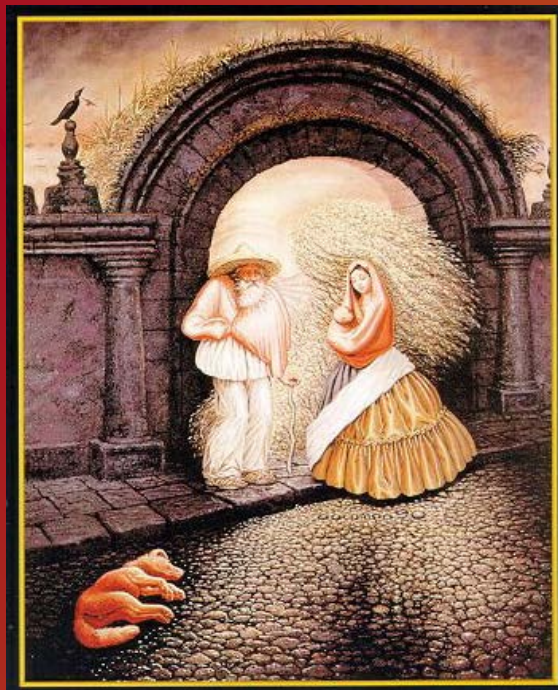# PSYCHOLOGY OF HUMAN BEHAVIOUR

EXT 502

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PSYCHOLOGY: MEANING AND DEFINITIONS

Psychology has emerged out as a separate subject of study. Prior to this it was considered as a part of philosophy. Psychology is, in effect, child of two parents: philosophy (the pursuit of wisdom through logical reasoning) and physiology (the study of vital life processes of an organism such as respiration, digestion, and reproduction). Wilhe|m Wundt, M. D. (1832-1920), usually called as father of psychology. He founded psychology laboratory in Germany and called himself a psychologist.

Meaning and definitions

The term psychology is derived from two Greek words – *psyche* (soul, or mind) and *logos* (science or study). Thus literally it means study or science of soul or mind.

- Till the 16th century, psychology was considered as the science of soul. This definition was rejected as soul was soul considered as a very ambiguous word. There was controversy regarding the nature of soul, its location in the body, etc.

- In the 18th century, psychology was conceived as the science of mind. But difficulty regarding the meaning of mind still persisted. It was considered very doubtful if mind as such can be studied and which mind? Is it the study of right mind or wrong mind? There was no answer to these questions.

- Later, psychologists considered psychology as the science of consciousness. This definition was rejected because there are three levels of consciousness – focus of consciousness, fringe of consciousness and unconsciousness. Only one level was taken into consideration.

- Most contemporary psychologists considered psychology as the science of behaviour of organism. This includes human behaviour as well as animal behaviour, normal behaviour and adult behaviour, child behaviour and adult behaviour.

Some of the definitions of psychology are presented below:

- Psychology is the science of the activities of individual in relation to the environment (Woodworth).

- Psychology is the positive science of behaviour (Watson).

- Psychology is the science of human behaviour and experience (Cruze).

- Psychology is the science of mental activity of an organism (Guilford).

These definitions contain some truth but are not totally correct. A compressive definition of psychology is given by Charles E. Skinner. According to him,

Psychology deals with the responses to any and every kind of situation that life presents. By responses or behaviour is meant all forms of processes, adjustments, activities, and experiences of the organism.

Finally, psychology can be defined as the scientific study of behaviour and mental processes.

Key attributes of this definition

- Scientific study implies carefully controlled observation, description, and experimental investigation to collect information and organising this information.

- Behaviour broadly refers to all action that can be observed such as physical activity and speaking as well as mental processes meant to private, cognitive processes that can not be observed directly such as perceiving, thinking, feeling, motives, remembering, etc.

Scope

Psychology discovers the general laws that explain the behaviour of living organisms and the most important living organism is human being itself. The individual responds to stimulation and by such responses adjusts to the environment. This continual adjustment constitutes the activity of the individual during his life time.

Psychology is seeking to discover what particular conditions produce a given type of activity, so that eventually the psychologists will be able to control and direct human activity by controlling these conditions.

Psychology studies the abnormal as well as the normal person. It also attempts to discover the source of knowledge, beliefs, and customs and to trace the development of thinking and reasoning, so as to find the kinds of environmental stimulation that produce certain types of activity.

This knowledge of psychology is useful to extension personnel because it will help them to find causes of prejudice, the habit of sticking to old practices and ways of doing things, the doubts, and lack of confidence and factors affecting motivation.

Importance

The study of psychology helps in identifying:

1. The abilities of individual.

2. The needs of individual techniques to be employed to motivate them.

3. The hereditary and environmental factors that affect behaviour.

4. The levels of achievement motivation of the individuals.

5. The factors that lead to differential perceptions.

6. The causes of emotions and frustrations in human beings.

7. The causes of retarded learning.

8. The levels of knowledge and attitudes possessed by individuals

9. The different psychological traits possessed by individuals.

There is no single cause of human behaviour. It results from the interplay of diverse factors which create a set of circumstances through the dynamic interaction of man and his environment. According to *field theory* in psychology, the interaction of situational factors with the perceived environment can be described as a *field of forces*, a *system in tension*, or in short, a psychological field. This can be expressed in a formula as follows:

b = f (P, E sub)

Behaviour is a function of the interaction of the individual and his perceived environment. It is not the totality of factors in his environment that influences his behaviour but only those which are perceived by the individual.

Present information, past experience (past knowledge), and expectations (the anticipation of future events) contribute to the subjective perception of circumstances. Behaviour can be described as follows.

A person (P) in his environment (subjectively perceived environment) feels something is worth striving for (a target, a desirable state of affaires, an object that is positively desired), and he mobilises his personal powers to reach the goal in question. When something negative or undesirable occurs, he activates his personal powers in the same way to avoid the negative situation. Ways of reaching targets and avoiding negative situations can be blocked or impeded by barriers or inhibiting factors (lack of knowledge, uncertainty about consequences, insufficient means, social sanctions, etc).
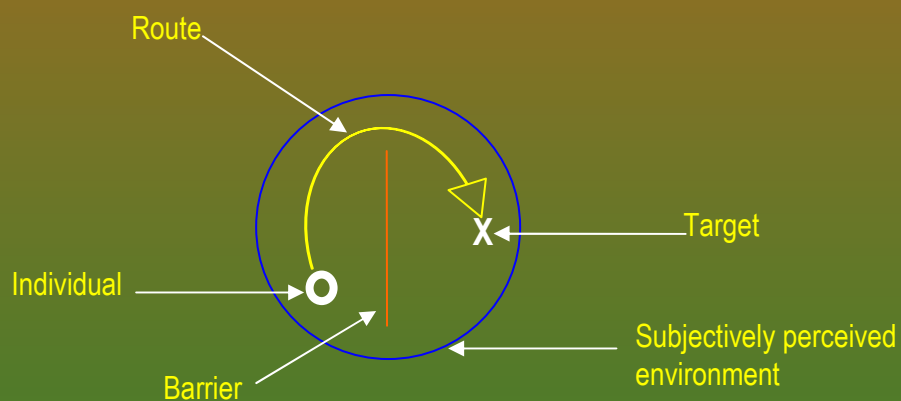
Fig. 1: Model of the Psychological Field

PSYCHOLOGY: MEANING AND DEFINITIONS

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Phase 1　　　　　Phase 2　　　　　Phase 3

Inhibiting forces

Driving forces

Behaviour at different times

Time

Disturbance of former equilibrium	Shift to new equilibrium	Stabilisation of modified behaviour
Perception of problem	Stages of achievement	Solution to problem or relapse

Fig. 2: Model of Behaviour Modification

Most of the Governments often use policy measures such as laws or subsidies rather than extension or information programmes for changing the human behaviour or a combination of these measures with extension programmes. We need to understand the different methods that can be used to influence human behaviour if we want to know when it is feasible or desirable to use extension. Some of these methods are discussed in this lecture. They are not mutually exclusive. Often they merge one into another. Whether the methods are of one type or another depends partly on the values of the observer.

1) Compulsion or coercion

Power is exerted by an authority, forcing somebody to do something. The person applying coercive power requires the following conditions:

- he must have sufficient power;

- he must know how he can achieve his goals; and

- he must be able to check whether the person being coerced is behaving in the desired manner.

Application of coercive power means that the person applying the power is responsible for the behaviour of the person he is trying to change. It is possible to achieve behaviour change with a large number of people in a relatively short time using this method. However, it can be very expensive to maintain and control, and the people being coerced may not always behave as required. The method is unsuitable for changing behaviour that requires initiative by the people being coerced. Extension may be essential to make the sanctions known, and to try to persuade the people being coerced to follow regulations of their own free will. Many government regulations and laws relating to public health, traffic control, etc. are of this type. Dairy inspectors sometimes have to coerce dairy farmers to follow more hygienic practices in their milking sheds, using regulations and the threat of fines and other sanctions to achieve their goals.

2) Exchange

Goods or services are exchanged between two individuals or groups. The conditions necessary for applying this method are that:

- each party in the exchange process considers the transaction to be in their favour;

- each has the goods or services desired by the other; and

- each can only deliver his part when the exchange goods or services have been delivered by the other, or he can trust that this will be done.

Exchange is often a very efficient method for meeting the needs and interests of different groups, parties, or individuals. However, it is not always efficient or fair. Sometimes the other party is inclined to deliver as little as possible of the expected exchange. We see this situation in industrial negotiations between employers and employees, and in trade negotiations between peasant farmers and city merchants. Extension can playa useful role by drawing the attention of a potentially disadvantaged partner in an exchange to ways of preventing the other partner from gaining an unfair advantage. For example, farmers in a remote part of a developing country can be given information about the prices paid for the produce in urban markets. They can also be given advice about ways of ensuring fair and legal trading arrangements with their urban-based trading partners.

3) Advice

It is given on which solution to choose for a certain problem. We can use this method if:

- the farmer agrees with us about the nature of his problem and the criteria for choosing a 'correct' solution;

- we know enough about the farmer's situation and have adequate information to solve his problem in a way that has been tested scientifically or in practice;

- the farmer is confident that we can and will help him with a solution to his problem;

- we don't think it necessary or possible for the farmer to solve the problem himself; and

- the farmer has sufficient means at his disposal to carry out the advice.

The adviser is responsible for the quality of his advice. While the adviser's specialised knowledge may be put to good use, there is usually little development of the farmer's capacity to solve his own problems. Doctor-patient relationships and many advisory situations between extension agents and farmers are good examples of this method.

4) Openly influencing a farmer's knowledge level and attitudes

This method may be applied when:

- we believe the farmer cannot solve his own problem because he has insufficient or

incorrect knowledge, and/or because his attitudes do not match his goals;

- we consider the farmer can solve his own problems if he has more knowledge or has changed his attitudes;

- we are prepared to help the farmer collect more and better knowledge and to help him change his attitudes;

- we have this knowledge or know how to get it;

- we can use teaching methods to transmit this knowledge or to influence the farmer's attitudes;

- the farmer trusts our expertise and motives, and is prepared to cooperate with us in our task of changing his knowledge or attitudes.

It is possible to achieve long-term behavioural change using this method. The farmer's self-confidence and capacity to solve other similar problems in the future by himself is increased. It is a labour intensive method which is often used in extension and education programmes. For example, an extension agent may teach a farmer how to control insect pests in his crop with the strategic use of pesticide sprays. His first task will be to explain the life cycles of the insect pest and the crop so that the farmer will understand when each is most vulnerable to attack. If the farmer knows and understands how to use pesticide sprays safely and at the most vulnerable times of the insects' life cycle, he will be in a better position to solve similar problems in the future. This means he is less likely to ask extension agents for advice whenever there is an insect problem, but will use his knowledge and experience to solve the problem himself. It is also possible to try to influence only knowledge level or only attitudes. Most of the conditions we mentioned remain valid in both cases.

5) **Manipulation or influencing the farmer's knowledge level and attitudes without the farmer being aware**

Conditions for using this method are:

- we must believe it is necessary and desirable for the farmer to change his behaviour in a certain direction;

- we think it is unnecessary or undesirable for him to make independent decisions;

- we control the techniques to influence farmers without them being aware of it; and

- the farmers do not actively object to being influenced in this way.

In this situation the person exerting influence bears responsibility for the consequences of his actions. At times he may have his own interests in mind, as we find in many commercial advertising campaigns and in political propaganda. However, it is possible to have the best interests of the farmer in mind, as we find in many government sponsored health and safety campaigns. Dangerous chemicals are widely used in agriculture to control plant diseases and insect pests. Most farmers would agree it is in their best interests if extension agents influence them to use these chemicals safely and correctly.

Extension also has an important role to play in making farmers aware of subtle or hidden attempts to influence them made by people who stand to gain financially. For this reason the extension services in industrialised countries publish reports on official and impartial tests of tractor and farm machinery performance. Farmers can then check these performances against the claims made by the manufacturers in their advertising campaigns.

The methods discussed so far are directed at influencing the farmer himself. Important changes can often be achieved by directing influence at the farmer's situation. The next methods to be discussed are examples of changes to the farmer's situation.

6) Providing Means

We can apply this method under the following conditions:

- the farmer is trying to achieve certain goals which we consider to be appropriate;

- the farmer does not have the means available to achieve these goals, or he does not wish to risk using these means; and

- we have these means and are prepared to make them available to the farmer on a temporary or permanent basis.

Specific means in agriculture include short- and long-term credit for the purchase of land or inputs such as fertilizer, certified seed, sprays, farm machinery, production subsidies, and so on. Correct and timely application of these means, which are usually financed by public funds, may generate large rises in individual farmers' incomes. While this may help distribute wealth more widely among the population it may also concentrate the wealth among those with the greatest power or influence in obtaining the means. Costs of providing the means may be recovered through higher taxes on the increased incomes, although there is also the danger

that loans and other means will not be repaid or replaced in full, thus making them an expensive form of influence if not carefully controlled and supervised. The 'providing means' approach can be a temporary measure to stimulate farmers to try an innovation.

Government departments, including the extension service, use this method for making financial and physical means available. Even if the extension service is not directly involved in distributing credit and inputs, it has an important role to play in drawing farmers' attention to the availability of these means for improving their situation. Extension agents can also help farmers apply for subsidies, credit, etc. and assist them in making decisions regarding when to use these means.

7) Providing service

This may involve taking over certain tasks from the farmer. The method can be used if:

- we have the knowledge and/or means available to perform the task better or more economically than the farmer;

- we agree with the farmer that it is useful to perform these tasks; and

- we are prepared to perform them for him.

Loan and subsidy applications, economic returns for livestock numbers and crop production, and other lengthy forms are an important but time-consuming part of modern farming. Many farmers find it difficult and tedious filling out such forms, and often are very pleased to receive free help and advice from extension agents. However, if free assistance is given indefinitely the farmer is likely to become dependent and less self-reliant. Clearly, it is in the best public interests if he can learn to complete these tasks efficiently himself, or be prepared to pay other specialists to help him. The extension agent's role in this situation is to give initial help or training in how to complete the tasks, or to direct his client to appropriate sources of professional assistance. There are cases where farmers are considered to be incapable of learning how to perform the task themselves.

8) Changing the farmer's social and/or economic structure

Methods for changing the socio-economic structure in rural areas may be important means of influence when:

- we agree with the farmer about his optimal behaviour;
- the farmer is not in a position to behave in this way because of barriers in the

economic and/or social structure;

- we consider changes in this structure to be desirable;
- we have the freedom to work towards these changes; and
- we are in a position to do this, either through power or by conviction.

Attempts to change social structure will usually be opposed by some individuals or groups, especially when they think these changes will lead to them losing power or income. Farmers who join together in an association may have sufficient power to overcome this type of resistance.

Extension agents can help farmers understand how economic and social structures influence their prospects for making a better living and enjoying a more comfortable style of life. They can also help them to explore ways of changing the structures or situations which prevent them from enjoying a better life. Extension agents can help farmers to predict their chances of success and to foresee possible consequences of any action they may take to change their situation, by giving them deeper insight into the social and economic forces that influence them. Extension and community development workers have helped many poor and disadvantaged people win a more equitable position in their society by showing them how to participate in political processes at the local and national level. Recent programmes of the Food and Agriculture Organization (F AO) of the United Nations have emphasized participation of small farmers, small fishermen, and peasants in training and development projects which help these relatively powerless people to form self-help groups for improved distribution of inputs and marketing of produce.

We have seen that methods of influence vary according to the degree of harmony or conflict of interest between those who influence and those who are influenced, the extent to which both parties are aware of any conflict of interest, and the amount of power each possesses. It is important for the farmer and the extension agent to be aware of their common interests in an extension topic. Each depends on the other, with a change by either one possibly destroying a mutually beneficial relationship. It is usually easier for the farmer to break this relationship as he is not constrained by the same ethical considerations as the extension agent. However, by virtue of his specialised knowledge the extension agent has a potential source of power he could misuse. His hold on farmers could be even stronger where he combines his advisory activities with supervision of credit, distribution of inputs, enforcement of regulations, etc.

Perception refers to the way the world looks, sounds, feels, tastes or smells. It is what is immediately experienced by a person. From another point of view, perception can be defined in terms of the *process* giving rise to our immediate experience of the world. Perception can not be observed directly in behaviour and must be inferred from changes in performance or behaviour. The famous American psychologist William James has said – "part of what we perceive comes through the senses, from the objects before us, another part….. Always comes out of our own head." This 'out of the head' part of the quotation refers to the elaborations, transformations, and combinations of sensory inputs that make our experience or perception of the world what it is.

