflict with socio-political and economic reasons or ideologies.

### **The Maladjusted Person:**

Mental illness, emotional instability, mental disorders, emotional disorders, personality disorders, behaviour disorders, psychological disorders-all these terms denote one and the same thing. They are interchangeably used to describe what we call maladjustment. They denote conditions of tension and nervousness and the characteristic features of maladjustment and deviations in feelings, acting and thinking. The more serious the disorder, the more

radical are the disturbances until a point is reached when the individual becomes almost incapable of adjusting to life.

### **The Adjusted Person:**

Most people have to face frustrations conflicts and such situations as may cause concern, anxiety and nervousness at times. They are able to overcome their troubles and adjust themselves to such situations. But there are people who cannot overcome their troubles and cannot compromise with them.

They develop behaviour disorders in the form of exaggerated, persistent reactions which tend to incapacitate them and distort their feelings and behaviour. They are maladjusted persons. They create another world in which they can live more comfortably and with real life situations they are in gross disharmony.

Two distinct types of persons have been described above-the normal and the maladjusted. But it must be remembered that the distinction between the adjusted and the maladjusted is very subtle. The line between the two is very thin, for no person is completely adjusted. He is adjusted to a degree. A normal person may be emotionally hyperactive at times and he may be so depressed that he can hardly live with himself.

He may at times regress to childish behaviour and still be a normal man. A well-adjusted person maintains a favourable orientation towards reality. "His life is like a ship riding the waves. He may be swayed this way or that by wind or weather but he always returns to an even keel.

This even keel is his fundamental balance in life that enables him to withstand the thousands of disturbing stimuli which assail him and still keep his bearings and continue to move towards the goals he has set for himself."

The maladjusted child may either show nervousness or may exhibit emotional over-reactions and deviations or may be emotionally immature. His behaviour may be exhibitionistic or antisocial. He may be suffering from psychosomatic disturbances.

Many of the symptoms which are being detailed below may appear in normal children but whenever a combination of these symptoms appears frequently and consistently we should suspect maladjustment.

### **Symptoms:**

(1) Nervousness in the child is exhibited by habitual biting and wetting of lips, nail, biting, stammering, blushing, turning pale, constant restlessness, body rocking, nervous finger movements, frequent urination.

(2) The maladjusted child shows undue anxiety over mistakes, marked distress over failures, absent-mindedness, day-dreaming; he refuses to accept any recognition or reward, evades responsibility, withdraws from anything that looks new or difficult: he has lack of concentration, is unusually sensitive to all annoyances is suitable to work when distracted and has emotional tone in argument and feel hurt when others disagree; he makes frequent efforts to gain attention of the teacher. Such are the emotional over-reactions and deviations.

(3) The child, having emotional disorders, is unable to work alone, and rely on his own judgment; he is suffering from complexes; he is unusually self-conscious or over-critical of others, either too docile or too suggestive; such are his characteristic traits exhibiting his emotional instability.

(4) The child who cannot adjust himself in the school environment shows exhibitionistic behaviour. He tends to tease, push and shove other pupils; he wants to be too funny or over-conspicuous; he is either found bluffing, or refusing to accept any lack of personal knowledge; he agrees markedly with whatever the teacher says or does and shows exaggerated courtesy.

(5) The maladjusted child has behaviour disorders which are generally seen in his antisocial behaviour. He is cruel to others, bullies them, uses obscene language, shows undue interest in

sex, tells offensive stories, dislikes school work, resents authority, reacts badly to discipline, runs away from the class, and shows complete lack of interest in school work suddenly. He has psychosomatic disturbances also. When he is emotionally distressed, he begins to vomit or develops constipation and diarrhea or tends to overeat and shows other feeling disturbances.

### **Causes of Maladjustment:**

The five main causes of maladjusted behaviour of adolescent are as follows:

(i) Family: The family as an institution has various functions to perform various causes e.g. social, economic and psychological contribute immensely to maladjusted behaviour in children.

