

## BASIC PRINCIPLES OF HUMAN BEHAVIOUR

### Human Behaviour

It is the expression of one's thoughts and feelings. Behaviour patterns that are expressed outwardly are called as *overt behaviour patterns* and those that are internal are called as covert behaviour patterns.

Human behaviour refers to the range of behaviours exhibited by humans and which are influenced by culture, attitudes, emotions, values, ethics, authority, rapport, persuasion, coercion, and or genetics.

Psychology studies mental behaviour. All Activities or behaviour patterns could be fitted into stimulus - response mechanism.

### S-R mechanism

A stimulus is anything that arouses the organism or any of its parts to activity.

Eg. Light is the stimulus for eyes and sound for ears.

A response is any resultant activity that is aroused by a stimulus.

Eg. Somebody pricks you with a pin and you lift your arm. Here pinprick is the stimulus and lifting of arm is the response.

**Type of stimulus/response:** External stimulus and External response.

Internal stimulus: stimulus need to be external. It may sometimes be internal.

Eg. Feeling hungry and taking food.

Internal response: Changes in one's organic or physiological conditions as a result of some stimulus.

All behaviour patterns and mental phenomena are due to this S-R mechanism.

The S-R mechanism involves the following things:

**Stimulus → Receptor → Message → Connector → Effector → Response**

1. **Stimulus:** The trigger, or cause of the change.
2. **Receptors:** Stimulus is converted to an electrical impulse.

Refer to sense organs possessed by organism through which stimuli are received. The environment of objects and persons influence these receptors and these receptors get impressions from objects and persons. Receptors are sensory cells specialised for sensitivity to environmental stimulation.

3. **Message:** Electrical impulse is sent to the CNS by sensory neurons. At CNS, the

impulse is sent to the brain via interneurons.

i) Sensory to CNS

ii) At the CNS, impulse is relayed from sensory to interneuron

iii) Sensory message is sent to the brain

iv) The brain interprets the message.

v) The brain sends a response message to motor neurons via interneurons.

4. **Connectors:** Those connect receptors and effectors. For example, the spinal cord is connected with receptors and also units the effectors. These nerves are called *sensory nerves* and also called as *in-carrying or off afferent nerves*.
5. **Effectors:** Parts of body by which man's actions to objects and persons are performed are called *motor organs* or organs of response. Any kind of movement is possible only through these effectors. Effectors are the cells of muscle whose activity is behaviour.
6. **Result or Response:** activity based on message from the brain.

### **Central Nervous System:**

It is very important. It comprises of brain, spinal cord and all the nerves emerging from these and running to the different parts of body.

### **Peripheral Nervous System:**

Nerves spread over different parts of the body and connecting them. To some extent central nervous system and peripheral nervous system function independently. But most activities are largely under the control of central nervous system.

Nerve cells : Structural unit of nerve is neuron

Neuron : Short projections - dendrites

In a typical nerve axon one nerve is linked up with dendrites of the next and so on

### **Neurons types:**

Sensory neurons - Carry messages from the peripheral organs of the body to the central nervous system

Motor neurons - Found in nerves carrying messages from various centres of central nervous system to different peripheral parts.

Associative neurons - Connect sensory and motor nerves.

### **Sensation- Meaning**

Any experience that takes place through sense organs is called sensation. Sensations are the gateways of knowledge, because all our knowledge is based upon the functioning of sense organs. Sensation is the simple and most elementary process, which creates the desire to work for something and how to know something based on past experiences. A sensation is the awareness of a quality of an object that stimulates any sense organs. It is purely a sensory knowledge, which does not have any relationship with any knowledge or awareness. There are many kinds of sensations as there are sense organs. Each sensation is important and each has particular sense organs.

Eg. Visual sensations of light and colour- related eyes.

Auditory sensation of noise and tone- related to the ears.