We receive elementary inputs about the world through our senses and organise the bits and pieces of the input in ways that are advantageous to us in our attempts to deal with the world. The total process of receiving such inputs consists of four phases: stimulation, registration, organisation, and interpretation. Usually, however, it is the last phase which is referred to as perception. The efficacy of facts seems to dwindle progressively as the facts pass through the four successive phases. You can understand interpersonal situations better if you appreciate how you and another person construct perceptions.

The phase of interpretation or giving meaning to a stimulus is determined by external factors (stimulus characteristics) as well as personal factors such as the perceiver's own needs, prior experience, mental sets, and emotions. In the context of person perception and social interaction, these personal factors operate rather insidiously; they are subliminal in operation and thus stay below one's threshold of consciousness. Perception is the first event in the chain which leads from stimulus to action.

Nature of perception

1. *Perception is a process*

   Perception is essentially a process rather than a product and outcome of some psychological phenomenon.

2. *Perception is the information extractor*

   Our sensory receptors are bombarded continuously by various stimuli present in our environment. Perception forms the duty by extracting relevant information.

3. *Perception is preparation to response*

Perception is the first step towards active behaviour of an organism. Our sensory receptors are just the receiving and transmitting centres of the sensory information.

4. *Perception involves sensation*

The relationships between sensation and perception are directive what we do have in sensation is always part of perception.

5. *Perception provides organisation*

In addition to the help provided in deriving meaning to sensory impressions, perception also helps in its proper arrangement and organisation.

6. *Perception is highly individualised*

Perception of one individual differs significantly from another person in the same situation. Different individuals do not perceive objects, events, or relationships in much the same way. Event individual perceptions of the same event may vary.

Definitions of perception

The meaning we attach to the raw information received through our senses is called *perception*. Alternatively, interpretation of sensory information is perception (Woolfolk, 1995).

Perception can be defined as a process by which individuals organise and interpret their sensory impressions in order to give meaning to their environment (Robbins, 2001).

Van den Ban & Hawkins (1988) defined perception as the process by which we receive information or stimuli from our environment and transform it into a psychological awareness.

Social perception is the process through which we attempt to understand other persons and ourselves (Baron and Byrne, 1993).

LAWS OF PERCEPTION

Gestaltists concept of perception

There have been two major approaches used by psychologists in conceptualising the nature of perception – (I) Gestalt's Tradition and (ii) Behaviouristic Tradition. 'Gestalt' is a German world meaning 'form', 'shape', 'pattern' or 'configuration'. The pioneers in this approach to perception are German origin. Max Wertheimer, W. Kohler and K. Koffka. These leaders of

the Gestalt school reacted against the attempts of the psychologists of the late 19th century to reduce perception to separate elements. The Gestalt psychologists felt that this approach overlooked the essential wholeness of behaviour and that *perception ought to be studied as a total process and not its components*. They argued that the whole is more than the sum of its parts.

Behaviouristic principles of perception

The strongest criticism of the Gestalt school of thought came forth from the Behaviourists who said that the perceptual tendencies to organise stimuli perceptually are acquired through learning and experience and are *not innate* as maintained by the Gestaltists. Hebb, who has been one of the more articulate spokesmen for the behaviourists maintained that if perceptual experience tends to be similar for all people, it does not mean that it is innate but only that during their developmental periods, they encountered *the same kind of stimuli* i.e. lines, angles, curves, etc. and then somewhat similar experiences.

Form Perception

The sensory inputs we receive come into our awareness as shapes, patterns, and forms. We do not ordinarily perceive the world around us as patches of colour, variations in brightness, or loud sounds. Instead, we see tables, floors, walls, trees, and buildings; we hear automobile horns, footsteps, and words.

Figure and Ground in Form Perception

Perhaps the most fundamental process in form perception is the recognition of a figure on a ground. We see the objects and forms of everyday experience as standing out from the background. Pictures hang on a wall; words are seen on a page. In these cases, the pictures and words are perceived as the figure, while the wall and the page are the ground. The ability to distinguish an object from its general background is basic to all form perception.

Fig. 1: Vase or Two faces

Figure 1 shows a reversible figure ground relation. The figure can be seen either as a vase or as two profiles. When you see the vase, you perceive the light area as the figure against a dark ground. It is seldom possible to see both the vase and the profiles simultaneously. The figure-ground relation is also found in senses other than vision. When we listen to a symphony, we perceive the melody or theme as the figure and the chords as ground. In rock

music, the guitarist uses repetitive chords as the ground for a more or less varied song, or figure.

Organisation in Form Perception

When several objects are present in the visual field, we tend to perceive them as organised into patterns or groupings. Such organisation was studied intensively in the early part of 20th century by the Gestalt psychologists. They emphasised that organised perceptual experience has properties which cannot be predicted from a simple analysis of the components. Gestalt psychologists stressed that *"the whole is more than the sum of its parts."* This simply means that perception has its own new properties after organisation has taken place. Organisation in perception partially explains our perception of complex patterns as unitary forms, or objects. We see objects as objects only because grouping processes operate in perception. Without grouping processes, the various objects and patterns we perceive – a face on a television screen, a car, a tree, a book – would not "hang together" as objects or patterns. They would merely be so many contoured dots, lines, or blotches. The major principles (sometimes even called laws) of perceptual organisation are presented as follows.

One organising principle is **proximity**, or **nearness**. The law of proximity says that items which are close together in space or time tend to be perceived as belonging together or forming an organised group. The principle of proximity is that *features which are close together are associated*. In Figure 2, for example, we see three pairs of vertical lines instead of six single lines. In Figure 2a, what you are likely to notice fairly quickly is that this is not just a square pattern of dots but rather is a series of *columns* of circles. Below is another example (Fig. 2b). Here we are likely to group the circles together in *rows*.

Fig. 2: Three pairs of vertical lines
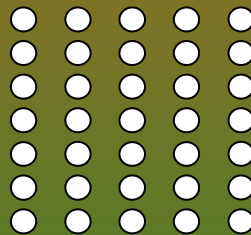
Fig. 2a: Circles in columns
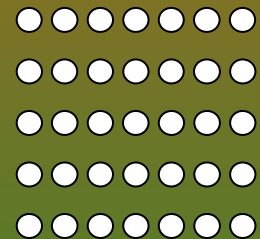
Fig. 2b: Circles in rows

A second major principle of perceptual organization is **similarity**. Look at the example below (Figure 3 and Figure 3a); here the little circles and squares are evenly spaced both horizontally and vertically so proximity does not come into play. However, we do tend to see

alternating columns of circles and squares. It is because of the principle of similarity - *features which look similar are associated*. Without the two different recurrent features we would see either rows or columns or both.
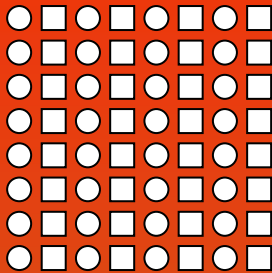
Fig. 3
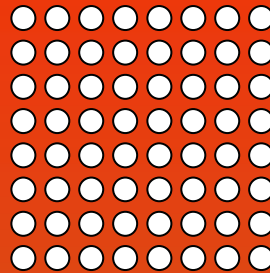
Fig. 3a

A third principle of perceptual organization is that of *good **continuity** or continuation*. This principle is that *contours based on smooth continuity are preferred to abrupt changes of direction*. The objects or stimuli are perceived as a unit on the basis of their continuity. It is the tendency to perceive a line that starts in one way as continuing in the same way. For example, a line that starts out to be a curve is seen as continuing on a smoothly curved course (Figure 3). In this the perception is organised by selecting the circle 'c' or 'd' instead of breaking continuity by selecting 'b' or 'a'. It explains why our attention being held more by continuous patterns rather than discontinuous one.
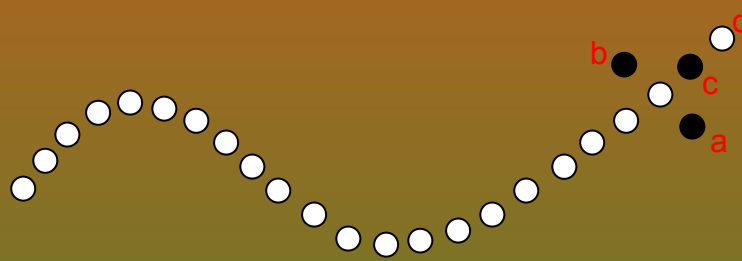
Fig. 3

Closure is a fourth law of perceptual organisation. This law makes our perceived world of form more complete than the sensory stimulation that is presented. The law of closure refers to perceptual processes which organise the perceived world by filling in gaps in stimulation. By their action we perceive a whole form, not just disjointed parts. In Figure 4a, for example, object is seen as a circle with gaps in it, and in Figure 4b the object seen as a square with gaps in it – not as disconnected lines. If these incomplete figures were flashed in a

tachistoscope, a device used in perceptual experiments for the very brief presentation of stimuli, they might even be perceived as complete figures without gaps.
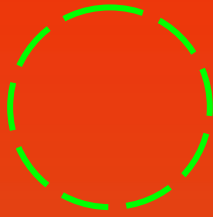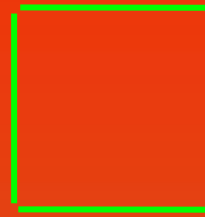
Fig 4a   Fig 4b

In all these laws of organisation, the principle of the Gestalt psychologist that the "whole is more than the sum of its parts" can be observed at work. In other words, the perceived organisation has properties of its own that are not simply the result of adding together the "atoms" of individual sensory inputs. It is the organising principles, not just simple additions of sensory elements that are crucial for our perception of form.

Constancy of Perception

The world as we perceive is a stable world. When we stand directly in front of a window, its image on the light sensitive surface of the eye – the retina – is rectangular. But when we move to one side of the window, the image becomes more like a trapezoid. This is simple geometry. Despite the change in the retinal image, however, we continue to perceive the window as rectangular. Perceptually its shape has not changed, even though its image on the retina has.

The rest of our perceptual world is just as stable, and this stability is present early in life. A man's size does not appear to change much as he walks toward us. A dinner plate does not look like a circle when viewed from one angle and an ellipse when viewed from another. The location of a sound does not appear to change when we move our heads. Stability of perception helps up adapt to the environment. It would be impossible to operate in a world where sounds changed their locations when we moved our heads, and where objects changed their shapes and sizes when we saw them from different positions and distances. Imagine what it would be like if your friends had a multitude of sizes and shapes. The stability of the environment as we experience it is termed *perceptual constancy*. In our visual world, perceived shapes, sizes, colours, and brightness show perceptual constancy.

Depth Perception

Depth perception was a puzzle to scientists and philosophers for hundreds of years. They could not understand how we can see a three-dimensional world with only a two-dimensional, or flat retina in each eye. The retina is able to register images only in terms of right-left and up-down. Yet we perceive the world as having the extra dimension of depth.

Today we realise that the ability to perceive depth is no more amazing than any other perceptual accomplishment. We are able to make use of information, or cues, in the sensory input to "generate" the three-dimensional world that we see. Thus, the question is: What are the cues we use to see depth and distance? Part of the answer lies in the cues received by each eye separately – the *monocular* ("one-eyed") *cues* for depth perception. Another part of the answer is found in the cues we get from both eyes working together – the *binocular* ("two-eyed") *cues*.

Human perception is very selective. Humans see what they want to see or what they are mentally set or ready to see. Humans pay attention only to a few stimuli present in the environment. Several physical and psychological factors influence what we select or pay attention to. One's needs, values, cultural background, past experience, interests etc determine one's perceptual readiness. Any characteristic that makes a person, object, or event stand out will increase the probability that it will be perceived. Why? Because it is

Selective perception

People selectively interpret what they see on the basis of their interests, background, experience, and attitudes.

impossible for us to assimilate everything we see, hear, observe – only certain stimuli can be taken in. This tendency explains why you are more likely to notice those things that are like your own. Whereas as several other things goes unnoticed. Since we can not observe everything going on about us, we engage in selective perception.

From a purely biological standpoint our senses are utilised to perceive the world around us and to help us learn about it. We take in stimuli from this world by tasting, touching, smelling, hearing, and seeing what's going on around us. Since stimulation comes at us from several directions at once, we have the biological capability to physically *tune out* most of what we do not need for the task at hand.

Selective perception from a psychological standpoint is how we view our world to create or justify our own reality. It means, for example, that what we wish to see in this world we will see in this world. Information we receive will be processed in a manner that harmonises with and supports our current beliefs. In other words, as Nietzsche put so well, there really are no facts, only interpretations.

Selectivity works as a shortcut in judging other people. Since we can not assimilate all that we observe, we take in bits and pieces. But those bits and pieces are not chosen randomly; rather, they are selectively chosen according to our interests, background, experience, and attitudes. Selective perception allows us to *speedy read* others, but not without the risk of drawing an inaccurate picture. Because we see what we want to see, we can draw unwarranted conclusions from an ambiguous situation.

What makes selective perception different from other types of perception is the way it's used. In general, selective perception is used to protect us. The type of selective perception we engage in when we drive protects us from getting into an accident. In this way, we don't attend to all stimuli coming our way at one time. We ignore much of what is not needed for the task at hand. Selective perception utilised in this manner is what Sherif and Cantril call "selectivity of perception" and refers to an individual's investigation of the objective world to which the individual is actually paying attention.

Past experience also influences our selectivity of perception. Farmers who have worked with livestock for many years will be much more aware of small differences in body shape, quality of wool or fur and general condition of animal than a person who is unaccustomed to working with livestock. Training is a way of providing an organised and structured set of past experiences to influence our perception. For example, the agricultural student who has received training in agronomy or botany will see a pasture as a collection of specific plants, some of which have high nutritive value and others of which might be considered to be useless weed. The untrained observer, on the other hand, may see it simply as a patch of grass.

The important point for the extension specialist is that training changes your perceptions from those of most other receivers, usually in the direction of greater sensitivity to detail. Thus training may lead us to have different perceptions of situations from those of untrained people. This may create problems if we assume we are seeing or hearing the same thing as those around.

Perception is the way we receive and interpret the information we are presented with. Understanding of our surroundings is perceived by our sense organs. Light and radiation stimulate our eyes; sound waves and air vibrations stimulate our ears; tastes stimulate our tongues; and smells stimulate our nose. Our skin is also a sense organ, perceiving pressure, pain, and temperature.

Through perception, we learn to associate certain things as being known objects, events, or people. However, perception does not tell us about the objects, events, or people themselves. Our brains must organise and interpret what our sense organs perceive, converting environmental stimuli into information about the world.

There are three factors that make up perception:

- Detection: Sensing the stimulus.

- Recognition: Identifying the stimulus.

- Discrimination: Differentiating between stimuli (such as different musical notes).

Receptors are important to perception. Sensory systems (such as vision and hearing) each have specialised receptors which are sensitive to certain types of stimuli. They receive the environmental stimuli, and send information to the brain via nerve impulses. For example, the human eye has two types of receptors in the retina: rods and cones. The rods respond to the intensity of light, resulting in detailed black-and-white vision. The cones respond to the frequency of light, perceiving colour. Rods allow us to have detailed vision even in dim light, while the cones enable us to perceive colour and vivid detail in bright light.

Many factors (including experience, expectations, and physical, emotional, and psychological influences) affect what we perceive. Personal experience, emotion, and motivation are also important in determining our perception. Experiments have shown that the perception of form, colour, pain, and touch differ between cultures and age groups. Therefore habits, customs, and education also influence perception. Emotions can prevent perception entirely, such as when an emotional shock causes someone to temporally lose their hearing. We are also more likely to perceive stimuli that are related to our motivation. Motivation affects the characteristics we observe in people, objects, and events, such as when a highly anticipated day seems to take forever to arrive while the day of an exam seems to rapidly approach.

While many people believe that an illusion is a false perception, it is actually defined as anything that is inconsistent with other perceptions. Since perceptions do not impart information about objects or events themselves, no sensory system is better than another at receiving truthful perceptions.

Closure is a general principle of perception that allows us to perceive general or incomplete things as being complete. Our experience and knowledge allows us to use closure to fill in parts of a perception that may be missing, or associate a general perception with a known one. On the other hand, constancy is the principle stating that despite changes that may occur, we tend to perceive objects as being constant in their physical properties (such as size, shape, and colour). For example, under different kinds of light, we tend to perceive an apple as being red despite not actually seeing that colour. The opposite of constancy can also occur, when an object stays the same but we begin to perceive it differently. M C Escher's art involving optical illusions is a prime example of this.

People's behaviour is based on their perception of what reality is, not on reality itself. The world as it is perceived is the world that is behaviourally important. Therefore perception of the farmers about technology, extension agency, farming etc affects the adoption of innovation. The following reasons highlight the importance of perception in extension.

- Faulty perception occurs about object or task that will have serious implications in field. For example, good production on high yielding variety leads to motivate farmer to grow high yielding variety.

- Differential perception occurs when meaning of object is not conceived properly that will lead to faulty adoption. For example, gm/kg, lit/gallon, ml/lit.

- Distorted perception occurs when messages are distorted then the implementation or adoption will also be faulty. For example, if diagnosis of disease is wrong, then control measures will also be wrong.

- If the farmer is to perceive the objects or messages properly and accurately, the extension agent has to understand the qualities of stimulus and perceive it properly and then communicate the innovation. For example, new pesticides which is very effective but have residual effect should not be used.