(a) Social causes: Gibbon says that the social problem of one generation is the psychological problem of the next generation. Children coming from homes that have been broken due to death, divorce, desertion, separation etc., are often maladjusted in their behaviour. Such children feel insecure and become maladjusted. With the tremendous growth in population, it is extremely difficult for parents to provide even the basic necessities like food, clothing and shelter to their children. It invariably results in greater degree of frustration and hostility amongst them.

(b) Economic causes: The occupational status of parents problems of unemployment poverty and low economic status breed maladjustment amongst children.

(c) Psychological causes: If parents are over-possessive highly authoritative, unrealistic in their expectations incompatible and abusive, this will have an adverse effect upon their children. When the psychological needs are not met, children get frustrated and develop problems like nail biting fear of dark, lack of self confidence.

(ii) Personal causes: The individuals who are physically, mentally and visually handicapped react abnormally to the situation. When they cannot score well academically compared to their peers, they develop an inferiority complex. Finally they isolate themselves from others and indulge in day-dreaming.

(iii) School-related causes: When growing children do not find ways and means to channelize their energy in a purposeful manner in the school they exhibit in maladjusted behaviour.

(iv) Teacher-related causes: If the teacher is unfair, biased or not involved with the student it certainly affects the mental health of the children in the school.

(v) Peer-group related causes: Another important factor that disturbs the psycho-equilibrium of students is an unhealthy relationship with their peer group.

### **STRESS**

Stress is a general term applied to various psychologic (mental) and physiologic (bodily) pressures experienced or felt by people throughout their lives.

#### **Definition of Stress**

**Stress** is defined as “a state of psychological and physiological imbalance resulting from the disparity between situational demand and the individual's ability and motivation to meet those needs.”

**Dr. Hans Selye**, one of the leading authorities on the concept of stress, described stress as “the rate of all wear and tear caused by life.”

Stress can be positive or negative:

1. Stress is good when the situation offers an opportunity to a person to gain something. It acts as a motivator for peak performance.
2. Stress is negative when a person faces social, physical, organizational and emotional problems.

Factors that are responsible for causing stress are called *stressors*.

#### **Causes of Stress**

The major causes of stress at work or in organization:

