

Classical conditioning vs operant conditioning essay sample

[Psychology](#), [Behaviorism](#)



Learning is necessary for all animals, it helps the survival of the fittest and helps adjust to the ever-changing environment. Learning is the association between two events together. Classical conditioning and operant conditioning both work with associating events together.

Classical conditioning

Thanks to Ivan Pavlov, the accidental discovery of classical or 'Pavlovian conditioning' led to a whole new section of learning. Classical conditioning is what happens when the learner learns to associate stimulus together through involuntary or automatic responses.

Ivan Pavlov was a veterinarian who accidentally discovered that his dogs began to salivate before food was presented, thus his famous experiment with dogs began in the early 20th century. What Pavlov did in his experiment was that he would have a dog that would salivate when presented with meat powder. The unconditional stimulus is a stimulus that naturally causes a response; the meat powder in Pavlov's experiment was the unconditional response. The unconditioned response is the natural reaction to a stimulus, in Pavlov's experiment, the dog's salivation to the sight of food and the no salivation response to the tuning fork are the unconditioned stimulus. Pavlov would then separately strike a tuning fork and the dog's natural response to the tone would be to not salivate.

During conditioning, Pavlov hit the tone then he presented the dog the meat powder shortly after, which would cause the dog to salivate, after doing this a number of times, the dog would associate the tone of the tuning fork to

food. After the conditioning, the dog would be able to salivate to the tuning fork's tone without even having to see the meat chowder. The conditional stimulus is the learned reaction to a neutral stimulus, in Pavlov's experiment; this would be the tuning fork. The conditional reaction would be the dog's learned reaction to the neutral stimulus. In Pavlov's experiment, the tuning fork would become the conditional stimulus because the dog's learned response to the tuning fork's tone would be to salivate and anticipate food.

In this case, there was predictable relationship among the events and the animal learned to respond to the first event in anticipation of the second event. In classical condition generalization and discrimination can occur, generalization is where subjects can respond to similar stimulus as they would the conditioned stimulus, while the opposite of generalization is discrimination is to be trained to not respond to anything else but the conditioned stimuli.

Ivan Pavlov's classical conditioning and the pairing of stimuli help shape many of our daily behaviors. Many certain stimuli, such as a ring, a perfume, or even a song can cause strong emotions because these objects have been paired with something meaningful such as a wife, an ex-girlfriend, or even a dog. We make these associations all the time and often do not realize the power that classical conditioning have on us.

Operant conditioning

Unlike Classical conditioning, Operant conditioning does not need to use the associations between stimuli. Classical conditioning occurs when the

environment manipulates the subject while operant conditioning occurs when the subject manipulates the environment. Operant conditioning is the type of learning where the voluntary behavior is increased or decreased by the use of reinforcement or punishment.

Edward L. Thorndike was interested in studying the intelligence of animals; he stated the law of effect, which states that if the stimulus is performed with a result of a satisfying event, the stimulus would be strengthened. B. F. Skinner elaborated E. L. Thorndike's work of the law of effect, by creating the Skinner box. The Skinner box helps clarify operant conditioning the Skinner box is a controlled box, which is soundproof and the box would have a bar or a lever for the animal to press to release food. With the Skinner box animals would be able to press the lever for food, they would learn that if they keep pressing more food would come. In operant conditioning the subject must have a correct response in order to receive the reinforcement, if the consequences of a behavior is positive then the behavior would occur more often. If the consequences are negative, the consequences are negative then the consequences would decrease. In operant conditioning, shaping is when rewards are given when the desired behavior is done thusly guiding the behavior towards a goal.

The key to operant conditioning is reinforcement. Reinforcement is when a stimulus is presented that increases the probability that the preceding response will recur in the future. Reinforcement depends on time and the number of responses:

Fix-ratio schedule is delivered after a fixed number of responses.

Variable ratio schedule is reinforcement that is delivered after an unpredictable number of responses.

Fixed-interval schedule is when the response comes after a specific amount of time.

Variable-interval schedule is when the response comes after an unpredictable amount of time.

We learn this way everyday in our lives. Making a mistake and remembering to do things differently to avoid the mistake the next time a similar situation comes up again. We have learned to act different based on the natural consequences of our previous actions. This could also apply for positive rewards as well; we would do the same thing to have more of the positive outcomes.

Similarities

Both classical and operant conditionings are basic forms of learning. Acquisition occurs in both conditionings, because both types of conditioning result in the inheritance of a behavior. Extinction in classical conditioning results if there is a decrease in frequency or strength of a learned response due to the failure to continue to pair the US and the CS. Discrimination happens in both conditions; animals can react specifically to get the desired reactions and positive outcomes. Extinction also happens in operant conditioning, if the reinforcement is not present, extinction will occur in

operant conditioning. Another factor that is involved in conditioning is spontaneous recovery. That is the reappearance of an extinguished response after the passage of time, without further training.

If Pavlov's dogs did not hear the tuning fork's tone for a few years, and if when they heard it later they drooled, this would be an example of spontaneous recovery. Something similar occurs with operant conditioning. If an animal was conditioned to behave in a certain manor, but then their reinforcement was stopped, that animal may still have a reaction to the stimulus at a much later date. Both required experiments on animals, Operant conditioning had the Skinner box built for the use of animals, and classical conditioning had Pavlov's salivating dogs.

CONCLUSION

We use classical conditioning and operant conditioning in our everyday lives. Our behaviors have been shaped by the way we react to different situations, all to survive and avoid negative outcomes.