- Perception of the individual mostly depends on his need of message. Hence the extension agent should communicate only such messages. For example, to the vegetable growers, pest and disease of sugarcane need not be told because he is not having the need of them.

Meaning and Definitions

The most general and simplest view is that attitudes are likes and dislikes individuals. There are numerous definitions of the concept attitude given by social psychologists. Most of them view attitudes as *inclinations* or *predispositions*. Thurstone (1946) has defined *attitude as the degree of positive or negative affect associated with some psychological object*.

Allport (1935) reviewed the literature on the topic and defined *an attitude as a mental and neural state of readiness, organised through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related*. Following are the important elements of Allport's definition:

- Attitudes are private

- Attitudes are formed and organised through experience. That is, we are not born with our attitudes we acquire them via the *socialisation* process

- An attitude is not passive, but rather it exerts a dynamic or directive influence on behaviour. Attitudes believed to directly influence behaviour

More recently, Petty and Cacioppo (1986) defined attitudes that capture the essence of several definitions. According to them, *attitudes are general evaluations people make about themselves, other persons, objects, and issues.* In other words, attitudes involve lasting likes and dislikes, preferences and aversions, towards specific aspects of the external word. This definition is useful, for attitudes involve affective reactions and must persist overtime to be of any practical (or theoretical) importance. However, recent evidence suggests that to be truly comprehensive, this definition must be broadened in two respects. It should reflect the fact that attitudes involve more than just positive or negative feelings (Pratkanis, Breckler, and Greenwald, 1989). Memories of past experiences with attitude objects, mental images of them, and several other aspects of cognitions also play a part (Breckler and Wiggins, 1989).

Second, a comprehensive definition of attitudes should reflect the fact that they serve important functions for the persons who hold them. Taking these points into account, Breckler and Wiggins (1989) offered the following definition. *Attitudes are enduring mental representations of various features of the social or physical world. They are acquired through experience and exert a directive influence on subsequent behaviour.*

In sum, attitudes are internal representations of various aspects of the social or physical world – representations containing affective reactions to the attitude object and wide range cognitions about it (for example, thoughts, beliefs, judgements). Attitudes reflect past experience, shape on going behaviour, and serve essential functions for those who hold them.

Components of attitude

Our *response* to an object is often in line with what we *believe* about and how we *feel* toward that object. Thus an attitude comprises three parts.

- **Cognitive component**

  The cognitive component is the storage component where we organise information (opinion & Belief) about an attitude object. For example, the belief that discrimination is wrong.

- **Affective component**

  The affective component is the emotional (like-dislike) component of an attitude. For example, I do not like Mr 'X' because he discriminates against a specific group.

- **Behavioural (conative) component**

  The behavioural component is the intention to behave in certain way toward someone or something. For example, I might choose to avoid Mr 'X' because my feeling about him.

Having an *idea* or *belief* about the object is the minimum condition for having an attitude with regard to it. When the object of which you have an idea becomes associated with pleasant or unpleasant events or with your aspirations and goals, you attach a corresponding *affect* or an *emotional* tinge to that object. This affected belief energises and directs your *response* with regard to the object.

Attitudes and Behaviour (The A-B Relationship)

Attitudes signify what people think of, how they feel about, and how they tend or intend to behave toward an attitude object. How about the actual behaviour of people? Could we predict a person's overt behaviour from our knowledge of his/her attitudes? Attitudes and behaviour are often closely linked. However, this is not always the case; the relationship

between them is more complex than first meets the eye. There are several factors that play an important role when attitudes predict behaviour.

- The *importance* of attitude: important attitudes are ones that reflect fundamental values, self-interest, or identification with individuals or groups that a person values. Attitudes that individuals consider important tend to show a strong relationship to behaviour.

- The s*pecificity* of attitude: specific attitude predict behaviour better than general ones. The more specific the attitude and the more specific the behaviour, the stronger the link between the two.

- The *accessibility* of attitude: attitude that are easily remembered are more likely to predict behaviour than attitude that are not accessible in memory. You are more likely to remember attitudes that are frequently expressed. So more you talk about your attitude on a subject, the more you are likely to remember it, and the more likely it is to shape your behaviour.

- Discrepancies between attitudes and behaviour are more likely to occur *social pressures* to behave in a certain way hold exceptional power.

- The attitude-behaviour relationship is likely to be much stronger if an attitude refers to something with which the individual has direct *personal experience*.

- Fishbein and Ajzen (1980) proposed that the best predictor of behaviour is one's *intentions*. Whether a person behaves in an attitude consistent way or not depends on the nature of the behaviour intention formed. Behaviour intentions are influenced by three factors

  o *Attitude toward the behaviour*: How does the person feel about the behaviour in question?

  o *Subjective norms*: What others are doing

  o *Perceived behaviour control*: How easy or hard is the behaviour and what will the outcome of the behaviour?

Functions of attitudes

Attitudes do not exist in a social vacuum; rather they develop for important reasons and serve various functions. For example, attitudes guide behaviour toward valued goals and away from aversive events. Similarly, they assist individuals in processing complex information about the social world. Thus, once attitudes are formed, they help individuals to interpret new information and to reach decisions more efficiently than would otherwise the case.

Katz (1960) discussed functions that attitude perform for the personality:

- **The adjustment functions**

  We strive to maximise success and minimise failures in our interaction with the world. Therefore, we develop favourable attitudes toward those objects which we perceive will facilitate success and unfavourable attitudes toward those which we perceive will hinder success or lead to failure. Besides developing such positive and negative attitude toward corresponding objects, we also adopt the attitudes of peers, authority figures, etc. to conform and feel accepted. Thus, attitudes help us lead an adjusted social life.

- **Ego defensive functions**

  To protect ourselves from unpleasant truths about our own selves, we develop some attitudes, which predispose us to defensive behaviours such as projection and rationalisation. Attitudes here are formed and used to protect centrality, or ego. This method is demonstrated when we observe certain vehicle purchase decisions. Some consumers have the attitude and/or belief that their vehicle is an extension and an expression of their self (ego).

- **Value expressive functions**

  A person may also derive emotional gratification by expressing oneself in terms of attitudes appropriate to one's basic, personal values and self concept. That is, some attitudes provide an opportunity for expressing or materialising one's basic values and give one immense pleasure of actualising oneself. For instance, if you had strong humanitarian values, you would develop positive attitudes toward the poor and the destitute. Aided by these attitudes, you would support their cause and thereby bring your values into fruition.

- **Knowledge functions**

    Attitudes allow us to categorise information about attitude objects and more easily manage our world

In sum, attitudes help people to understand the world around them, to lead an adjusted life in the world, to protect their self-esteem, and to express their fundamental values. An attitude may perform one or more or even all of these functions. For example, you might develop an unfavourable attitude toward a particular "clique" of fellow students for ego-defensive reasons. Quite soon this attitude guides your selection of student acquaintances and friends and thus becomes instrumental in fulfilling your need to belong to a peer group. It can also lead you to assert your views and derive satisfaction from being able to take an open stand on issues. It can also facilitate your further dealings with the group by disposing you to act in a clear cut and well defined fashion rather than feel fresh and lost every time you encounter the group or any of its members.

People are always adopting, modifying, and relinquishing attitudes to fit there ever changing needs and interests. People attempt to change the attitudes of others for various reasons. The head of a traditional family, the village headman, the religious priest, the social worker, the leader, the propagandist, etc. are all examples of people who influence the attitudes of others. Attitude can be changed through persuasion. Acceptance of new attitudes depends on who is presenting the knowledge, how it is presented, how the person is perceived, the credibility of the communicator, and the conditions by which the knowledge was received.

Attitude can be changed by a number of sources including other people, family, media, religious organisation, or the object itself. In 1968, McGuire developed steps to changing an attitude. The steps are attention, comprehension, yielding, retention, and action. In analyzing the attitude-change process, we must consider the effect of who says what, how to whom, with what effect.

Approaches of attitude change

Numerous studies have been done on the subject-matter of attitude change and over a dozen theories have been advanced to interpret and accommodate the facts related to the dynamics of attitude change. Here we shall only take a look at a few salient points of the theories.

Attitudes change when:

- A person receives new information from others or media- *Cognitive change.*

- Through direct experience with the attitude object- *Affective change.*

- Force a person to behave in a way different than normal- *Behavioural change.*

The psychological structure of man is said to be composed of integrated sets of cognitions regarding himself and the world. Any new information that enters his head -- if out of tune with the existing structure -- produces a disequilibrium, which gives rise to psychological discomfort. Such discomfort urges the person to alter the existing structure in him.

Banking on the tendency of the attitudinal components to be consistent, your approach to change attitudes could be to engineer any one of the three components. You may, for example, choose to change the cognitive component by introducing new, reliable, and cogent information about the attitude object in question. The other two components will then tend to align themselves to the altered cognitive component, resulting in a new attitude. By the same

logic, you may influence the affect part by associating the attitude object with pleasant or unpleasant experiences. Traumatic experiences are extreme cases of the affective component being influenced. If you wanted to start with behaviour itself, you could persuade people into behaving in a way that is at variance with their present attitude and the resulting *cognitive dissonance* will motivate them to change their attitude in line with their new behaviour.

The individual might also reject the new information and maintain the old cognitive structure intact, if the information is perceived to be useless or the change required to accommodate it appears too cumbersome.

Another approach to attitude change may arise from an analysis of the functions which a particular attitude fulfils for a person. If the attitude you are trying to influence has been serving a knowledge function; i.e., if it has been helping the person to structure and understand his universe, then your attempt to change it will be successful if you give him information that serves the function even better. In the same way, you must show that the advocated attitude is instrumental in leading a better adjusted life in his situation, if the attitude you want to change in the person has been fulfilling an adjustive function. If the attitude in question were an offshoot of the subject's basic values, attempts to change just the attitude would be of little use; the person's basic values have to be tackled. Influencing attitudes that fulfil a person's ego-defensive function is a difficult affair; you may have to study the person's self-concept and help him/her to take a re-look at himself/herself.

Factors affecting attitude change

Attitude will be changed based on how a person sees the communication and the communicator. Less committed people will change ideas more frequently. Attitude change also has to do with other personality characteristics such as susceptibility to persuasion, intelligence, readiness to accept change, etc. We are more likely to accept information if we feel the communicator has no intent to change our attitudes and opinions.

In Hovland's view, we should understand attitude change as a response to communication. He and his colleagues did experimental research into the factors that can affect the persuasiveness of a message.

Target Characteristics

These are characteristics that refer to the person who receives and processes a message.

- Intelligent people are less easily persuaded by one-sided messages.

- People with higher in self-esteem are less easily persuaded, there is some evidence that the relationship between self-esteem and persuasibility is actually curvilinear, with people of moderate self-esteem being more easily persuaded than both those of high and low self-esteem levels (Rhodes & Woods, 1992).

- The mind frame and mood of the target also plays a role in this process.

Source Characteristics

The major source characteristics are expertise, trustworthiness, and attractiveness. The credibility of a perceived message has been found to be a key variable here (Hovland & Weiss, 1951); if one reads a report on health and believes it comes from a professional medical journal, one may be more easily persuaded than if one believes it is from a popular newspaper. Some psychologists have debated whether this is a long-lasting effect and Hovland and Weiss (1951) found the effect of telling people that a message came from a credible source disappeared after several weeks (the so-called "sleeper effect"). If people are informed of the source of a message before hearing it, there is less likelihood of a sleeper effect than if they are told a message and then told its source

Message Characteristics

The nature of the message plays a role in persuasion. Sometimes presenting both sides of a story is useful to help change attitudes.

Cognitive Routes

A message can appeal to an individual's cognitive evaluation to help change an attitude. In the *central route* to persuasion the individual is presented with the data and motivated to evaluate the data and arrive at an attitude changing conclusion. In the *peripheral route* to attitude change, the individual is encouraged to not look at the content but at the source. This is commonly seen in modern advertisements that feature celebrities. In some cases, doctors and experts are used. In other cases film stars are used for their attractiveness.

Effective Communication

No matter what approach is adopted for changing attitudes, communication of some kind (informational, persuasive, or coercive) is always at the root of it all. While it is true that not all communication or information leads to attitude change, any attitude change requires and is

related to some information about the attitude object and about the consequences of the advocated attitude. Therefore, effective communication is a must for any attempt to succeed in changing others' attitudes.

People have a tendency to be selective in what they want to listen to; they prefer the information which supports their attitudes and avoid what is unsupportive. So, how would you first of all get them to listen to your message?

As for the channels, mass media like the TV get a lot of attention, but do not seem to effect change. What should you do? The idea of a two-step flow of influence may be utilised: The media message be tailored for and addressed to opinion leaders, who would in turn influence the rest of the target population.

Repetition of messages, active participation by the target person or group, creating new reference groups, providing a supportive environment, etc. help attitude change and facilitate sustenance of the change.

Group discussion and getting the persons to make a public commitment to behave in a particular way have proved to be more efficacious in bringing about attitude change than one-way persuasive communication. Subtle pressure towards uniformity in a group, coupled with the fear of being rejected from the group and the need to be accepted in it, is also a powerful way of influencing an individual's attitude.

Whatever approach you adopt to change attitudes, a practical assumption you can go by is that attitude change occurs because of some conflict, inconsistency, or dissatisfaction with the status quo. Accordingly, you create the appropriate conflict or dissatisfaction in the target population, offer the necessary support to resolve the conflict and ensure adequate reinforcement to sustain the emergent change.

What can we do to change attitudes?

In order to produce change a suggestion for change must be reviewed and accepted. Reception and acceptance are more likely to occur where the suggestion meets existing personality need or desires. The suggestion is more likely to be accepted if:

• It is in harmony with valued group norms and loyalties.

• The source of the message is perceived as trustworthy or expert.

- The message follows certain rules of 'rhetoric' regarding order, presentation, organisation of content, nature of appeal, etc.

A suggestion carried by mass media plus face-to-face reinforcement is more likely to be accepted than a suggestion carried by either one of these alone, other things being equal.

Change in attitude is more likely to occur if the suggestion is accompanied by change in other factors underlying belief and attitude.

The problem of attitude change is the problem of the degree of discrepancy between one's own position and the position advocated in a message; and the felt necessity of coping with that discrepancy. There may be change when the argument involves small discrepancies, but there will be less change in attitude with larger discrepancy and no change with major discrepancies.

The probability of change towards an advocated position is greater when the number of feasible alternative interpretations of the topic is great, when the individual is somewhat unfamiliar and is not highly involved with the topic, and when the source and communicator have high prestige.

One-sided vs. two-sided presentation

A one-sided presentation is more effective if the audience agrees or has little knowledge about the subject. A two-sided presentation is more effective if audience already has a view and you are trying to change it, because if they know the facts and you omit them, they will discount your argument.

Much research has also been done on deliverance of message, including one-sided vs. two-sided. Some research looks at whether primary (first message delivered is dominant) or recency (last message delivered is dominant) is more effective. For arguments with contradictory issues, present the pro-argument before the con-argument. Also, deliver positive information before getting to the negative side of a topic.

Stereotypes

Stereotypes are cognitive frameworks consisting of knowledge and beliefs about specific social groups. Stereotypes suggest that all members of such groups possess certain traits or characteristics. Stereotypes exert strong effects on the ways in which we process incoming information. For example, information relevant to particular stereotype is processed more quickly than information not

Stereotype
When we judge someone on the basis of our perception of the group to which s/he belongs is called stereotype.

related to it. Similarly, stereotypes lead the persons holding them to pay attention to specific types of information – usually, input consistent with the stereotypes. Alternatively, if information inconsistent with a stereotype does manage to enter consciousness, it may be actively refuted, perhaps by recalling facts and information that are consistent with the stereotype. Moreover, stereotypes also determine what we remember – usually, again, information that is consistent with these framework.

Definition

Stereotype can be defined as *a generalisation about a group of people in which identical characteristics are assigned to virtually all members of the group, regardless of the actual variation among the members* (Aronson, 1999).

When stereotypes are inaccurate or applied rigidly they become a problem

Formation of stereotypes

Social categorisation is one of the important factors for the formation of stereotypes. People naturally divide each other into groups based upon sex, race, age, nationality, religion, and other attributes. Categorisation magnifies differences between groups (outgroups) and minifies differences within groups (ingroups)

Outgroup homogeneity bias

Expectation is that group members are more likely to share group characteristics and are more similar. Koreans, Chinese, Vietnamese, Taiwanese, and Filipinos are all Asians. Thus ignores differences.

Ingroup favouritism

We are inclined to look more favourably at members of our own group. We see members of our group having more positive characteristics. The pronouns "we, us, and ours" trigger positive emotions where as "they, them, and theirs" elicit negative emotions.

Prejudice

(The cost of hating without cause)

The term prejudice has a negative connotation. Generally we say that a person is prejudiced if he has got an unfavourable opinion about a person based on the membership of its group. Prejudice also implies that it is irrational. It means that the opinion or judgement is formed before/prior a thoughtful examination of the pertinent facts; that it is unfair and hasty judgement. The outstanding features of prejudice are:

- It is an inter-group phenomena,

- It has a negative orientation, and

- It is an attitude

Definition

Prejudice is an attitude (usually unfavourable) toward the members of some group, based solely on their membership in that group. In other words, a person who is prejudiced toward some social group or category tends to evaluate its member in a characteristic manner (usually negative) merely because they belong to that group. Their

> **Prejudice**
> Unfavourable attitudes toward members of groups based on a stereotype

individual traits or behaviour plays little role; they are disliked (or possibly liked) simply because they belong to a specific social group.