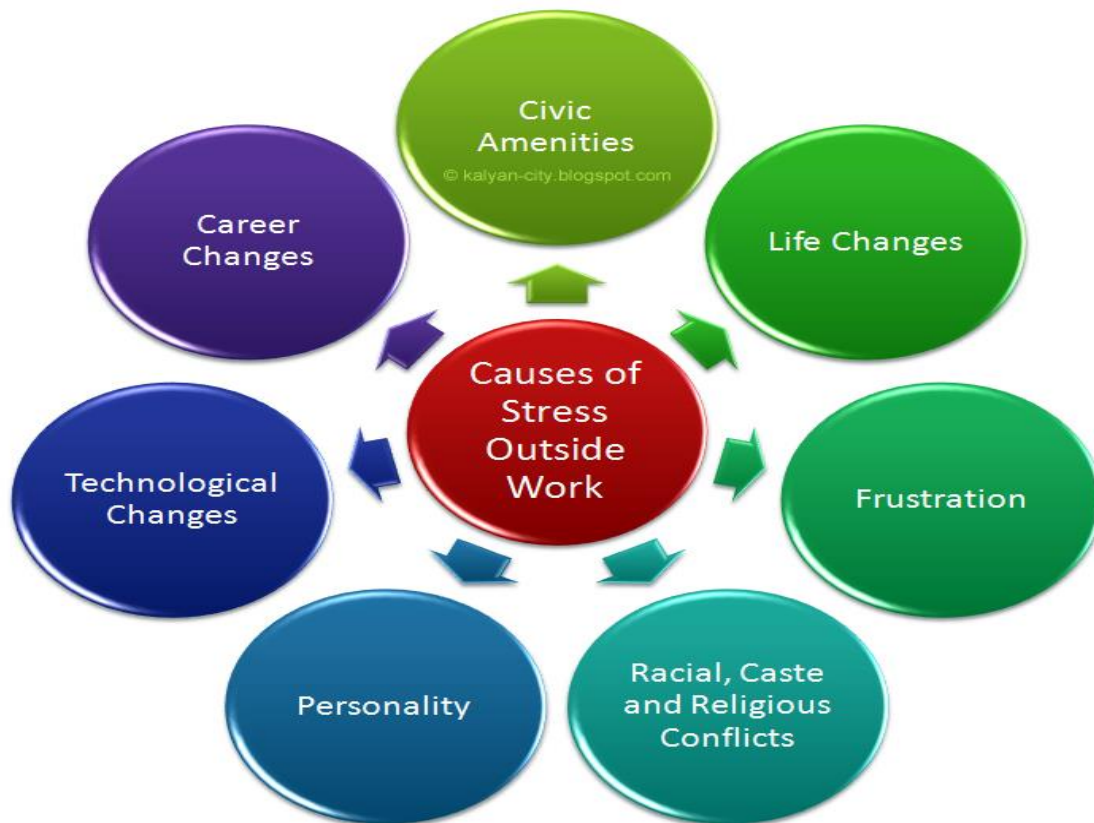


1. **Career Concern:** If an employee feels that he is very much behind in the corporate ladder, then he may experience stress. If he seems that there are no opportunities for self-growth, he may experience stress. Hence, unfulfilled career expectations are the significant source of stress.
2. **Role Ambiguity:** It occurs when the person doesn't know what he is supposed to do, on the job. His tasks and responsibilities are not clear. The employee is not sure what he is expected to do. It creates confusion in the minds of the worker and results in stress.
3. **Rotating Work Shifts:** Stress may occur in those individuals who work on different work shifts. Employees may be expected to work on day shift for some days and then on the night shift. That may create problems in adjusting to the shift timings, and it can affect not only personal life but also family life of the employee.

4. **Role Conflict:** It takes place when people have different expectations from the person performing a particular role. It can also occur if the job is not as per expectation, or when a job demands a certain type of behavior that is against the person's moral values.
5. **Occupational Demands:** Some jobs are more demanding than others. Jobs that involve risk, and danger are more stressful. Research findings indicate, job that cause stress needs constant monitoring of equipments and devices, unpleasant physical conditions, making decisions, etc.
6. **Lack of Participation in Decision-making:** Many experienced employees feel that management should consult them on matters affecting their jobs. In reality, the superiors hardly ask the concerned employees before taking a decision. That develops a feeling of being neglected, which may lead to stress.
7. **Work Overload:** Excessive workload leads to stress as it puts a person under tremendous pressure. Work overload may take two different forms:
  - a. *Qualitative work overload* implies performing a job that is complicated or beyond the employee's capacity.
  - b. *Quantitative work overload* is a result of many activities performed in a prescribed time.
8. **Work Underload:** In this, case, too little work or very easy work is expected on the part of the employee. Doing less work or jobs of routine and simple nature would lead to monotony and boredom, which can lead to stress.
9. **Poor Working Conditions:** Employees may be subject to poor working conditions. It would include bad lighting and ventilation, unhygienic sanitation facilities, excessive noise, and dust, presence of toxic gasses and fumes, inadequate safety measures, etc. All these unpleasant conditions create physiological and psychological imbalance in humans thereby causing stress.
10. **Lack of Group Cohesiveness:** Every group is characterized by its cohesiveness, although they differ widely in its degree. Individuals experience stress when there is no unity among work group members. There are mistrust, jealousy, frequent quarrels, etc., in groups and this lead to stress to employees.
11. **Interpersonal and Intergroup Conflict:** These conflicts take place due to differences in perceptions, attitudes, values and beliefs between two or more individuals and groups. Such conflicts can be a source of stress for group members.
12. **Organizational Changes:** When changes occur, people have to adapt to those changes, and this may cause stress. Stress is higher when changes are significant or unusual like transfer or adoption of new technology.
13. **Lack of Social Support:** When individuals believe that they have the friendship and support of others at work, their ability to cope with the effects of stress increases. If this kind of social support is not available, then an employee experiences more stress.

