Some phenomena of classical conditioning

Various important observations have been made as a result of a large number of experiments conducted by **Pavlov, Bechterev** and a number of other psychologists. The following are some of the important findings as reported by him in his classic book on conditioning

       (1) **Intensity**: One simple fact is that gastric secretion is the function of kind of food (UCS). There is positive correlation between intensity of the stimulus and magnitude of the response but there is negative correlation between intensity of the stimulus and latency of the response. The more intense the CS, the more rapidly conditioning will proceed and longer the CR will be.

CS---CR

(High Intensity)   +   (Low intensity)

                           Latency is Less

CS---CR

(Low Intensity)   (Low magnitude)

                           Latency is Higher

Latency is higher It has also been reported that if the CS is too weak, there may be no conditioning.

       (**2) Temporal relationship between CS and UCS**: Classical conditioning experiments have been conducted in control conditions in psychological laboratory. Psychologists have manipulated systematically the time interval between the CS and UCS. It has been reported that an interval of half a second (0.5 sec) between CS and UCS produces the greatest amount of conditioning. If the time interval is shorter than half a second and particularly if the interval is negative so that the CS follows UCS , a dramatic failure of conditioning is typically found. Studies suggest that there may be very different optimum interval for different responses.

(3) **Extinction**: If CS (Sound of the bell) is not followed by UCS (food); it means there is no reinforcement. A stage comes when the dog stops to secrete saliva .This process is known as extinction. Extinction has been used in two different ways-- extinction as procedure as something the experimenter does and another something which happens to behaviour of the organism. **Pavlov** reported in his experiments that when the spacing of test trails was increased, the response extinguished rapidly.

(4) **Spontaneous recovery:** It has been reported by psychologists that when the dog is brought out of the experimental set-up and again put in the set-up after a lapse of time, the dog responds to conditioned stimulus (CS) by gastric secretion. This process is called spontaneous recovery. The phenomenon of spontaneous recovery explains that there is no complete extinction due to time interval but there is inhibition of CR.

(i) **External inhibition**: It is a process of inhibiting CR by external factors in the environment as noise or any other distraction which may draw the attention of the dog. Suppose a dog has been conditioned to a tone to salivate. When we present the tone and a new distracting stimulus (noise) is also presented, we find that occurrence of a novel Stimulus inhibits or blocks the CR, the dog does not salivate. It has been further reported that if the novel stimulus is presented on series of experimental trials, the CR will return on its full strength.

(ii) **Internal inhibition**: It was observed by Pavlov that it completes extinction of CR is obtained by not providing food to the dog and it is then given a period of 24 hours rest. CR will show spontaneous recovery when the dog is tested again. The extinction does not permanently weaken the CAR Pavlov argued that spontaneous recovery proves that CR in extinction does not represent dying of the reflex or any real Weakening of the learned S-R connections. It is blocked by some internal inhibitory Process. For example, physical health of the organism or pre occupation with some other activity etc.

(5) **Generalization:** Generalization is a process in which a conditioned response to a stimulus is generalized to similar category of stimuli. We can understand it with the help of an example, suppose the dog salivates at the sound of the buzzer of 1000 intensity but if the dog also salivates at the sound of 999 or 1001 intensity, it means the dog has his response to the stimuli generalized. Classical experiment by Watson on Albert is an example of stimulus generalization of fear response.