Formation of prejudice

Individuals who are prejudiced toward particular groups tend to process information about these groups differently from the way they process information about other groups. Specially, information consistent with their prejudiced views may receive more attention, be rehearsed more frequently, and as a result, tend to be remembered more accurately than information that is not consistent with these views (see Fig. 1).

To the extent that prejudice is an attitude, it involves the three basic components of attitudes such as affective (feeling), cognitive (belief), a behaviour. The affective component refers to the negative feelings or emotions prejudiced persons experience when in the presence of, or even just thinking about, members of specific groups. Many persons do indeed experience greater anxiety and emotional arousal when interacting with members of another group than when interacting with members of their own group. The cognitive component involves beliefs

and expectations about members of these groups and the ways in which information about them is processed, stored, and recalled. Finally, the behavioural component involves tendencies to act in negative ways – or intentions of doing so – toward the groups who are the object of prejudice. When those tendencies or intentions are translated into overt actions, they constitute discrimination.

Prejudice vs. Discrimination

Prejudice refers to a special type of attitude – generally negative one – toward the members of some distinct social group. In contrast, discrimination refers to negative *actions* toward those individuals. In other words, acting negatively toward a person based on group membership.

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                                    Prejudice grow
                                    stronger
                                         ▲
                                         │
  Prejudice  →  Information consistent  →  Noticed, rehearsed,
                with prejudiced attitudes   entered into

                                    Prejudice largely
                                    unaffected
                                         ▲
                                         │
  Prejudice  →  Information inconsistent →  Not as readily noticed,
                with prejudiced attitudes   rehearsed less; not
                                            entered into memory
                                            as readily
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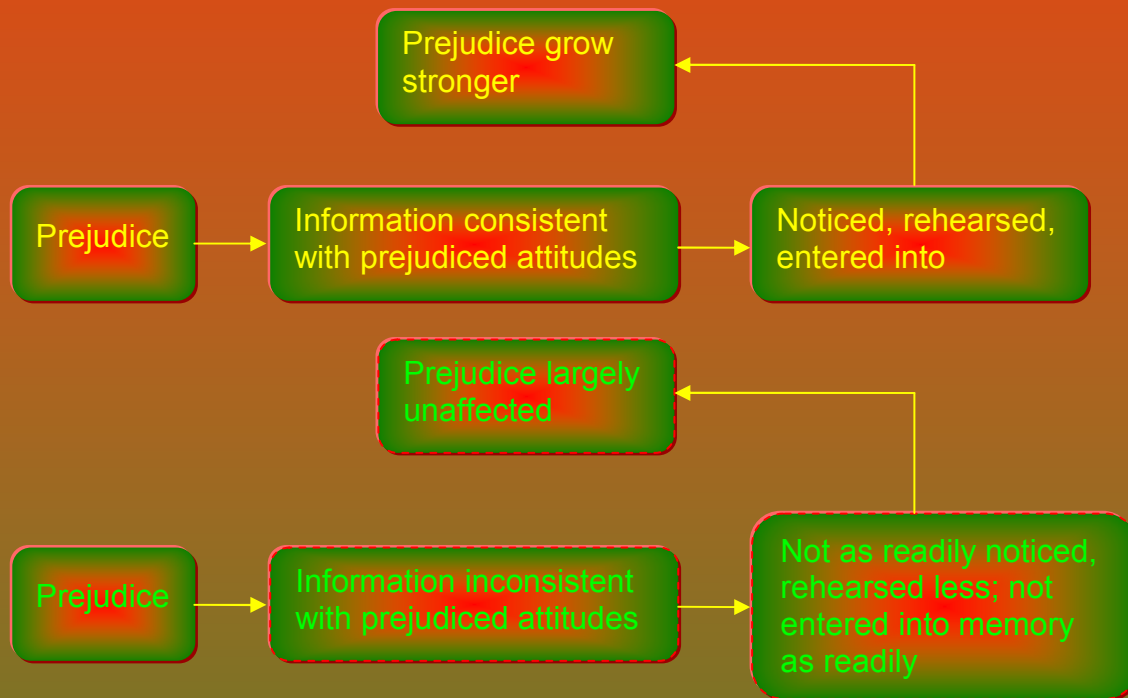
Fig. 1: Prejudice and the processing of social information

Meaning and Definitions

The word motivation is derived from the Latin term *motivus*, which means 'to move'. It indicates a push towards action. It is need satisfying and goal seeking behaviour. Thus motivation is an inner state that energises, activates or moves and directs human behaviour towards goals. Asopa and Beye (1997) defined motivation as "an internal force, which stimulates, regulates, and upholds a person's more important actions". Its existence and nature is deduced from observation and experience of behaviour. Terry and Franklin (1987) explained motivation as "the need or drive within an individual that drives him or her toward goal-oriented action." Woolfolk (1995) defined motivation as an internal state that arouses, directs, and maintains behaviour. Robbins (2001) explained motivation as the processes that account for an individual's intensity, direction, and persistence of an effort toward attaining a goal.

Motivation may be self-directed or one may be motivated by others and by environment and one can motivate others as well. Self motivation is the ability to change one's behaviour to strive for better performance. Motivation of others is the ability to influence the behaviour of other people in such a manner as to get them to do what you expect them to do.

TYPES OF MOTIVATION

Intrinsic motivation

Motivation that stems from factors such as interest or curiosity is called intrinsic motivation. Intrinsic motivation is the natural tendency to pursue personal interests and exercise capabilities and in doing so, seek out and conquer challenges. When we are intrinsically motivated, we do not need incentives or punishments to make us work, because the activity itself is rewarding. We enjoy the task or the sense of accomplishment that it brings.

The individual who is intrinsically or naturally motivated performs an act because he or she finds interest within the activity. He or she is engaged in doing something because he or she derives pleasure within the work. Intrinsic motivation has real values in doing an activity as it creates spontaneous attention and interest and sustain it throughout.

Extrinsic motivation

Motivation created by external factors like rewards and punishments is called extrinsic motivation. When we are extrinsically motivated, we do something in order to earn reward, avoid punishment, or for some other reason that has very little to do with the task itself. We are not really interested in the activity for its own sake; we care only about what it will gain us.

Intrinsic motivation produces a stronger and more permanent drive in comparison to extrinsic motivation and is considered more important in extension. It is always better to make use of intrinsic motivation whenever it is possible to do so. But in case, when it is not appropriate to make use of intrinsic motivation, the use of extrinsic motivation should not be suspended.

There are several theories of motivation. These theories differ in their predictive strength. These theories can be broadly classified into two groups. These are *content theories and process theories*. Content theories explain the 'why' of human behaviour whereas process theories recognise variables that go into motivation, and their interrelationship.

A) Content theories of motivation

- Maslow's hierarchy of need theory
- ERG (Existence, Relatedness, and Growth) theory
- McClelland's theory of needs
- Two-factor theory

B) Process theories of motivation

- The equity theory
- The expectancy theory
- The reinforcement theory
- The goal-setting theory

A) Content theories of motivation

Content theories of motivation focus on the inner needs that motivate behaviour. In an effort to reduce or satisfy their needs, people will act in certain way. According to need theory, a person is motivated when he or she has not yet attained certain level of satisfaction with his or her life
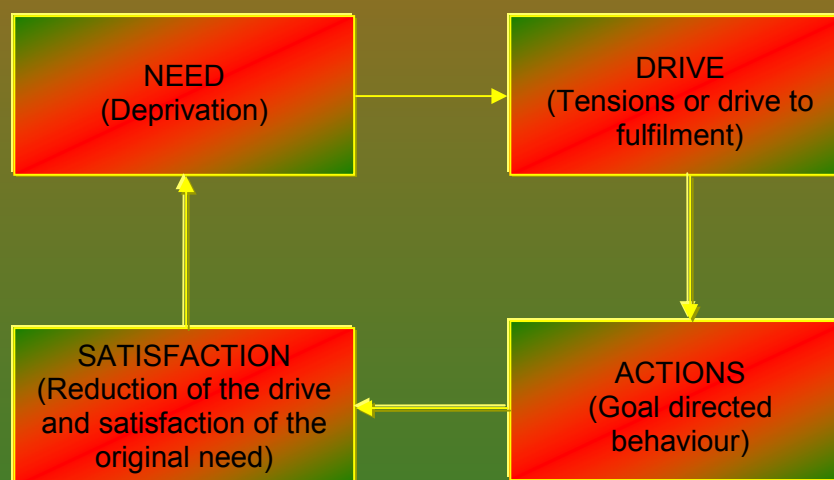
NEED (Deprivation) → DRIVE (Tensions or drive to fulfilment) → ACTIONS (Goal directed behaviour) → SATISFACTION (Reduction of the drive and satisfaction of the original need) → NEED (Deprivation)

Fig. 1: A content theory model of motivation

Maslow's hierarchy of need theory

Maslow (1943) viewed human motivation as hierarchy of five needs ranging from the most basic physiological needs to the highest needs for self-actualisation. According to Maslow, individuals will be motivated to fulfil whichever need is prepotent, or most powerful, for them at a given time. The term *prepotency* refers to the idea that some needs are felt as being more pressing than others. Maslow argues that until these most pressing needs are satisfied, other needs

> **Maslow's hierarchy of needs**
> Theory of motivation that people are motivated to meet five types of needs, which can be ranked in a hierarchy.

have little effect on an individual's behaviour. In other words, *we satisfy the most prepotent needs first* and then progress to the less pressing ones. As one need becomes satisfied, and therefore less important to us, other needs loom up and become motivators of our behaviour. Maslow represents this prepotency of needs as a *hierarchy*. The most *prepotent* needs are shown at the bottom of the ladder, with prepotency decreasing as one progresses upwards. Maslow (1943) classified these human needs into following five main groups:

1) **Physiological:** Includes thirst, hunger, and other bodily needs

2) **Safety:** Includes security and protection from physical and emotional harm

3) **Social:** Includes affection, belongingness, acceptance, and friendship

4) **Esteem:** Includes internal esteem factors such as self-respect, autonomy, and achievement; and external factors such as status, recognition, and attention

5) **Self-actualisation:** The drive to become what one is capable of becoming; includes growth, achieving one's potential, and self-fulfilment.

Maslow said that once the first level needs (physiological needs) are largely satisfied, then the next level of needs emerges. Individuals become concerned with the need for *safety and security* - protection from physical harm, disaster, illness and security of income, life-style, and relationships.

Similarly, once these safety needs have become largely satisfied, individuals become concerned with *social needs* - a sense of membership in some group or groups, a need for affiliation and a feeling of acceptance by others.

Fig. 2: Maslow's Hierarchy of Needs

When there is a feeling that the individual belongs somewhere, he or she is next motivated by a desire to be held in *esteem*. People need to be thought of as worthwhile by others, to be recognised as people with some value. They also have a strong need *to see themselves* as worthwhile people. Without this type of self-concept, one sees oneself as drifting, cut off, pointless.

Finally, Maslow says, when all these needs have been satisfied at least to some extent, people are motivated by a desire to *self-actualise*, to achieve whatever they define as their maximum potential, to do their thing to the best of their ability. Maslow describes self-actualisation as follows:

"A musician must make music, an artist must paint, a poet must write, if he is to be ultimately happy. What a man *can* do, he *must* do. This need we may call self-actualisation ... It refers to the desire for self-fulfilment, namely the tendency for one to become actualised in what one is potentially. This tendency might be phrased as the desire to become more and more what one is, to become everything that one is capable of becoming. The specific form these needs take will of course vary greatly from person to person. In one individual it may be expressed maternally, as the desire to be an ideal mother, in another athletically, in still another aesthetically, the painting of pictures, and in another inventively in the creation of new contrivances. It is not necessarily a creative urge although in people who have any capabilities for creation it will take this form."

The theory would say that although no need is ever fully gratified, a substantially satisfied need no longer motivates. So if you want to motivate someone then you need to understand

what level of the hierarchy that person is currently on and focus on satisfying those needs at or above that level.

ERG Theory

Maslow's five basic needs have been regrouped by Alderfer (1969) into three categories: existence, relatedness, and growth (ERG). Alderfer's first level of needs, *existence,* includes physiological and safety needs. The second need category, *relatedness,* consists of social and esteem needs. The third category, *growth,* includes the individual's desire to be self-confident, creative, and productive.

> **ERG theory**
> Theory of motivation that say people strive to meet a hierarchy of existence, relatedness, and growth needs; if efforts to reach one level of needs are frustrated, individuals will regress to a lower level.

In contrast to the hierarchy of needs theory, the ERG theory demonstrates that (1) more than one need may be operative at the same time, and (2) if the gratification of a higher level need is stifled, the desire to satisfy a lower level need increases. Maslow's hierarchy of needs theory follows a rigid, steplike progression. ERG theory does not assume that there exists a rigid hierarchy in which a lower order needs must be substantially gratified before one can move on. A person can, for example, be working on growth even though existence or relatedness needs are unsatisfied; or all three needs categories could be operating at the same time.

ERG theory also contains a frustration-regression dimension. In his theory, Maslow argued that an individual would stay at a certain need level until that need was satisfied. But ERG theory counters by noting that when a higher level need is frustrated, the individual's desire to increase a lower level needs take place. For example, inability to satisfy a need for social interaction might increase desire for more money or better working condition. So frustration can lead to regression to a lower need.

In summary, ERG theory argues, like Maslow, that satisfied lower-order needs lead to the desire to satisfy higher order needs; but multiple needs can be operating as a motivators at the same time, and frustration in attempting to satisfy a higher level need can result in regression to a lower level need.

ERG theory is more consistent with our knowledge of individual differences among people. Variable such as education, family background, and cultural environment can alter the

importance or driving force that a group of needs holds for a particular individual. Overall ERG theory represents a more valid version of the need hierarchy.

McClelland' Theory of Needs

McClelland (1962) identified three basic needs within individuals. They are need for *achievement (nAch),* need for *power (nPow),* and need for *affiliation (nAff).* McClelland's need for achievement and affiliation are similar to Maslow's social and esteem needs. Need for power has not been mentioned in Maslow's theory. The strengths of these needs can be identified by administering a Thematic Apperception Test (TAT).

> **McClelland' theory of needs**
> Achievement, power, and affiliation are the three important needs that help in explaining motivation.

Some people have a compelling drive to succeed. They are striving for personal achievement rather than rewards of success *per se*. they have a desire to do something better or more efficiently than it has done before. This dive is the achievement need (*nAch*). High achievers differentiate themselves from others by their

> **Achievement need**
> The drive to excel, to achieve in relation to a set of standards, to strive to succeed.

desire to do things better. They seek situations in which they can attain personal responsibility for finding solutions to problems, in which they can receive rapid feedback on their performance so they can tell easily whether they are improving or not, and in which they can set moderately challenging goals. High achievers are not gamblers; they dislike succeeding by chance. They prefer the challenge of working at a problem and accepting the personal responsibility for success or failure rather than leaving the outcome to chance or the action of others. Importantly, they avoid what they perceive to be very easy or very difficult tasks. They want to overcome obstacles, but they want to feel that their success or failure is due to their own actions. This means they like tasks of intermediate difficulty.

The need for power (*nPow*) is the desire to have impact, to be influential, and to control others. Individuals high in nPow enjoy being in charge, strive for influence over others, prefer to be placed into competitive and status oriented situations, and tend to be more concerned with prestige and gaining influence over others than with effective performance.

> **Power need**
> The need to make others behave in a way that they could not have behaved otherwise.

The need for affiliation (*nAff*) is the desire to be liked and accepted by others. Individuals with high affiliation motive strive for friendship, prefer cooperative situations rather than competitive ones, and desire relationships involving a high degree of mutual understanding.

> **Affiliation need**
> The desire for friendly and close personal relationships.

Two-Factor Theory

Herzberg, Mausner and Snyderman (1962) developed a two-factor theory also called *Motivation-Hygiene Theory (M-H).* This theory is based on the concept *of job context* (hygiene factors) *and job content* (motivating factors). *Job content* refers to the job or work itself, and emerges from the work and employee relationship. Therefore these factors are innate and work in different ways.

The factors that lead to job satisfaction (the motivating factors) are achievement, recognition, work itself, responsibility, advancement, growth etc. and related to *job content* and the rewards of work performance. The factors which may prevent dissatisfaction (the hygiene factors) are company policy and administration, supervision, interpersonal relationships, working conditions, money, status, security, etc. and related to *job context* in which work was conducted.

> **Two-factor theory**
> Intrinsic factors are related to job satisfaction whereas extrinsic factors are associated with dissatisfaction.

Hygiene factors are job contextual and also include maintenance factors. These are considered *extrinsic*, as they are out of the limit of work and employees. These are satisfiers to the extent that they produce dissatisfaction if absent. However, they are not motivators for better performance. If applied effectively, they can at best prevent dissatisfaction and if applied poorly, they can result in negative feelings about the job.

Motivating factors are related to job content and are concerned with increased satisfaction and the desire to work harder. These are considered *intrinsic* and they allow for psychological growth and development on the job. They are closely related to the concept of *self-actualisation*, involving a challenge, an opportunity to extend oneself to the fullest, to taste the pleasure of accomplishment, and to be recognised as having done something worthwhile. These are the characteristics that people find intrinsically rewarding.

