Describe and evaluate Classical conditioning.

Classical is a type of learning in which an organism comes to associate stimuli. A neutral stimulus that signals an unconditioned stimulus (UCS) begins to produce a response that anticipates and prepares for the unconditioned stimulus. It is an automatic mechanism that emits an automatic response that aids the survival of an organism by its ability to predict good and bad events. A deer that hears a twig snap in a forest may signal a hunter whilst the aroma of a cake may cause you to salivate.

The Classical conditioning theory was developed by Ivan Pavlov. Pavlov was a Russian digestive system specialist who developed the last three decades of his life to novel learning experiments with dogs. Pavlov's classic experiment was to present a stimulus (a tone) just before an unconditioned stimulus (food in the mouth). The neutral stimulus then became a conditioned stimulus (CS) emitting a conditioned response (CR) which was the salivation in anticipation of food.

Pavlov also introduced other concepts linked to classical conditioning such as the acquisition of stimuli, extinction and spontaneous recovery. He found that in order for a stimulus to become the CS it needed in most cases to precede the UCS. Pavlov deduced that classical conditioning was therefore biologically adaptive as it helped and organism prepare for a good or bad event. If the event had already occurred the CS would not likely indicate anything significant.

Pavlov also found that if a CS occurs repeatedly with out a paired UCS then over time and through successive repetitions the CR will decline. Pavlov named this extinction. However if, after a rest, the CS occurred again then spontaneous recovery, the reappearance of a weakened CR, would occur. In Pavlov's experiments after the tone was sounded with no paired food, salivation declined until no CR was emitted. However after two or three hours the tone was sounded again and the dog began once more to salivate.

Pavlov noted that dogs that would emit a CR for the CS back rub would to a lesser degree (indicated by the number of drops of saliva) respond to a scratch. Pavlov described this as generalisation of stimuli which is the tendency to respond o stimuli similar to the CS. Contrary to this was discrimination, which is the ability to distinguish between a CS which predict a UCS and an irrelevant stimuli. Pavlov's dogs were able to respond to the sound of a particular tone and not other tones.

Classical conditioning is able to explain the acquisition of some aspects of behaviour where a specific response is associated with a specific stimulus. Complex sets of behaviour can be explained by this theory for instance pre-Chemotherapy nausea. It also has a range of practical applications for instance in behaviour where it is used to treat phobias in particular and also some generalised anxiety. Similarly classical conditioning has been practically applied in predator control. In Australia coyotes that were preying on sheep were given a poisoned sheep carcass to feed on. The poison caused the Coyotes to be sick and consequentially they stopped preying on the sheep.

Several criticisms of classical conditioning have arisen in recent years. The Bright-Noisy-Tasty experiment (Garcia and Koelling – 1966) challenged Pavlov's belief that each neutral stimulus has an equipotential for becoming the conditioned stimulus. Instead they found that organisms are predisposed toward certain stimuli. Similarly the Kestoria experiment with dogs (1967) found that contrary to Pavlov's belief a predictive relationship between stimuli was more important than temporal contiguity. It was not simply a stimulus response association but the relationship and the response that the stimulus predicted the response. Pavlov also dismissed "mentalistic" concepts such as consciousness which indicates that he underestimated the cognitive process and the biological constraints of an organism.

Judging by today's standards we can see that Pavlov's work was incomplete however it is clear that we benefit from his work. His theory was proved applicable to every organism so far tested, from earthworks to people (Schwartz 1984). His theory is unanimously accepted as a basic form of learning for all organisms. Pavlov also demonstrated a way in which an abstract concept such as learning could be scientifically studied. None of his experiments contained subjective judgements. He suggested a scientific model for how Psychology could proceed. Study through the isolation of elementary building blocks of complex behaviours and analysis through objective laboratory procedures. It is clear therefore that Pavlov's contribution to psychology is essential.