Certain factors outside the scope of an organization also cause stress.

The main causes of stress outside work or organization:



1. **Civic Amenities:** Poor civic amenities in the area in which one lives can be a cause of stress. Inadequate or lack of public facilities like improper water supply, excessive noise or air pollution, lack of proper transport facility can be quite stressful.
2. **Life Changes:** Life changes can bring stress to a person. Life changes can be slow or sudden. Gradual life changes include getting older, and abrupt life changes include death or accident of a loved one. Sudden life changes are highly stressful and very difficult to cope.
3. **Frustration:** Frustration is another cause of stress. It arises when goal-directed behavior gets blocked. Management should attempt to remove barriers and help the employees to reach their goals.
4. **Racial, Caste, and Religious Conflicts:** Employees living in areas, which are often prone to conflicts among people based on differences seen in their race, caste and religion do suffer more from stress. In the case of a religion, the minorities and lower-caste people (especially in India) are subject to more stress.
5. **Personality:** We can classify people as 'Type A' and 'Type B'.  
The 'Type A' people:
  - a. They feel guilty while relaxing.
  - b. They get irritated by minor mistakes of self and others.
  - c. They feel impatient and dislike waiting.
  - d. They also multitask and prefer to do several things at one time.
 The 'Type B' people are exactly opposite and hence are less affected by stress due to the above factors.
6. **Technological Changes:** When there are any changes in technical fields, employees are under the constant fear of losing jobs or need to adjust to new technologies. It can be a source of stress.

7. **Career Changes:** When a person suddenly switches to another job, he is under stress to shoulder new responsibilities adequately. Under-promotion, over-promotion, demotion and transfers can also cause stress.

Following habits can remarkably help to relieve stress:

- Regular meditation,
- Physical exercise,
- Balanced diet,
- Focused thinking,
- Control of anger,
- Managing Depression,
- Maintaining calmness in stressful situations,
- Having a positive attitude towards life,
- Harmony towards self and others, etc.

### MEANING OF FRUSTRATION

**Frustration** is one of the causes of stress. It arises when one's motivation to achieve a desired goal is blocked. For example, an employee wants to finish a report before the end of the day but finds that something or the others keep interrupting him at work. This can lead to his frustration.

In psychology, frustration is a common emotional response to opposition. Related to anger and disappointment, it arises from the perceived resistance to the fulfillment of individual will. The greater the obstruction, and the greater the will, the more the frustration is likely to be. Causes of frustration may be internal or external. In people, internal frustration may arise from challenges in fulfilling personal goals and desires, instinctual drives and needs, or dealing with perceived deficiencies, such as a lack of confidence or fear of social situations. Conflict can also be an internal source of frustration; when one has competing goals that interfere with one another, it can create cognitive dissonance. External causes of frustration involve conditions outside an individual, such as a blocked road or a difficult task. While coping with frustration, some individuals may engage in passive-aggressive behavior, making it difficult to identify the original cause(s) of their frustration, as the responses are indirect. A more direct, and common response, is a propensity towards aggression.

### Types of Reactions to Frustration ↓

The reactions to frustration are also known as **Defense Mechanisms**. These defense mechanisms are so called as they try to defend individuals from the psychological effects of a blocked goal. When some employees get frustrated, they become tensed and irritable. They experience an uneasy feeling in their stomach and also show various other reactions of frustration.