Hygiene factors describe the *conditions* of work rather than the work itself. Herzberg's point is that if you want to motivate people, you have to be concerned with the *job itself* and not simply with the surroundings.

In a medical sense, growth, healing, and development occur as natural internal processes. They are the result of proper diet, exercise, sleep etc. Hygienic procedures simply prevent disease from occurring. They do not promote growth *per se*. Herzberg says that we should focus our attention on the individuals in jobs, not on the things that we surround them with. He maintains that we tend to think that growth and development will occur if we provide good working conditions, status, security and administration, whereas in fact what stimulates growth (and motivation to grow and develop) are opportunities for achievement, recognition, responsibility and advancement.

Herzberg goes further than Maslow, cutting the hierarchy off near the top and maintaining that motivation results only from some elements of esteem needs and self-actualisation.

B) Process theories of motivation

Process theories study the thought processes and identify variables that decide people to act.

Equity theory

Equity theory is based on the assumption that a major factor in job motivation is the individual's evaluation of equity or fairness of the reward received. Equity can be defined as a ratio between the individual's job inputs (such as effort or skill) and job rewards (such as pay or promotion). According to equity

> **Equity theory**
> Individuals compare their job inputs and outcomes with those of others and then respond so as to eliminate any inequities.

theory, individuals are motivated when they experience satisfaction with what they receive from an effort in proportion to the effort they apply. People judge the equity of their rewards by comparing them either to the rewards others are receiving for similar input or to some other effort/reward ratio that occurs them.

Expectancy theory

Vroom's expectancy theory (1964) argues that the strength of tendency to act in a certain way depends on the strength of an expectation that the act will

> **Expectancy theory**
> The strength of a tendency to act in a certain way depends on the strength of an expectation that the act will be followed by a given outcome and on the attractiveness of that outcome to the individual.

be followed by given outcome and on the attractiveness of that outcome to the individual. In practical terms, expectancy theory says that an employee will be motivated to exert a high level of effort when he or she believes that effort will lead to a good performance appraisal; that a good appraisal will lead to organisational rewards such as a bonus, a salary increase, or a promotion; and that the rewards will satisfy the employee's personal goals. This theory therefore focuses on three relationships.

| Individual effort | →1 | Individual performance | →2 | Organisational rewards | →3 | Personal goals |
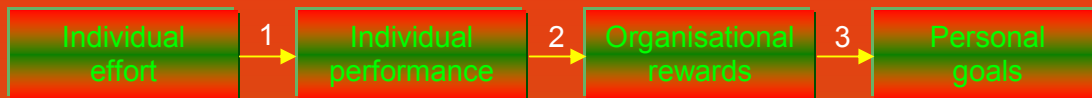
Fig. 3: Expectancy theory

- *Effort-performance relationship:* The probability perceived by the individual that exerting a given amount of efforts will lead to performance.

- *Performance-reward relationship:* The degree to which the individual believes that performing a particular level will lead to the attainment of a desired outcome.

- *Rewards-personal goals relationship:* The degree to which organisational rewards satisfy an individual's personal goals or needs and the attractiveness of those potential rewards for the individual.

The key to expectancy theory is the understanding of an individual's goals and the linkage between effort and performance, between performance and rewards, and finally, between the rewards and individual goal satisfaction. Expectancy theory recognises that there is no universal principle for explaining everyone's motivations. Additionally, just because we understand what needs a person seeks to satisfy does not ensure that the individual perceives high performance as necessarily leading to the satisfaction of these needs.

Reinforcement theory

Reinforcement theory shows how the consequences of past behaviour affect future actions in a cyclical learning process. This process may be expressed as follows:

Stimulus ⟶ Response ⟶ Consequences ⟶ Future Response

According to this view, the individual's own voluntary behaviour (response) to a situation or event (stimulus) is the cause of specific consequences. If those consequences are positive,

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the individual will in the future tend to have similar responses in similar situations. If those consequences are unpleasant, the individual tend to change his or her behaviour in order to avoid them. For example, people may be likely to obey the law because

Reinforcement theory
Behaviour is a function of consequences.

they have learned at home and at school that disobedience leads to punishment. This is known as the *law of effect*. Reinforcement theory involves people's memory of past stimulus-response-consequence experiences. According to reinforcement theory, *a person is motivated when he or she responds to stimuli in consistent patterns of behaviour over time*.

Reinforcement theory is based on the assumption that people can be motivated in a properly designed work environment for desirable performance (Skinner, 1953). It contends that the sum of external environment - and not internal needs, wants or desires - determines individual behaviour.

Goal-setting theory

Goal-setting theory is based on the premise that a person's intentions to work towards a goal are major source of work motivation (Locke, 1968). Goals remind the people what

Goal setting theory
A process theory of motivation that focuses on the process of setting goals and suggests that specific and difficult goals with feedback lead to higher performance.

needs to be done and how much effort will need to be expended. The theory argues that

- Specific goals produce higher level of output than the generalised goal such as *do your best* is an example of generalised goal. The specificity of the goal itself acts as an internal stimulus.

- If factors such as ability and acceptance of the goals are held constant then more the difficult the goal, higher the level of performance.

- People will do better when they get feedback on how well they progressing towards their goals because feedback helps to identify discrepancies between what they have done and what they want to do; that is, feedback acts to guide behaviour. But all feedback is not equally potent. Self-generated feedback is more powerful motivator than externally generated feedback.

- Participation in setting goals does not necessarily improve performance but participation does increase the probability that more difficult goals will be agreed to and acted upon.

Goal-setting theory presupposes that an individual is committed to the goal. This is most likely to occur when goals are made public, when the individual has an internal locus of control, and when the goals are self-set rather than assigned.

The main purpose of extension work is to motivate the concerned individuals (people) to adopt new ideas, information, practice etc., where extension worker acts as a motivator. Therefore, it is necessary to motivate the people for mobilising them for the success of any extension programme. Any extension worker can motivate the people for their participation in the extension programme by the following possible ways:

Adopting a need based approach

It is possible to motivate individuals to satisfy their various needs (drives) by knowing the level of motivation and their patterns among the individuals. Therefore, an extension worker should understand the basic needs of the people with whom he is to work. Extension worker should show the people, how to satisfy such wants by learning and adopting new techniques, etc. as indicated below:

- **Desire for physiological need**

  People can be motivated towards the direction of achieving higher yields and outcome, etc.

- **Desire for security**

  The people (farmers) can be motivated to adopt new practices by convincing that the new practices will increase their income and enhance their security.

- **Desire for new experience**

  This can be done by imparting latest knowledge, information, attitudes, and skills.

- **Desire for response**

  This need can be met by encouraging people to work in groups for the fulfilment of affection and feeling of belonging, etc.

- **Desire for recognition**

  The need for status, prestige, improvements etc. of the individuals can be fulfilled by working with local leaders.

Training to set a realistic level of aspirations

Any attempt to raise the expectations of the people should be done on the basis of their socio-economic status. It is important to train them to improve their general resources before leading them to aspire for material things.

Seeking participation of individuals

The active involvement of people in the programme should be sought which can act as booster of motivation for participants as well as others in a given situation.

Providing awards and incentives

The awards and incentives to people involved in a concerned activity may be given in the form of prizes, certificates, recognition, etc. at some occasions. Competitions can also motivate them and other people for further actions.

Use of Audio-visuals

Audio-visuals for the concerned programme should be used which can act as lubricants for motivating the individual for that particular activity or a programme.

All complex behaviour is learned. Learning is apparently a simple but theoretical concept. Hence, it is not directly observable. We can infer that learning has taken place if an individual behaves, reacts as a result of experience in a manner different from the way formally behaved. Most of us have experienced a learning experience of some sort in our life times, and continue to do so almost on a daily basis. The development of young children comes about through learning as much as through physical growth. In brief, learning is at the heart of our everyday life.

Yet learning is an elusive concept. It has no universally agreed definition. The way one defines it emanates from, as well as influences, the way one theorises learning. Thus there are as many definitions as there are theories of learning. For instance, cognitive theories of learning, which emphasise the thought process and the role of the mind in learning, view principally in the light of the mind's ability to acquire, process, and retain new knowledge and information. Thus cognitive psychologists studying learning are interested in unobservable mental activities such as thinking, remembering, creating, and solving problems. On the other hand, behavioural psychologists view that the outcome of learning is change in behaviour and emphasises the effects of external events on the individual. But experiential theories, which emphasise the role of action and experience in learning, conceptualise it in terms of competencies generated among learners.

Learning can be explained in its simplest way. Take a situation – say situation of cycling. There is a person say Mr X. There is a situation when Mr X does not know cycling and then is another situation when the same Mr X knows cycling. The in between process when the behaviour shifts from unlearnt to learnt is known as learning. Thus learning is a process of acquisition. It is acquiring and not losing.

Definitions

Despite the apparent diversity of definitions, however, a common recognition characterises most approaches to learning that it involves a process of change in learners – a change in knowledge, attitudes, beliefs, and behaviour. Some of the definitions of learning are presented below.

- Learning is a process of progressive behaviour adaptation (Skinner, 1960).

- Learning is a process by which a person becomes changed in his behaviour through self-activity (Leagans, 1961).

- Learning is the process whereby knowledge is created through the transformation of experience (Kolb, 1984)

- Learning is the acquiring or improving the ability to perform a behavioural pattern through experience and practice (Van den Ban & Hawkins 1988).

- Learning is any relatively permanent change in behaviour that occurs as a result of experience or practice (Weiss, 1990).

- Learning is a relatively permanent change in behaviour that results from practice (Atkinson et al, 1993).

- Learning is process through which experience causes a relatively permanent change in an individual's knowledge or behaviour (Woolfolk, 1995).

- Learning is a relatively permanent change in an individual's behaviour or behaviour potential (or capability) as a result of experience or practice (Huitt, 1999).

These definitions have several common key terms that require clarification.

- *Learning involves change:* change may be good or bad, desirable or undesirable. People can learn unfavourable behaviours – to hold prejudices or to restrict their output, for example – as well as favourable behaviours.

- *The change must be relatively permanent:* temporary changes may be only reflexive and fail to represent any learning. Therefore, the requirement of learning is that it must be relatively permanent, which rules out changes due to illness, fatigue, hunger, or temporary adaptations. For example, a person who has gone without food for two days does not learn to be hungry, and a person who is ill does not learn to run more slowly. Off course, learning plays a part in how we respond to hunger or illness.

- *The change must be brought about by experience:* The change may be deliberate or unintentional, for better or for worse. To qualify as learning, this change must be brought about by experience – by the interaction of a person with his or her environment. The experience may be acquired directly through practice or indirectly, through reading or

observation. Change due to simply maturation, such as growing taller or turning grey, do not qualify as learning.

- *The change resulting from learning is in the individual's behaviour or knowledge: Some* psychologists tend to emphasise the change in knowledge whereas others the change in behaviour.

PRINCIPLES OF LEARNING

1) Principle of association

Learning is growth-like and continuous. The kind of learning that takes place is the result of the kind of experience we have. Previous learning always sets the stage for subsequent learning. New learning may be associated with previous successful and satisfying responses. For example, if the farmers have obtained profitable return by the application of nitrogenous fertilizer, they may be motivated to use balanced fertilizers containing phosphate and potash, for still higher return. Implications of this principle are: begin at the level of the learner; new must be related to the old; adjust the pace to the learner's capacity, one idea at a time; bring the idea to the attention of the learner repeatedly (in a variety of ways) and over a period of time.

2) Principle of clarity of objectives

Learning is more effective when it is purposeful. The learning must make sense and be useful to the learners. Objectives must be clear and meaningful to the learners. What is to be learnt must be important to a relatively large number of participants in the group and must be attainable.

3) Principle of self activity

Learning is an active process on the part of the learners. The instructor can create a situation and stimulate a person to learn. The door to learning is "locked on the inside" and unless the learner opens the door himself, learning cannot take place. Activities appropriate to the specific learning must be used. For example, conducting demonstration by the farmers in their own fields provides opportunity of self-activity, that is, ***learning by doing***. This makes learning effective and permanent.

4) Principle of Motivation

To learn, people need to feel the need for learning. When this desire exists, the learner will exert a high level of effort. The learning experience, therefore, should be designed so learners can see how it will help them achieve those goals they have set for themselves.

5) Principle of practice

When learner actually practice what they have read, heard, or seen, they gain confidence and are less likely to make errors or to forget what they have learned. Active involvement through practice, therefore, should be made part of the learning process.

6) Principle of disassociation

Learning is affected by emotions. The most effective way of eliminating an undesirable response is to set up a desirable substitute that must be more satisfying than the original reaction. For example, when planting a crop in lines gives better yield, the farmer may be advised not to practise broadcasting.

7) Principle of readiness

Learning takes place more effectively when one is ready to learn.

8) Principle of set or attitude

An unfavourable attitude or set retards learning and a favourable attitude accelerates it.

9) Principle of reinforcement

Behaviours that are positively reinforced (rewarded) are encouraged and sustained. When the behaviour is punished, it is temporarily suppressed but is unlikely to be extinguished.

10) Principle of transfer of learning

It does not make much sense to perfect a skill in the classroom and then find that you cannot successfully transfer it to the job. Therefore, learning should be designed to foster transferability.

11) Principle of feedback

Learning is facilitated when the learners are provided with knowledge of progress of learning.

12) Principle of abilities

Learning abilities varies widely among individuals. The level of communication and the level of understandability of the subject matter taught must be in line with the learner's ability.

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PAVLOV'S CLASSICAL CONDITIONING

This theory was developed by Ivan Petrovich Pavlov (1849-1936), a Russian physiologist and Nobel Prize winner (1904) for the study of the physiology of digestion.

Classical conditioning focuses on the learning of *involuntary* emotional or physiological responses such as fear, increased heart beat, salivation, or sweating – sometimes called *respondents* because they are automatic responses to stimuli. Through the classical conditioning, humans and animals can be trained to react involuntarily to a stimulus that previously had no effect – or a very different effect – on them. The stimulus comes to *elicit*, or bring forth, the response automatically.

Classical conditioning
Association of automatic responses with new stimuli

The conditioning process may be illustrated diagrammatically as below.

1. Before Conditioning

Food (UCS) ⟶ Salivation (UCR)

Sound (NS) ⟶ Orientation but no salivation

The Unconditioned Stimulus (UCS) automatically produces the Unconditioned Response (UCR). The Neutral Stimulus (NS) does not produce salivation.

2. Conditioning Process

Sound (NS)

Followed by

Food (UCS ⟶ Salivation (UCR)

The UCS is paired with the NS. The UCS produces the UCR.

3. After Conditioning

Sound (CS) ⟶ Salivation (CR)

The NS is now the Conditioned Stimulus (CS). It produces a Conditioned Response (CR), salivation, which is similar to the UCR produced by the food.

Pavlov's experiment

Prior to the conditioning experiment, the dog's salivary duct was surgically treated so that saliva flowed through a small opening could be collected and measured accurately. The dog was trained to stand in a harness. Pavlov began his experiment by sounding a tuning fork and recording a dog's response. There was no salivation as expected. At this point, the sound of the tuning fork was a *Neutral Stimulus* (NS) because it brought forth no salivation. Then Pavlov fed the dog. The response was salivation. The food was an *Unconditioned Stimulus* (UCS) because no prior training or conditioning was needed to establish the natural connection between food and salivation. The salivation was an *Unconditioned Response* (UCR) because it occurred automatically – no conditioning required.

Using three elements – the food, the salivation, and the tuning fork – Pavlov demonstrated that a dog could be conditioned to salivate after hearing the tuning fork. He did this by contiguous pairing of the sound with food. At the beginning of the experiment, he sounded the fork and then quickly fed the dog. After Pavlov repeated this several times, the dog began to salivate after hearing the sound but before receiving the food. Now the sound had become a *Conditioned Stimulus* (CS) that could bring forth salivation by itself. The response of salivation after the tone was now a *Conditioned Response* (CR).

The Neutral Stimulus (NS)

A stimulus that does not automatically elicit a response. The sound of tuning fork is the NS in the experiment.

The Unconditioned Stimulus (UCS)

The UCS in the Pavlovian situation is the *meat powder (food)*. It is a stimulus which, prior to the conditioning experiment, consistently and regularly elicits a response. Every time we present the food, the dog salivates. The capacity of the UCS to elicit a regular response can be innate or learned. It does not matter so long as it elicits a response consistently.

UCS
Stimulus that automatically produces an emotional or physiological response

The Unconditioned Response (UCR)

The UCR is the consistent response to the UCS. This response does not have to be learned. In the Pavlovian

UCR
Naturally occurring emotional or physiological response

situation, the *salivation* is response to the food is the UCR.

The Conditioned Stimulus (CS)

The conditioned stimulus (CS) is the sound of the tuning fork. The CS is a stimulus that does not initially elicit a learned response. We pair the CS (sound) with the UCS (meat powder) over and over again. With repeated pairings the CS will begin to elicit a salivary response when it is presented by itself.

CS
Stimulus that evokes an emotional or physiological response after conditioning

The Conditioned Response (CR)

The CR is the learned response elicited by the conditioned stimulus (CS). That is, if we sound the tuning fork alone and dog salivates to the unconditioned stimulus (UCS) alone then that response is an unconditioned response (UCR) not CR.

CR
Learned response to a previously neutral stimulus

Generalisation, Discrimination, and Extinction

Pavlov's work also identified three other processes in classical conditioning. These are Generalisation, Discrimination, and Extinction. After the dogs learned to salivate in response to hearing one particular sound, they would also salivate after hearing other similar tones, those that were slightly higher or lower. This process called *generalisation* because the conditioned response of salivating generalised or occurred in the presence of similar stimuli.