### **Definition**

Impressions received through the sense organs are called sense organs – MATHUR

A sensation is an elementary cognitive experience- Dr. JALOTA

Sensations are first things in the way of consciousness- JAMES

Sensation is defined as the simplest of all conscious experience – Douglas and Halland

Sensation is the process of receiving, translating and transmitting information to the brain from the external and internal environment- HUFFMAN

### **Characteristics of sensation**

- 1) **Quality:** Ex: A visual sensation may be of one colour or another. The quality of a taste sensation may be sour, sweet, bitter etc.
- 2) **Intensity:** Each sensation may vary in intensity from low to high in a continuous manner. Thus, we experience mild pain or severe pain, faint light or bright light and so on.
- 3) **Threshold:**
  - a) **Absolute threshold:** For any stimulation to be aroused, the stimulus (light, sound, touch etc.) must have a minimum intensity. Stimuli of very low value are not responded to. Thus, for every sensation there is an absolute threshold level.

- b) Differential threshold:** When we listen to some sound, we do not respond to every small change in the sound. Hence, changes in stimuli are not sensed unless the change involved is atleast of a certain minimal intensity. This change in the sensory experience is known as differential threshold value of stimulus.
- 4) **Adaptation:** A sensory system is able to adapt itself to a sensation of it is subjected to that sensation for a long time.
- 5) **After-images or after-sensation:** Strong sensory experiences continue to remain for a few more moments even after their sensation.
- 6) **Extensity:** Sensations may also vary in extensity or size (eg.). Thus we may see a small patch or large patch of light.
- 7) **Duration:** Sensations also possess the property of duration. Our sense experiences last for different lengths. The sensation may present for a long time or may disappear immediately.
- 8) **Latency period:** Sensations have a latency period. This is the time taken by the bodily tissues before they start making their normal responses.

### **Attention**

This is the process of attending to series of stimuli. From among the many stimuli which are within range psychologically we select only those that are related to our present needs and interests. Attention is the cognitive process of selectively concentrating on one aspect of the environment while ignoring other things. Attention has also been referred to as the allocation of processing resources.

Examples include listening carefully to what someone is saying while ignoring other conversations in a room or listening to a cell phone conversation while driving a car.

### **Span of Attention**

Span of attention means how many letters or digits that we can see at a single glance. How many figures or letters can notice in one act of attention? This can be determined by

the use of an apparatus called the 'Tachistoscope'. There are individual differences but usually 4 or 5 numbers or letters can be attended to at a single glance. The registration plate of a motor car contains usually only 4 figures. Serial numbering will go upto 9999, but not 10,000. This is because when a car runs fast the traffic constable will not ordinarily be able to take note of more than 4 numbers.

### **Perception – Meaning**

When things come into contact with any of our sense organs, we feel sensation. When brain comes to know the form of these sensations, it comes to know the stimulus fully. This cognitive experience of the brain is called perception. Perception is the process by which an organism interprets sensory input so that it acquires meaning.

Perception = Sensation + Meaning (interpretation)

All knowledge of the world is ultimately obtained through sensory experiences. Sensation alone is meaningless and it will not result in acquisition of knowledge. Sensation is to be followed by application of mind. Then it results in perception. In other words we can say that the first response to a stimulus is sensation and perception is the next response following sensation.

### **Definition**

Perception is the process of getting to know objects and objective facts by the use of senses- WOODWORTH

Perception refers to the complex processes which begin with the stimulation of a sense organ and end with an interpretation of the resulting neural activity by the organism i.e. with the meaning of the stimulus- JAMES A.DAYAL

### **Characteristics of perception**

- 1. Perception shifts:** Just like attention perception also shifts. As we attend to one part of the stimulus we perceive that part and then as attention passes on to another part we perceive that part also.
- 2. Perception is a grouping and combine response:** we put several stimuli together and make a joint response to it. When we perceive the face of a friend there are several stimuli coming to us from different parts of his face eyes, ears, nose etc. we put them all together and understand it as a totality.

3. **Figure has advantage over background in perception:** There are no gaps in nature and the human mind also hates gaps. It tends to fill in gaps and perceive things as having a definite form.
4. **Perception is an isolating response:** We perceive the thing we select for our attention and do not perceive the things that are not attended to.
5. Perception follows the '**Law of reduced cues**'. Applied to perception, the law of reduced cues means that as we become more and more acquainted with an object, the signs by which we can perceive it become less and less till at last, a fraction of original sign is enough for us to recognize that object.