Following are the various types of reactions to frustration :-

1. **Withdrawal** : Behaviours such as asking for a transfer or quitting a job.
2. **Fixation** : An employee blames others and superiors for his problems, without knowing complete facts.
3. **Aggression** : Acting in a threatening manner.
4. **Regression** : Behaving in an immature and childish manner and may self-pity (to feel sorry for oneself).
5. **Physical Disorder** : Physical ailments such as fever, upset stomach, vomiting, etc.
6. **Apathy** : Becoming irresponsive and disinterested in the job and his co-workers.

### Sources or Causes of Frustration

Following are the main sources or causes of frustration :-

1. **Environment** : The workplace environment and natural environment both may frustrate the employees. For example, there may be break down in machinery, no



canteen facilities, a wet rainy day or a hot sunny day may prevent the employees to perform their duties efficiently.

2. **Co-workers** : Co-workers may be a major source of frustration. They may place barriers in the way of goal attainment by delaying work, withholding work inputs, poor presentation of work, affecting its quality, etc.
3. **Employee Himself** : The employee himself is rarely recognised as a source of frustration. The employee may set higher goals than his abilities.
4. **Management** : Management may act as the source of frustration, they may block the promotion of an employee due to change in organisation's promotional policies.

### **Symptoms**

Frustration can be considered a problem–response behavior, and can have a number of effects, depending on the mental health of the individual. In positive cases, this frustration will build until a level that is too great for the individual to contain or allow continuing, and thus producing action directed at solving the inherent problem in a disposition that does not cause social or physical harm. In negative cases, however, the individual may perceive the source of frustration to be outside of their control, and thus the frustration will continue to build, leading eventually to further problematic behavior (e.g. violent reaction against perceived oppressors or enemies).

Stubborn refusal to respond to new conditions affecting the goal, such as removal or modification of the barrier, sometimes occurs. As pointed out by J.A.C. Brown, severe punishment may cause individuals to continue nonadaptive behavior blindly: "Either it may have an effect opposite to that of reward and as such, discourage the repetition of the act, or, by functioning as a frustrating agent, it may lead to fixation and the other symptoms of frustration as well. It follows that punishment is a dangerous tool, since it often has effects which are entirely the opposite of those desired".

### **CONFLICT**

#### **Psychology of Conflicts**

Conflict is a state of opposition, disagreement or incompatibility between two or more people or groups of people, which is sometimes characterized by physical violence. Military conflict between states may constitute war.

#### **Definitions:**

An analysis of the literature reveals that the term ‘conflict’ is defined in a number of ways. Followers of Georg Simmel, like R.E. Park, have seen conflict as one of the central forms of interaction. Simmel (1955) writes: ‘If every interaction among men is a sociation, conflict must certainly be considered as sociation.’

Park and Burgess (1921), likewise, treat conflict as a distinct form of competition. They wrote: ‘Both are forms of interaction but competition is a struggle between individuals or groups of individuals who are not necessarily in contact and communication while conflict is a contest in which contact is an indispensable condition.’

According to Max Weber (1968), ‘a social relationship will be referred to as conflict in so far as action within it is oriented intentional to carrying out the actor’s own will against the resistance of the other party or parties’. Thus, the social interaction of conflict is defined by the desire of each participant to impose his will upon the other’s resistance.

These sentiments are well echoed in the words of A.W. Green (1956) who defined it as ‘the deliberate attempt to oppose, resist or coerce the will of another or others’. As a process, it is the antithesis of cooperation in which a deliberate attempt is made to thwart the will of others. Gillin and Gillin (1948) wrote: ‘Conflict is the social process in which

individuals or groups seek their ends by directly challenging the antagonist by violence or threat of violence.' To sum up, it may be said that conflict refers to the struggle in which competing parties, attempting to reach a goal, strive to eliminate an opponent by making the other party ineffectual or by annihilation.