Pavlov could also teach his dogs *discrimination* to respond to one tone but not to others that are similar – by making sure that food always followed only one tone, not any other.

Extinction occurs when a conditioned stimulus (a particular tone) is presented repeatedly by is not followed but the unconditioned stimulus (food). The conditioned response (salivating) gradually fades away and finally is *extinguished* – it disappears altogether.

OPERANT CONDITIONING

It is also known as *Instrumental Conditioning* theory of learning and developed by B F Skinner (1904-1990). Automatic or involuntary actions are often called *respondents*. Clearly, not all human learning is automatic and unintentional. Most behaviours are not elicited by stimuli, they are *emitted* or voluntarily enacted. The behaviour of eating a meal, driving a car, writing a letter shows operant but little of respondent character. People actively operate on their environment to produce different kinds of consequences. These deliberate actions are called *operants*. The learning process involved in operant behaviour is called *operant conditioning* because we learn to behave in certain ways as we operate on the environment.

Operant conditioning
Learning in which voluntary behaviour is strengthened or weakened by consequences or antecedents

Skinner believed that the principles of classical conditioning account for only a small portion of learned behaviours. Many human behaviours are operants, not respondents. Classical conditioning describes only how existing behaviours might be paired with new stimuli; it does not explain how new operant behaviours are acquired.

Behaviour, like response or reaction, is simply a word for what a person does in a particular situation. Generally behaviour is influenced by two factors. One that precede it (its antecedents) and other that follow it (its consequences). This relationship can be shown very simply as antecedent-behaviour-consequence, or A-B-C. As behaviour is on going, a given consequence becomes an antecedent for the next ABC sequence. Operant behaviour can be altered by changes in the antecedents, the consequences, or both.

Skinner's experiment

To study the effects of consequences on behaviour under carefully controlled conditions, Skinner designed a special cagelike apparatus, which is popularly known as Skinner box. The subjects of Skinner's studies were usually rats or pigeons placed in the cages. A typical Skinner box is a small enclosure containing only a

Skinner Box
Experiment chamber designed to isolate stimulus-response connections

food tray and a lever or a bar (for rats) or a disc (for pigeons). The lever or disc is connected to a food hopper. Modifications of this basic box included lights close to the lever or disc and electrified floors used to give mild shocks to the animals.

In one experiment, Skinner placed a hungry rat in the box and the rat would wander over the bar from time to time and push the bar down or pressed the lever. The moment it happened, food pellet would fall into the tray. The rat learned this task of pressing the bar more frequently when the food pellet *reinforced the behaviour*. In another experiment, a hungry pigeon is placed in the box and proceeds to explore it. Since pigeons tend to peck, the animal will eventually get around the pecking the disc. At that point a small food pellet will drop into the food tray. The hungry bird eats the pellet, moves around the box, and soon pecks the disc again. There is more food, and before long the pigeon is pecking and eating continuously. The next time the pigeon is placed in the box, it will go directly to the disc and begin pecking.
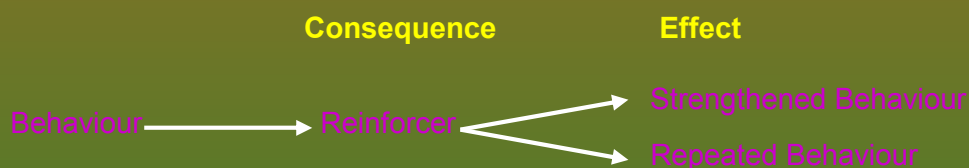
TYPES OF CONSEQUENCES

According to the behavioural view, consequences determine to a great extent whether a person will repeat the behaviour that led to the consequences. The type and timing of consequences can strengthen or weaken behaviours. There are two possible types of consequences such as reinforcement and punishment.

Reinforcement

The most important aspect of Skinner's theory of learning relates to the role of reinforcement. Reinforcement is commonly understood as *reward* but this term has a particular meaning in psychology. An organism/ learner is presented with a particular stimulus – a reinforcer

> **Reinforcement**
> Use of consequences to strengthen behaviour

– after it makes a response. In a given situation, the organism/learner will tend to repeat responses for which it is reinforced. *A reinforcer is any consequence that strengthens the behaviour it follows*. Or any stimulus is reinforcer if it increases the probability of a response. The reinforcement process can be diagrammed as follows:

Consequence	Effect

Behaviour ⟶ Reinforcer ⟶ Strengthened Behaviour
⟶ Repeated Behaviour

There are two types of reinforcement. Skinner distinguished between positive and negative reinforcement.

Positive reinforcement

Positive reinforcement is a process which increases the probability of desired responses by presenting a stimulus after the behaviour. Or when the consequence that strengthens a behaviour is the appearance (addition) of a new stimulus, the situation is defined as positive reinforcement. Positive reinforcement occurs when the behaviour produces a new stimulus. For example, a peck on the disc is producing food for a pigeon.

Positive reinforcement
Strengthening behaviour by presenting a desired stimulus after the behaviour

A positive reinforcer is a stimulus which, when added to a situation, strengthens the probability of an operant response. Food, praise, smiles, prize, money, etc are the examples of positive reinforcer.
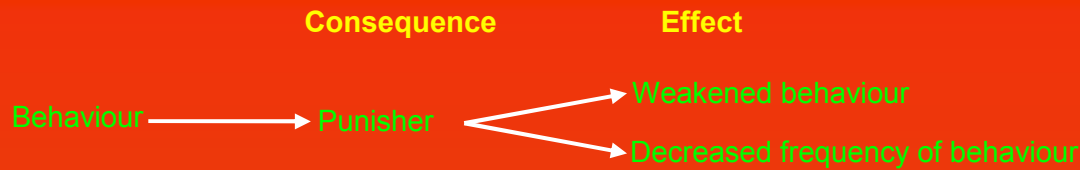
Negative reinforcement

In negative reinforcement, the desired behaviour is more likely to occur if such stimulus is removed. Or when the consequence that strengthens a behaviour by disappearance (subtraction) of a stimulus, the process is called negative reinforcement. If a particular action leads to stopping, avoiding, or escaping an *aversive* situation, the action is likely to be repeated in a similar situation.

Negative reinforcement
Strengthening behaviour by removing an aversive stimulus

A negative reinforcer is a stimulus which, when removed from a situation, strengthens the probability of an operant response. A loud noise, a very bright light, extreme heat or cold, electric shock, classify as negative reinforcers.

Punishment

Negative reinforcement is often confused with punishment. The process of reinforcement (positive or negative) always involves strengthening behaviour or always increases the probability of response. Punishment on the other hand, involves *decreasing* or *suppressing behaviour*. A behaviour followed by a punisher is less likely to be repeated in similar situation in the future. Again, it is the effect that defines a consequence as punishment, and different people have different perceptions of what is punishing. One student may find suspension from school punishing, while another student would not mind at all. The process of punishment is diagrammed as follows:

Consequence	Effect

Behaviour ⟶ Punisher ⟶ Weakened behaviour
⟶ Decreased frequency of behaviour

Like reinforcement, punishment may also be of two types.

Type I or presentation punishment

It occurs when the appearance of a stimulus following the behaviour suppresses of decreases the behaviour. When teachers assign demerits, extra work, running laps and so on, they are using presentation punishment.
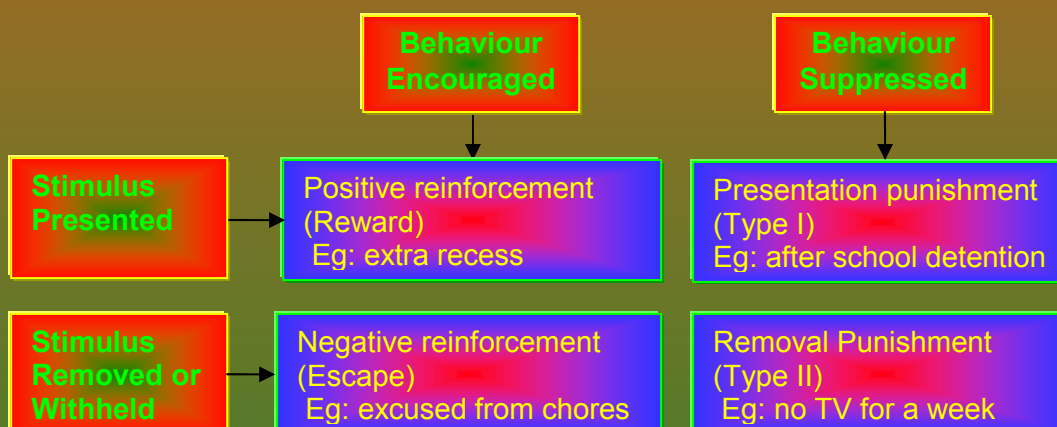
> **Presentation punishment**
> Decreasing the chances that a behaviour will occur again by presenting an aversive stimulus following the behaviour

Type II or removal punishment

The other type of punishment is called Type II punishment or removal punishment because it involves removing a stimulus. When teachers or parents take away privileges after a young person a behaved inappropriately, they are applying removal punishment.

> **Removal punishment**
> Decreasing the chances that a behaviour will occur again by removing a pleasant stimulus following the behaviour

Kinds of Reinforcement and Punishment: A Summary

	Behaviour Encouraged	Behaviour Suppressed
Stimulus Presented	Positive reinforcement (Reward) Eg: extra recess	Presentation punishment (Type I) Eg: after school detention
Stimulus Removed or Withheld	Negative reinforcement (Escape) Eg: excused from chores	Removal Punishment (Type II) Eg: no TV for a week

Note: Negative reinforcement and punishment are often confused. It may help you to remember that negative reinforcement is always associated with increases in behaviour, and punishment always involves decreasing or suppressing behaviour.

Tell me, and I will forget.
Show me, and I may remember.
Involve me, and I will understand.
- Confucius circa 450 BC

Experiential learning

Experiential learning is a learning theory that is learner-centred and operates on the premise that individuals learn best by experience. A good way to describe this theory is *learning by doing*. Thus experiential learning directly involved the learner with the material being studied instead of just thinking and talking about that material.

Experiential learning is a structured learning sequence which is guided by a cyclical model of experiential learning. It is a cyclical process that capitalises on the participants' experiences for acquisition of knowledge. This process involves setting goals, thinking, planning, experimentation, reflection, observation, and review. By engaging in these activities, learners construct meaning in a way unique to themselves, incorporating the cognitive, emotional, and physical aspects of learning.

Experiential learning provides a model that enables learners to draw from their past experiences to acquire new knowledge, skills, and/or attitudes that they can then apply in their own settings.

Experiential learning cycles

Experiential Learning Cycles are models for understanding how the process of learning works. They are distinct from other models of learning, such as behavioural models or social learning models in at least in two ways:

- Experiential Learning Cycles (ELCs) treat *the learner's subjective experience* as of critical importance in the learning process. ELCs draw on experiential education principles, which are largely based on the educational philosophy of John Dewey (1920s-1950s).

- ELCs propose an iterative series of processes which underlies learning. Depending on the model, there is anywhere between one stage (experience alone) through to six stages of learning to be considered.

ELCs are commonly used to help structure experience-based training and education programmes. For example, ELC models are amongst the most important pieces of theory used in many outdoor education programmes.

Several ELC models have been identified in experiential learning literature and can be organised in terms of the number of stages they propose ranging from 1 to 6. A four stages model (see Fig. 1) is Kolb's (1984) classic *Experiential Learning Cycle* model. This model suggests that a participant has a *concrete experience*, followed by *reflective observation*, then the formation of *abstract conceptualisations* before finally conducting active experimentation to test out the newly developed principles. There are many versions of four stage models, but the Kolbian four stages model is widely known and used in education and training circles and continues to grow in popularity.

An *experiential learning cycle* (ELC) is a means of representing sequences in experiential learning. It is often assumed that the stages of a *learning cycle* are managed by a facilitator, but they can also be self-managed or even unmanaged in the sense that learning from experience is a normal everyday process for most people.
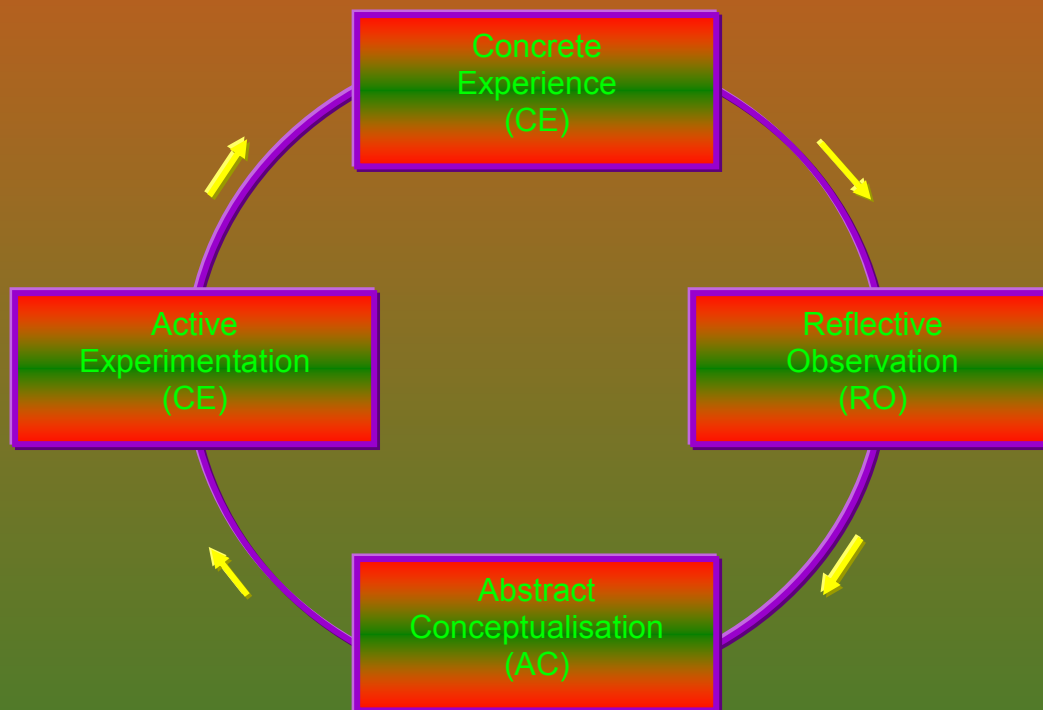
Concrete Experience (CE)

Reflective Observation (RO)

Abstract Conceptualisation (AC)

Active Experimentation (CE)

Fig. 1: Kolb's Experiential Learning Cycle Model

Kolb in his book *Experiential Learning: Experience as the Source of Learning and Development (1984)* introduces his experiential learning theory and provides a model for its application in schools, organisations, and virtually anywhere people are gathered together. He draws upon the contributions of Dewey, Lewin, Piaget, and others to construct his own model of experiential education. He lists six characteristics of experiential learning (pp. 25-38).

- Learning is best conceived as a process, and not in terms of outcomes.

- Learning is a continuous process grounded in experience.

- Learning requires the resolution of conflicts between dialectically opposed modes of adaptation to the world.

- Learning is a holistic process.

- Learning involves transactions between the person and the environment.

- Learning is the process of creating knowledge.

Experiential learning theory defines l*earning as the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping and transforming experience* (Kolb 1984, p. 41). The experiential way of learning involves the application of the information received from the educator/trainer to the experiences of the learner. It does not consist of activity generated in the classroom alone. The student does not acquire his or her knowledge exclusively from the teacher. Rather, s/he learns through this process of taking the new information derived in class and testing it against his or her accustomed real-life experiences. By so doing, the learner transforms both the information and the experience into knowledge of some new or familiar subject or phenomenon.

In the first phase of Kolb's model, the educator involves the learners in a *concrete experience*. The experience could be a role play, a live or video demonstration, a case study, or a testimonial. Generally, it will not be a lecture. The learners are then asked to review the experience from many perspectives. They ask themselves questions. What happened? What did you observe? This second phase is referred to as *reflective observation*. During the third phase of *abstract conceptualisation*, the learners develop theories and look at patterns. Further questions are asked. How do you account for what you observed? What does it mean for you? How is it significant? What conclusions can you draw? What general principles can

you derive? The fourth and final phase of this experiential model is *active experimentation*. The learners suggest ways that they can apply the principles they have learned. How can we apply this learning? In what ways can we use it the next time? What would we do differently?

Learning styles

Kolb explains that different people naturally prefer a certain single different learning style. The learning style preference itself is actually the product of two pairs of variables, or two separate *choices* that we make, which Kolb presented as lines of axis, each with *conflicting* modes at either end (see Fig. 2).

Concrete Experience (feeling) **----Vs----Abstract Conceptualisation** (thinking)

Active Experimentation (doing) **----Vs----Reflective Observation** (watching)

A typical presentation of Kolb's two continua is that the east-west axis is called the Processing Continuum (how we approach a task), and the north-south axis is called the Perception Continuum (our emotional response, or how we think or feel about it).

These learning styles are the combination of two lines of axis (continua) each formed between *dialectally related modes* of *grasping experience* (doing or watching), and *transforming experience* (feeling or thinking).

The word *dialectally* is not widely understood, and yet carries an essential meaning, namely *conflicting* (its ancient Greek root means *debate*). Kolb meant by this that we cannot do both at the same time, and to an extent our urge to want to do both creates conflict, which we resolve through choice when confronted with a new learning situation. We internally decide whether we wish to *do* or *watch*, and *at the same time* we decide whether to *think* or *feel*.

The result of these two decisions produces (and helps to form throughout our lives) the preferred learning styles, hence the 2x2 matrix below. We choose a way of *grasping the experience*, which defines our approach to it, and we choose a way to *transform the experience* into something meaningful and usable, which defines our emotional response to the experience. Our learning style is a product of these two choice decisions.

1) How to approach a task - i.e., *grasping experience* - preferring to

    (a) *watch* or (b) *do* , and

2) Our emotional response to the experience - i.e., *transforming experience* - preferring to

(a) *think* or (b) *feel.*

In other words we choose our *approach to the task or experience* (grasping the experience) by opting for 1(a) or 1(b).

1(a) - through watching others involved in the experience and reflecting on what happens (reflective observation - watching) or

1(b) - through jumping straight in and just doing it (active experimentation - doing).

And at the same time we choose how to *emotionally transform the experience* into something meaningful and useful by opting for 2(a) or 2(b):

2(a) - through gaining new information by thinking, analysing, or planning (abstract conceptualisation - thinking) or

2(b) - through experiencing the concrete, tangible, felt qualities of the world (concrete experience - feeling)

The combination of these two choices produces a preferred learning style.

Kolb's learning styles - matrix view

It's often easier to see the construction of Kolb's learning styles in terms of a 2x2 matrix. The diagram also highlights Kolb's terminology for the four learning styles; diverging, assimilating, and converging, accommodating:

	Doing Active Experimentation (AE)	Watching Reflective Observation (RO)
Feeling Concrete Experience (CE)	Accommodating (CE/AE)	Diverging (CE/RO)
Thinking Abstract Conceptualisation (AC)	Converging (AC/AE)	Assimilating (AC/RO)

Thus, for example, a person with a dominant learning style of *doing* rather than *watching* the task, and *feeling* rather than *thinking* about *the experience*, will have a learning style which combines and represents those processes, namely an *accommodating* learning style, in Kolb's terminology.
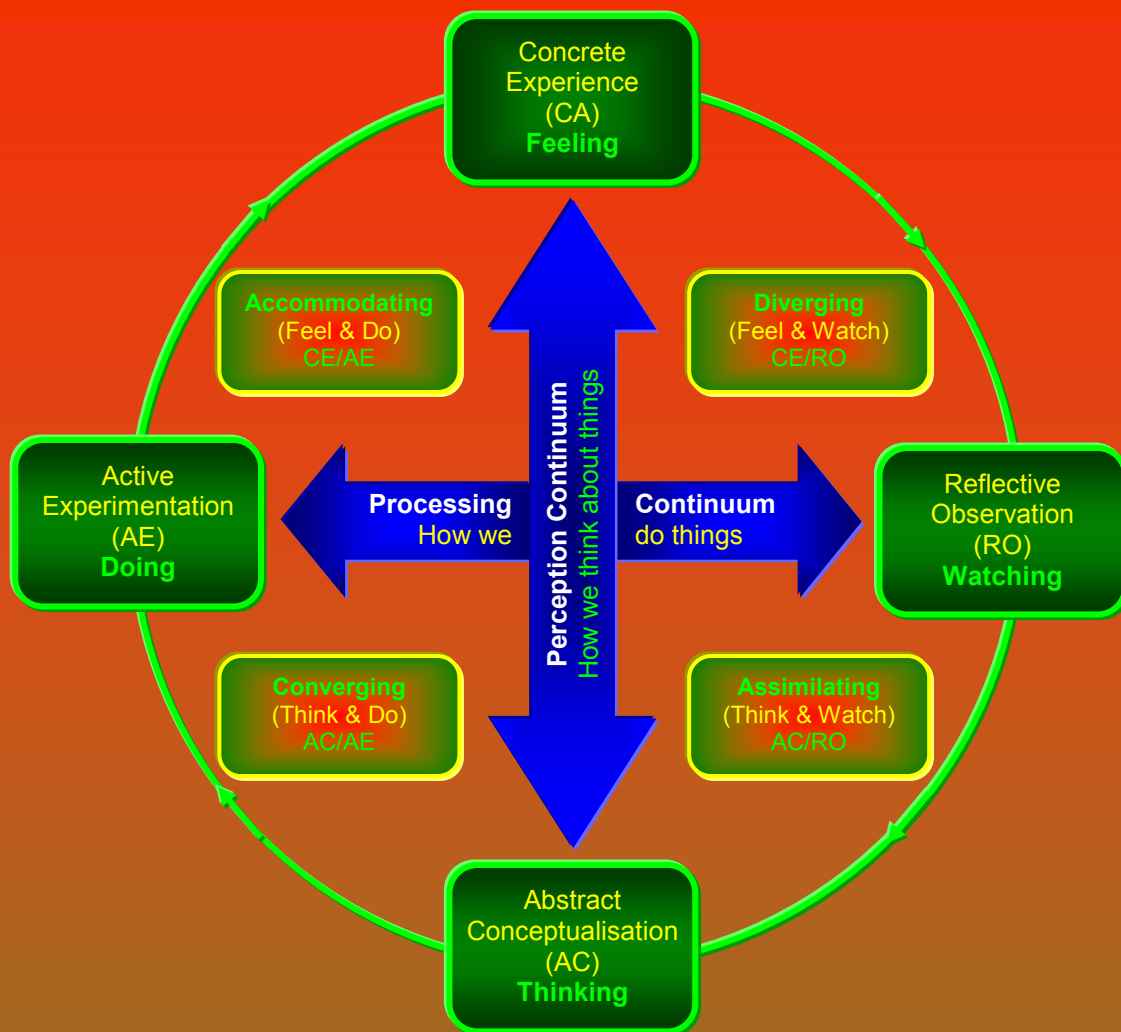
Fig. 2: Kolb's Learning Styles

Kolb's learning styles: description

Knowing a person's (and your own) learning style enables learning to be orientated according to the preferred method. Following are the brief descriptions of the four Kolb's learning styles:

Diverging (feeling and watching - CE/RO)

These people are able to look at things from different perspectives. They are sensitive. They prefer to watch rather than do, tend to gather information and use imagination to solve problems. They are best at viewing concrete situations from several different viewpoints. Kolb called this style *diverging* because these people perform better in situations that require generation of ideas, for example, brainstorming. People with a *diverging learning style* have broad cultural interests and like to gather information. They are interested in people, tend to

be imaginative and emotional, and tend to be strong in the arts. People with the diverging style prefer to work in groups, to listen with an open mind and to receive personal feedback.

Assimilating (watching and thinking - AC/RO)

The assimilating learning preference is for a concise, logical approach. Ideas and concepts are more important than people. These people require good clear explanation rather than practical opportunity. They excel at understanding wide ranging information and organising it in a clear logical format. People with an *assimilating learning style* are less focused on people and more interested in ideas and abstract concepts. People with this style are more attracted to logically sound theories than approaches based on practical value. These learning style people are important for effectiveness in information and science careers. In formal learning situations, people with this style prefer readings, lectures, exploring analytical models, and having time to think things through.

Converging (doing and thinking - AC/AE)

People with a *converging learning style* can solve problems and will use their learning to find solutions to practical issues. They prefer technical tasks, and are less concerned with people and interpersonal aspects. People with a *converging learning style* are best at finding practical uses for ideas and theories. They can solve problems and make decisions by finding solutions to questions and problems. People with a converging learning style are more attracted to technical tasks and problems than social or interpersonal issues. A converging learning style enables specialist and technology abilities. People with a converging style like to experiment with new ideas, to simulate, and to work with practical applications.

Accommodating (doing and feeling - CE/AE)

The accommodating learning style is *hands-on*, and relies on intuition rather than logic. These people prefer to take a practical, experiential approach. They are attracted to new challenges and experiences, and to carrying out plans. They commonly act on *gut* instinct rather than logical analysis. People with an *accommodating learning style* will tend to rely on others for information than carry out their own analysis. This learning style is prevalent and useful in roles requiring action and initiative. People with an accommodating learning style prefer to work in teams to complete tasks. They set targets and actively work in the field trying different ways to achieve an objective.

PERSONALITY

When psychologists talk of personality, they mean a dynamic concept describing the growth and development of a person's whole psychological system. Rather than looking at parts of the person, personality looks at some aggregate whole that is greater than the sum of the parts. Thus personality is the sum total of all that an individual is everything that constitutes a person's physical, mental, emotional, and temperamental make-up.

The term personality stems from the Latin word *persona,* which means *mask*. The study of personality can be understood as the study of *masks* that people wear. These are the personas that people project and display, but include the inner parts of psychological experience which we collectively call our "self".

Definitions

Personality is not easy to define. Basically, 'personality' refers to capture or summarise an individual's 'essence'. Personality is person-ality, the science of describing and understanding persons.

"I" is for personality

According to Adams (1954) personality is "I".

Adams suggested that we get a good idea of what personality is by listening to what we say when we use "I". When you say I, you are, in fact, summing up everything about yourself - your likes and dislikes, fears and virtues, strengths and weaknesses.

The word "I" is what defined you as an individual, as a person separate from all others (Schultz & Schultz, 1994).

The most frequently used definition of personality was produced by Gordon Allport in 1937. He said personality is the dynamic organisation within the individual of those psychophysical systems that determine his unique adjustments to his environment.

Robbins (2001) defined personality as the sum total of ways in which individual reacts to and interacts with others. It is most often described in terms of measurable traits that a person exhibits.

Woodworth defines personality as the quality of an individual's total behaviour; that is, how he reacts when his activity is considered as a whole. Personality comprises an individual's experience, his knowledge, skill, temperament, attitude, habits, character, and physical traits.

According to Carver and Scheier (2000), personality is a dynamic organisation, inside the person, of psychophysical systems that create a person's characteristic patterns of behaviour, thoughts, and feelings.

Personality can be defined as a dynamic and organised set of characteristics possessed by a person that uniquely influences his or her cognitions, motivations, and behaviours in various situations (Ryckman, 2004).

In essence, personality includes the unique pattern of psychological and behavioural characteristics that distinguishes each of us from everyone else. Personality characteristics are relatively stable and enduring, often developed in childhood, and affect the way we *think, act, feel, and behave*. Individual personality patterns are both *consistent and stable and unique and distinctive.*

Determinants of personality

An adult's personality is now generally considered to be made up of hereditary and environmental factors and moderated by situational conditions.

Heredity refers to those factors that were determined at conception. Physical stature, facial attractiveness, gender, temperament, muscle composition and reflexes, energy level, and biological rhythms are characteristics that are generally considered to be either completely or substantially influenced by who your parents were that is by their biological, physiological, and inherent psychological makeup. The hereditary approach argues that the ultimate explanation of an individual's personality is the molecular structure of the genes, located in the chromosomes.

Evidence demonstrates that traits such as shyness, fear, and distress are most likely caused by inherited genetic characteristics. It suggests that some personality traits may be built into the same genetic code that affects factors such as height and hair colour.

If personality characteristics were completely dictated by heredity, they would be fixed at birth and no amount of experience could alter them. For example, if you were relaxed and easy

going child, it would be result of your genes, and it would not be possible for you to change those characteristics. But personality characteristics are not completely dictated by heredity.

Environment to which we are exposed plays a substantial role in shaping our personalities. For example, culture establishes the norms, attitudes, and values that are passed along from one generation to next and create consistencies over time. The environment factors that exert pressures on our personality formation are culture in which we raised, our early conditioning, the norms among our family, friends, social groups etc that we experience.

Situation influences the effects of heredity and environment on personality. An individual's personality, although generally stable and consistent, does change in different situations. Situations seem to differ substantially in the constraints they impose on behaviour. Some situations (e.g., employment interview) constraints many behaviour; other situations (e.g., a picnic in a public park) constrain relatively few.

INDIVIDUAL DIFFERENCES

No two persons are born exactly alike; but each differs from the other in natural endowments, one being suited for one occupation and the other for another.

- Plato

Allport and Odbert (1936) found 17,953 words to describe the way people are psychologically different from each other (e.g. shy, trustworthy, laconic, phlegmatic, kind, conscientious, anxious etc.). All these words describe personality traits.

Clearly, personality constitutes the most significant area of individual differences. No two people are exactly the same - not even identical twins. Some people are anxious, some are risk-taking; some are phlegmatic, some highly-strung; some are confident, some shy; and some are quiet and some are loquacious. This issue of differences is fundamental to the study of personality.

People also differ in intelligence, abilities, ambition, motivations, and the like. If we want to accurately understand, explain, or predict human behaviour then we need to focus on individual differences. Some of the points of individual differences are presented below.

Differences in intelligence level

There are differences in intelligence level among different individuals. We can classify the individuals from genius (140 & above) to idiots (< 25) on the basis of their IQ level.

Differences in achievement

Through achievement tests it has been found that individuals differ in their achievement abilities. The difference in achievement is also found among those individuals who are at the same level of intelligence. This is on account of the difference in the various factors of intelligence and the differences in previous experiences or interests.

Differences in attitude

Attitude is a general disposition towards a group of people or an institution. Individuals differ in their attitudes towards different people or institutions.

Personality differences

Personality is complex. Its differences among individuals are wide. In everyday life, we usually think of personality as being made-up of many traits. Traits are distinguishing qualities or characteristics of a person. Traits are a readiness to think or act in a similar fashion in

response to a variety of different stimuli or situations. These traits are outward signs of dynamic forces that act and interact in an infinite number of ways. That is why the integration of these traits – or personality is never the same in any two individuals. Personality is unique.

Emotional differences

Individuals differ in their emotional reactions to a particular situation. There is some universality in the existence of emotions themselves in all the people. By this, we mean that the emotion of anger, for example, is a common to all the people but its depiction is different in different people. Some people are irritable by temperament and they get angry very soon. There are others who are of peaceful nature and do not become angry easily.

PERSONALITY AS A SET OF TRAITS

The early work in the structure of personality revolved around attempts to identify and level enduring characteristics that describe an individual's behaviour. Popular characteristics include shyness, aggressiveness, submissiveness, laziness, ambition, loyalty, and timidity. These characteristics, when they are exhibited in a large number of situations, are called *personality traits*.

The more consistence the characteristic and the more frequently it occurs in divers situations, the more important that trait is in describing the individual. In one study 17,953 individual traits were identified. One researcher isolated 171 traits but concluded that they were superficial and lacking in descriptive power. What he sought was a reduced set of traits that would identify underlying patterns. The result was the identification of 16 personality factors, which he called the *source, or primary traits.*

The 16 traits have been found to be generally steady and constant sources of behaviour, allowing prediction of an individual's behaviour in specific situations by weighing the characteristics for their situational relevance.

SIXTEEN PRIMARY TRAITS	
Reserved vs Outgoing	Trusting vs Suspicious
Less intelligent vs More intelligent	Practical vs imaginative
Affected by feelings vs Emotionally stable	Forthright vs Shrewd
Submissive vs Dominant	Self-assured vs Apprehensive
Serious vs Happy-go-lucky	Conservative vs Experimenting
Expedient vs Conscientious	Group dependent vs Self-sufficient
Timid vs venturesome	Uncontrolled vs Controlled
Tough minded vs Sensitive	Relaxed vs Tense

The Big Five Personality Factors

A remarkably strong consensus of what traits are basic has emerged. In recent years, an impressive body of research supports that five basic dimensions underlie all others and encompass most of the significant variation in human personality. The Big Five factors are NEOAC or OCEAN:

Neuroticism (Emotional Stability)

This dimension taps a person's ability to withstand stress. People with positive emotional stability tend to be calm, self confident, and secure. Those with highly negative scores tend to be nervous, anxious, depressed, and insecure.

Extraversion (Introversion)

This dimension captures one's comfort level with relationships. Extraverts tend to be gregarious, assertive, and sociable. Introverts tend to be reserved, timid, and quiet.

Openness to experience (Closedness to experiences)

This dimension addresses an individual's range of interests and fascination with novelty. Extremely open people are creative, curious, and artistically sensitive. Those at the end of openness category are conventional and find comfort in the familiar.

Agreeableness (Disagreeableness)

This dimension refers to an individual's propensity to deter to others. Highly agreeable people are cooperative, warm, and trusting. People who score low on agreeableness are cold, disagreeable, and antagonistic.

Conscientiousness (Lack of conscientiousness)

This dimension is a measure of reliability. A highly conscientious person is responsible, organised, dependable, and persistent. Those who score low on this dimension are easily distracted, disorganised, and unreliable.

Each Supertrait is measured by 6 facets (or subordinate traits). These are:

N	E	O	A	C
Anxiety	Warmth	Fantasy	Trust	Competence
Angry hostility	Gregariousness	Aesthetics	Straightforwardness	Order
Depression	Assertiveness	Feelings	Altruism	Dutifulness
Self-consciousness	Activity	Actions	Compliance	Achievement striving
Impulsiveness	Excitement-seeking	Ideas	Modesty	Self Discipline
Vulnerability	Positive emotion	Values	Tender-mindedness	Deliberation

A self theory of personality holds that the basic organising factor of the personality is the self. The self, in turn, is defined in many ways but it may be conceptualised as a picture into which behaviour fits. It represents past experiences, behaviours, and other influences on the individual. The self theories are not dynamic in the sense of the opposing forces hypothesised by the psychoanalytic theories, nor are they entirely static descriptions as the trait and type theories tend to be. The picture of the individual that constitute the self is a changeable mould that both determines and is determined by behaviour. Its functions are to monitor and organise ongoing behaviour, though the mechanism of this action is not clear.