### **The Nature of Conflict**

- A conflict is the moment of truth in a relationship—a test of its health, a crisis that can weaken or strengthen it, a critical event that may bring lasting resentment, smoldering hostility, psychological scars. Conflicts can push people away from each other or pull them into a closer and more intimate union; they contain the seeds of destruction and the seeds of greater unity; they may bring about armed warfare or deeper mutual understanding.
- How conflicts are resolved is probably the most critical factor in all relationships. Unfortunately, most people try to resolve them by using only two basic approaches in which someone wins and someone loses, both of which outcomes are ineffective and harmful to the relationship.
- Few persons accept the fact that conflict is part of life and not necessarily bad. We look on conflict as something to avoid at all costs. We often hear husbands and wives boast that they have never had a serious disagreement—as if that means theirs has been a good relationship.
- Parents tell their children, “All right, there is to be no arguing tonight at the dinner table—we don’t want to spoil our dinner.” Or they yell, “Stop that arguing, right now!” Parents of teenagers can be heard lamenting that now that their children are older there are many more disagreements and conflicts in the family. “We used to see eye to eye on most things.” Or, “My daughter was always so cooperative and easy to handle, but now we don’t see things her way and she can’t see things our way.”
- At home or at work, most of us hate to experience conflict, are deeply troubled when it occurs, and are quite confused about how to handle it constructively. Actually, it would be a rare relationship if, over a period of time, one person’s needs did not conflict with the other’s. When any two people (or groups) coexist, conflict is bound to occur just because people are different, think differently, and have needs and wants that sometimes do not match.
- Conflict, therefore, is not necessarily bad—it exists as a reality of any relationship. As a matter of fact, a relationship with no apparent conflict may be unhealthier than one with frequent conflict. A good example is a marriage where the wife is always subservient to a dominating husband or vice versa, or a boss-subordinate relationship in which the subordinate is so deathly afraid of the boss that s/he does not dare cross him/her in any way.
- Most people have known families, especially large families, where conflict crops up constantly and yet these families are wonderfully happy and healthy. Conversely, we often see newspaper accounts of youthful criminals whose parents indicate complete astonishment that their boy could do such a thing. They say they never had any trouble with him; he had always been so “cooperative” which is usually a euphemism of “obedient.”
- Conflict in a family or a work group, openly expressed and accepted as a natural phenomenon, can be far healthier than most people think. Members have the opportunity to experience conflict, learn how to cope with it, and be better prepared to deal with it in later life. And family conflict may actually be beneficial, provided that the conflict in the home gets resolved constructively.
- This is the critical factor in any relationship: how their conflicts get resolved, not how many conflicts occur. It is the most critical factor in determining whether a relationship

will be healthy or unhealthy, mutually satisfying or unsatisfying, friendly or unfriendly, deep or shallow, intimate or cold, peaceful or violent.

### **Types of Conflicts in psychology**

Psychologists today catalog conflicts according to the course of action that will resolve them. There are three types of conflicts: **approach-approach, avoidance-avoidance, and single and double approach-avoidance.**

**Approach-approach conflicts** occur under two conditions: people are attracted about equally to goals. But, carrying out one goal means abandoning the other. For example, you have to choose between buying a car or traveling to Europe. On the same night you want to attend a party and a movie. Research suggests that approach-approach conflicts are easier to resolve than any other type. As you tentatively near one goal (say, a brown sweater or a shopping expedition), its attractiveness rises. As you emphasize the advantages (it is warm, it is cheap), you are closer to your choice. At the same time, the appeal of the other goal decreases, and the conflict ends. People generally resolve approach-approach conflicts easily because they always result in something pleasant. Moreover, the alternatives can be achieved in turn. You may be able to purchase the sweater next month. When a person is simultaneously repelled by two goals (objects, actions, or whatever) and obliged to select one, psychologists call it **avoidance-avoidance conflict**. For example, you must choose to clean your room or do the dishes. Research shows that as organisms approach an unattractive choice, it becomes more repellent. Avoidance-avoidance conflicts arouse a great deal of anxiety typically, and they are difficult to resolve. People are likely to waver between the unpleasant alternatives and attempt to escape from the conflict altogether. When a person is attracted to and repelled by one goal we have a **single approach-avoidance conflict**. A single option, in other words, has a bittersweet quality. For example, an otherwise appealing career may require a lot of education. A luxurious car is costly. Should I have the dentist take care of my cavity? These conflicts also are difficult to resolve and generate much anxiety.