The self is central to personality to humanistic theorist Carl Rogers. We perceive the world and our experience through our ideas about the self, our self-concept. Rogers sees the self-concept as core to understanding human behaviour and personality because we *act according to our self-concept*, be it positive or negative.

Indeed Rogers feels we create our own "*perceptual reality"* and live in our own "*subjective*" phenomenological world that we create from our experiences and feelings about our self. To understand the personality we must enter into the subjective world of a person and begin to empathize or understand the person from their own subjective reality.

Humanistic psychologists believe that man is essentially good and rational. He is motivated from birth to actualize his self and is innately driven to self-actualize his or her potential. Given a nurturing environment in which people give the child the unconditional love, respect, and acceptance necessary for growth called unconditional positive regard, the child will grow toward enhancement of his unique self.

Personality to Rogers is the unique expression of each person's self-actualizing tendency as it unfolds in the person's perceptual reality. Personality reflects our feelings, beliefs and attitudes about ourselves, our self-concept. If a person's central motivating force, the drive for self-actualization, is unimpeded, the person will choose experiences that enhance growth and lead to actualization of potential and self-fulfilment.

Given unconditional positive regard during development the child develops into a *fully functioning person* who is spontaneous, open, flexible, creative, and loving. Fully functioning persons are congruent, freely expressing their true feelings. Their outside behaviours are congruent with their inside feelings so they are honest and genuine in their approach to the world.

Unfortunately the growth-process is often thwarted. Instead of receiving unconditional positive regard the child experiences conditional positive regard. Instead of acceptance, the developing self experiences conditions of worth, ways a child must behave to obtain approval. In Roger's personality theory conditional positive regard is the cause of poor self-image and maladjustment.

Parental criticism and punishment thwarts the developing self and stunts natural growth. The child now must channel natural growth energies toward defensive mechanisms. He learns to

withdraw from fight or accept the criticism. Any method he chooses damages his sense of self-worth. He uses elaborate defense mechanisms to defend against the hurt, anxiety, and tension. Instead of being genuine the child learns to hide behind masks and play roles or to simply withhold true feelings. Rogers theorizes that the child may even in time lose his or her sense of self, conforming and adapting to the prescriptions of behaviours called conditions of worth to win external acceptance.

Negative self-concepts, emotional disturbance, and mental disorders are products of conditional positive regard. The person becomes maladjusted and incongruent as he loses touch with the self inside. His behaviours on the outside are incongruent with his feelings on the inside. Humanistic therapies centre on assisting the person's honest self-exploration in an atmosphere of *unconditional positive regard, acceptance, respect, and empathy* in hopes the person can rediscover the self.

Rogers believes that in a *climate of trust and unconditional positive regard,* people can begin to drop their masks, facades, and ego defences and become increasingly real and congruent. When they begin to rediscover their real authentic self the *self-actualizing tendency* will allow them to grow toward realization of their full potential, a flowering of their sacred unique self.

Rogers opposes behaviourists with their use of rewards and punishments to shape behaviour. Rogers argues reinforcements may lead to conditions of worth, wherein a child believe his worth depends on his displaying "right" and "proper" attitudes and behaviours. Children need the approval of others, positive regard, and will distort perceptions and deny real feelings to conform to outside standards of behaviour. Negative evaluations lead to a negative self-concept. A person begins to doubt his self, his abilities, and his worth in the world, excessive *punishment* indeed.

Abraham Maslow developed a theory of personality that has influenced a number of different fields. This wide influence is due in part to the high level of practicality of Maslow's theory. This theory accurately describes many realities of personal experiences. Many people find they can understand what Maslow says. They can recognise some features of their experience or behaviour which is true and identifiable but which they have never put into words.

Like Carl Rogers, Maslow is a humanistic psychologist. Humanists do not believe that human beings are pushed and pulled by mechanical forces, either of stimuli and reinforcements (behaviourism) or of unconscious instinctual impulses (psychoanalysis). Humanists focus upon potentials. They believe that humans strive for an upper level of capabilities. Humans seek the frontiers of creativity, the highest reaches of consciousness and wisdom. This has been labelled "fully functioning person", "healthy personality", or as Maslow calls this level, "self-actualising person."

Maslow has set up a hierarchic theory of needs. All of his basic needs are instinctoid, equivalent of instincts in animals. Humans start with a very weak disposition that is then fashioned fully as the person grows. If the environment is right, people will grow straight and beautiful, actualising the potentials they have inherited. If the environment is not "right" (and mostly it is not) they will not grow tall and straight and beautiful.

Maslow has set up a hierarchy of five levels of basic needs. Beyond these needs, higher levels of needs exist. These include needs for understanding, aesthetic appreciation and purely spiritual needs. In the levels of the five basic needs, the person does not feel the second need until the demands of the first have been satisfied or the third until the second has been satisfied, and so on. Maslow's basic needs are as follows:

Physiological Needs

These are biological needs. They consist of needs for oxygen, food, water, and a relatively constant body temperature. They are the strongest needs because if a person were deprived of all needs, the physiological ones would come first in the person's search for satisfaction.

Safety Needs

When all physiological needs are satisfied and are no longer controlling thoughts and behaviours, the needs for security can become active. Adults have little awareness of their security needs except in times of emergency or periods of disorganisation in the social structure (such as widespread rioting). Children often display the signs of insecurity and the need to be safe.

Needs of Love, Affection, and Belongingness

When the needs for safety and for physiological well-being are satisfied, the next class of needs for love, affection, and belongingness can emerge. Maslow states that people seek to overcome feelings of loneliness and alienation. This involves both giving and receiving love, affection and the sense of belonging.

Needs for Esteem

When the first three classes of needs are satisfied, the needs for esteem can become dominant. These involve needs for both self-esteem and for the esteem a person gets from others. Humans have a need for a stable, firmly based, high level of self-respect, and respect from others. When these needs are satisfied, the person feels self-confident and valuable as a person in the world. When these needs are frustrated, the person feels inferior, weak, helpless, and worthless.

Needs for Self-Actualisation

When all of the foregoing needs are satisfied, then and only then are the needs for self-actualisation activated. Maslow describes *self-actualisation is the intrinsic growth of what is already in the organism, or more accurately, of what the organism is* (Psychological Review, 1949). In other words, self-actualisation is a person's need to be and do that which the person was "born to do." These needs make themselves felt in signs of restlessness. The person feels on edge, tense, lacking something, in short, restless. If a person is hungry, unsafe, not loved or accepted, or lacking self-esteem, it is very easy to know what the person is restless about. It is not always clear what a person wants when there is a need for self-actualisation. In short, self-actualisation is reaching one's fullest potential.

The hierarchic theory is often represented as a pyramid, with the larger, lower levels representing the lower needs, and the upper point representing the need for self-actualisation.

Maslow believes that the only reason that people would not move well in direction of self-actualisation is because of hindrances placed in their way by society.

Characteristics of self-actualised people according to Maslow (1968):

- efficient and accurate in perceiving reality

- are accepting of themselves, of other people and of nature

- are spontaneous in thought and emotion, rather than artificial

- are problem-centred - are concerned with the eternal philosophical questions of humankind

- are independent and autonomous

- have a continued "freshness of appreciation" of ordinary events

- often experience "oceanic feelings" that is a sense of oneness with nature

- identify with all of humanity and are democratic and respectful of others

- form very deep ties but only with a few people

- appreciate for its own sake the process of doing things

- have a philosophical, thoughtful, non-hostile sense of humour

- have a childlike and fresh creativity and inventiveness

- maintain an inner detachment from the culture in which they live

- may appear temperamental or ruthless as they are strong and independent people guided by their own inner visions

Studies have shown that only approximately one percent of people self-actualise. Most others live between 'love and belongingness' needs and 'self-esteem' needs. Self-actualisation is of course the weakest of needs, and is easily impeded. Some people have a fear of self-knowledge and entering into state of uncertainty. Many people feel the need for a balance between safety and freedom.

Concept

In its most general form emotion can be defined as an intense neural mental state that arises subjectively rather than through conscious effort and evokes either a positive or negative psychological response to move an organism to action. Research has identified six universal emotions: anger, fear, sadness, happiness, disgust, and surprise.

Growing consensus does agree that the distinction between emotion and feeling is important. Feeling can be seen as emotion that is filtered through the cognitive brain centers, specifically the frontal lobe, producing a physiological change in addition to the psycho-physiological change. **Affect** is an innately structured, non-cognitive evaluative sensation that may or may not register in consciousness; **feeling** is affect made conscious, possessing an evaluative capacity that is not only physiologically based, but that is often also psychologically (and sometimes relationally) oriented; and emotion is psychosocially constructed, dramatised feeling

Emotions are highly subjective personal tendencies to respond to internal and external variables. Emotions have *cognitive, physiological, and behavioural components*. Our cognitive appraisals and evaluations of events in our lives are key determinants to our emotional responses. Emotions are accompanied by physiological arousal of the automatic nervous system that leads to physical symptoms such as increase in respiration and heart rate. The behavioural component of emotions is expressed in our nonverbal body language including facial expressions.

Further, emotions are acute disturbances of the individual as whole, psychological in origin, involving behaviour, conscious experiences and verbal functioning. The word emotion has three distinct connotations.

- Emotion is a kind of reaction pattern in an individual which we observe when he seems to behave in a certain manner and describe as angry, affectionate, afraid, anxious, and excited. This type of behaviour is said to be emotional and is objectively observed.

- Emotion is a kind of experience within the individual. Those experiences we feel and can talk about without being subjective and are never really known to an outside observer.

- Emotion is a kind of somatic condition or set of physiological processes when organic functions are disturbed. This aspect of emotion can scientifically be studied.

Some of the basic or primary emotions that appear to be inborn and readily seen in infants are *joy, fear, anger, sadness, surprise, and disgust.* As we age, emotions become more complex and difficult to measure. Self-report measures, like Likert Scales, allow people to rate on a numerical scale how much of an emotion they feel but are subject to *"self-report bias."*

A number of psychophysiological measures of emotion such as the GSR (Galvanic Skin Response) and the polygraph that measures the heart rate and respiration are used in many applications but there is a serious disagreement about the validity and use of polygraph results. Lie detector tests are designed to detect autonomic fluctuations while the subject is being questioned. Other applications include forensic psychologists who believe they can *"read"* the emotions of jurors and witnesses from their "body language."

Types of emotions

There are two types of emotions; that is, positive and negative emotions.

Positive emotions

These are aroused by situation which help and promote the satisfaction of needs and realisation of goals and essential to the normal development. For example, joy, affection, love, happiness etc.

Negative emotions

These are aroused by situation which prevent the achievement of needs and realisation of goals and are harmful to the well-being and development of an individual. For example, fear, anger, jealousy, anxiety, frustration etc.

It should not be concluded that experiencing of positive emotion is always good and negative emotion is always bad. While weighing the impact, we should also keep in mind other factors like i) the frequency and intensity of emotional experience ii) the situation, occasion, and the nature of the stimulus which arouses the emotions.

Emotions with too much intensity (positive or negative) bring harmful effects. On the other hand the so called negative emotions may prove essential for human welfare. For example, the emotion of fear prepares an individual to face the danger ahead. The child who has no

emotion of fear is sure to get injured because he ahs not learnt to save himself against a possible danger.

Effect of emotion on behaviour of rural people

- Sudden fear causes speech defects

- Prolonged emotion causes stammering

- Interfere with affective perception

- Affect learning

- Prolonged fear in children results in timidity and stubbornness

- Negative emotions will interfere with physical functions of the body

- Emotions can hinder performance, especially negative emotions

- Emotions can increase arousal levels thus acting as motivation to higher performance

Emotion is a complex, subjective experience accompanied by biological and behavioural changes. Emotion involves feeling, thinking, activation of the nervous system, physiological changes, and behavioural changes such as facial expressions.

Different theories exist regarding how and why people experience emotion. These include evolutionary theories, the James-Lange theory, the Cannon-Bard theory, Schacter and Singer's two-factor theory, and cognitive appraisal.

Evolutionary Theories

More than a century ago, in the 1870s, Charles Darwin proposed that emotions evolved because they had adaptive value. For example, fear evolved because it helped people to act in ways that enhanced their chances of survival. Darwin believed that facial expressions of emotion are innate (hard-wired). He pointed out that facial expressions allow people to quickly judge someone's hostility or friendliness and to communicate intentions to others. Recent evolutionary theories of emotion also consider emotions to be innate responses to stimuli. Evolutionary theorists tend to downplay the influence of thought and learning on emotion, although they acknowledge that both can have an effect. Evolutionary theorists believe that all human cultures share several primary emotions, including happiness, contempt, surprise, disgust, anger, fear, and sadness. They believe that all other emotions result from blends and different intensities of these primary emotions. For example, terror is a more intense form of the primary emotion of fear.

The James-Lange Theory

There is much controversy as to the origins of emotion. Common logic says the stimulus creates the feeling that leads to the autonomic arousal. *(We see the barking dog, we feel fear, we run.)* In the 1880s, two theorists, psychologist William James and physiologist Carl Lange, independently proposed an idea that challenged commonsense beliefs about emotion. This idea, which came to be known as the James-Lange theory, is that people experience emotion because they perceive their bodies' physiological responses to external events. According to this theory, people don't cry because they feel sad. Rather, people feel sad because they cry, and, likewise, they feel happy because they smile. This theory suggests that different physiological states correspond to different experiences of emotion.

The Cannon-Bard Theory

The physiologist Walter Cannon disagreed with the James-Lange theory, posing three main arguments against it:

1. People can experience physiological arousal without experiencing emotion, such as when they have been running. (The racing heart in this case is not an indication of fear.)

2. Physiological reactions happen too slowly to cause experiences of emotion, which occur very rapidly. For example, when someone is in a dark alley alone, a sudden sound usually provokes an immediate experience of fear, while the physical "symptoms" of fear generally follow that feeling.

3. People can experience very different emotions even when they have the same pattern of physiological arousal. For example, a person may have a racing heart and rapid breathing both when he is angry and when he is afraid.

Cannon proposed his own theory of emotion in the 1920s, which was extended by another physiologist, Philip Bard, in the 1930s. The resulting Cannon-Bard theory states that the experience of emotion happens at the same time that physiological arousal happens. Neither one causes the other. The brain gets a message that causes the experience of emotion at the same time that the autonomic nervous system gets a message that causes physiological arousal. For example, our mind sees the dog and creates the visceral feelings followed by conscious fear.

Schachter and Singer's Two-Factor Theory

In the 1960s, Stanley Schachter and Jerome Singer proposed a different theory to explain emotion. They said that people's experience of emotion depends on two factors: physiological arousal and the cognitive interpretation of that arousal. When people perceive physiological symptoms of arousal, they look for an environmental explanation of this arousal. The label people give an emotion depends on what they find in their environment.

Example:

If a person finds himself/herself near an angry mob of people when s/he is physiologically aroused, she might label that arousal "anger." On the other hand, if she experiences the same pattern of physiological arousal at a music concert, s/he might label the arousal "excitement."

Schachter and Singer agree with the James-Lange theory that people infer emotions when they experience physiological arousal. But they also agree with the Cannon-Bard theory that the same pattern of physiological arousal can give rise to different emotions.

Cognitive Appraisal

The psychologist Richard Lazarus's research has shown that people's experience of emotion depends on the way they appraise or evaluate the events around them.

Example:

If a person is driving on a winding road by the edge of a high cliff, s/he may be concerned about the danger of the road. His/her passenger, on the other hand, thinks about the beauty of the view.

A problem exists when someone has a goal and an idea as how to solve it, but does not know how to proceed. Problem-solving deals mainly with intellectual problems: those which can be solved mentally or by manipulation. Problem-solving uses three main methods:

1. Examining what has been said about the problem.

2. Experimenting with the problem.

3. Working through the problem.

Research into problem-solving has shown that this process is not entirely open to consciousness. A person may begin by using conscious reasoning, but the solution is often found suddenly, as if it came out of nowhere. Graham Wallas described the general problem-solving sequence as containing four distinct stages:

- Preparation - The problem is defined and possible ways to approach it are explored.

- Incubation - Attention is turned away from the problem, and towards other things.

- Illumination - The solution suddenly become apparent.

- Verification - The solution is checked to confirm that it works.

The first studies into problem-solving were carried out by Gestalt psychologists, who emphasized the difference between solving a problem by understanding its structure and finding the solution by a blind application of known rules. Karl Duncker applied this type of analysis to multiple-step problems. He discovered that every phase of a solution tends to be a slight variation of the original problem. Duncker coined the term "functional fixedness" to describe a common source of difficulty: if the solution to a problem requires a concept to be used in an unfamiliar way, a fixation on the familiar usage may prevent the new one from being discovered.

Mathematician Gyorgy Polya introduced the idea that there are general techniques which can be applied to solving problems. He called these techniques heuristics: procedures that can help solve a problem, but cannot guarantee success. One well-known heuristic technique is working backwards when the answer is known.

Since the 1960s, computers have been an important contribution to problem-solving. A recent computer approach involved memory-based reasoning, in which a program compared new

data to previously solved problems and tried to make decisions based on similar cases. Although computer systems examine the possible solutions more quickly, even the most complex computer system cannot match the complexity of human reasoning or incorporate human experience into their problem solving methods.