**Double approach-avoidance conflicts** have two goals, each with good and bad points. The only available job is dull but will provide income. Should I go out with Agne or Lina? Agne is intelligent but hard to talk while Lina is talkative but simple. Like single approach-avoidance conflicts, double approach-avoidance conflicts are anxiety-provoking and hard to resolve.

Real conflicts may not fit neatly into these categories because people often face more than two choices. Moreover, when examined closely, all options in a conflict have both positive and negative aspects. At the very least, the selection of any appealing option limits other choices; the adoption of any negative option has an attraction, removing the conflict and the anxiety it generated. In short, life conflicts are likely to be of the approach-avoidance type.

### **Conflict is classified into the following four types:**

- **Interpersonal conflict** refers to a conflict between two individuals. This occurs typically due to how people are different from one another. We have varied personalities which usually results to incompatible choices and opinions. Apparently, it is a natural occurrence which can eventually help in personal growth or developing your relationships with others. In addition, coming up with adjustments is necessary for managing this type of conflict. However, when interpersonal conflict gets too destructive, calling in a mediator would help so as to have it resolved.
- **Intrapersonal conflict** occurs within an individual. The experience takes place in the person's mind. Hence, it is a type of conflict that is psychological involving the individual's thoughts, values, principles and emotions. Interpersonal conflict may come in different scales, from the simpler mundane ones like deciding whether or not to go organic for lunch to ones that can affect major decisions such as choosing a

career path. Furthermore, this type of conflict can be quite difficult to handle if you find it hard to decipher your inner struggles. It leads to restlessness and uneasiness, or can even cause depression. In such occasions, it would be best to seek a way to let go of the anxiety through communicating with other people. Eventually, when you find yourself out of the situation, you can become more empowered as a person. Thus, the experience evoked a positive change which will help you in your own personal growth.

- **Intragroup conflict** is a type of conflict that happens among individuals within a team. The incompatibilities and misunderstandings among these individuals lead to an intragroup conflict. It arises from interpersonal disagreements (e.g. team members have different personalities which may lead to tension) or differences in views and ideas (e.g. in a presentation, members of the team might find the notions presented by the one presiding to be erroneous due to their differences in opinion). Within a team, conflict can be helpful in coming up with decisions which will eventually allow them to reach their objectives as a team. However, if the degree of conflict disrupts harmony among the members, then some serious guidance from a different party will be needed for it to be settled.
- **Intergroup conflict** takes place when a misunderstanding arises among different teams within an organization. For instance, the sales department of an organization can come in conflict with the customer support department. This is due to the varied sets of goals and interests of these different groups. In addition, competition also contributes for intergroup conflict to arise. There are other factors which fuel this type of conflict. Some of these factors may include a rivalry in resources or the boundaries set by a group to others which establishes their own identity as a team.

## DEFENCE MECHANISMS

A **defence mechanism** is a coping technique that reduces anxiety arising from unacceptable or potentially harmful stimuli. Defence mechanisms are unconscious and are not to be confused with conscious coping strategies.<sup>[2]</sup> Sigmund Freud was one of the first proponents of this construct.

Defence mechanisms may result in healthy or unhealthy consequences depending on the circumstances and frequency with which the mechanism is used. In psychoanalytic theory, defence mechanisms (German: Abwehrmechanismen) are psychological strategies brought into play by the unconscious mind<sup>[5]</sup> to manipulate, deny, or distort reality in order to defend against feelings of anxiety and unacceptable impulses to maintain one's self-schema.<sup>[6]</sup> These processes that manipulate, deny, or distort reality may include the following: repression, or the burying of a painful feeling or thought from one's awareness even though it may resurface in a symbolic form; identification, incorporating an object or thought into oneself; and rationalization, the justification of one's behavior and motivations by substituting "good" acceptable reasons for the motivations. Generally, repression is considered the basis for other defence mechanisms.

Healthy persons normally use different defences throughout life. An ego defence mechanism becomes pathological only when its persistent use leads to maladaptive behaviour such that the physical or mental health of the individual is adversely affected. The purpose of ego defence mechanisms is to protect the mind/self/ego from anxiety and/or social sanctions and/or to provide a refuge from a situation with which one cannot currently cope.

One resource used to evaluate these mechanisms is the *Defense Style Questionnaire* (DSQ-40).

## TOP 7 PSYCHOLOGICAL DEFENSE MECHANISMS

In every human being, intrapsychic conflicts are bound to occur, usually because of sexual and aggressive impulses and tension. Usually, (or maybe hopefully), these conflicts

are resolved by themselves in a short amount of time; however sometimes this is not the case. Every now and then, our internal conflicts can last for long periods of times, and can potentially cause us great harm. Oftentimes anxiety can wear and tear at us, and should not be underestimated. Fortunately, our body has defense mechanisms to defend us from unpleasant emotions and feelings, such as anxiety. These are 7 of them:

### **1. Rationalization**

Rationalization is something that every human being does, probably on a daily basis. Rationalization is defined as “Creating false but plausible excuses to justify unacceptable behavior.” An example of this would be a student stealing money from a wealthy friend of his, telling himself “Well he is rich, he can afford to lose it.”

### **2. Identification**

Identification is defined as “Bolstering self-esteem by forming an imaginary or real alliance with some person or group.” This is a fairly common method of attempting to forget about ones troubles, happens fairly often, especially in insecure people. A person joining a sports team, fraternity, social clique or even subcultures are all examples of this.

### **3. Displacement**

Displacement is defined as “Diverting emotional feelings (usually anger) from their original source to a substitute target.” This frequently occurs in families, where we often see the father getting mad at the mother. The mother then takes her anger out on her son, the son in turn yells at his little sister, the little sister kicks the dog, and the dog bites the cat. Another example would obviously be a boxer taking out his frustration on a punching bag or an opponent.

### **4. Projection**

Projection is defined as “Attributing one’s own thoughts, feelings, or motives to another.” This characteristic is not uncommon, and we have probably all witnessed it. An angry man might accuse others of being hostile and antagonistic. Another example might be a con-artist might be under the impression that everyone else is trying to con him or her.

### **5. Regression**

Regression is defined as “A reversion to immature patterns of behavior.” There are plenty of examples of this (and we all know a couple we are guilty of). One of the more obvious examples might be a teenager not allowed to go on a trip for spring break, so he or she might throw a temper tantrum and scream and cry at his or her parents. Conversely, a teenager might revert back to infant behavior to receive sympathy from his or her parents.

### **6. Reaction Formation**

Reaction formation is one of the odder defense mechanisms, as it entails behaving completely contrary to how one truly feels. It is defined as “Behaving in a way that is exactly the opposite of one’s true feelings.” We see this all the time in relationships, where “I despise him” becomes “I love him.” Similarly, a boss might give an employee who he is frustrated with a raise.

### **7. Repression**

Repression underlies all the others, and it is possibly the oddest of them all. Repression is defined by “Keeping distressing thoughts and feelings buried in the unconscious.” There has been much controversy over repressed memories, and many court cases as a result of this. A little girl’s memory of being molested when she was a toddler might become a repressed memory. The little girl will completely forget about this experience, until the memory might resurface years later. The trouble is, there have been various accounts of memories resurfacing that have no truth or bearing to them. Repressed memories then are unreliable and oftentimes untrue. Conversely; there have been several cases of repressed memories being accurate; one must simply take an account of a repressed memory with a grain of salt.