

Behavioral Theory "Classical Conditioning" and "Operant Conditioning"

introduction :

Behaviorism is a theory of learning based on the idea that all behaviors are acquired through conditioning, and conditioning occurs through interaction with the environment. Behaviorists believe that our actions are shaped by environmental stimuli.

In simple terms, according to this school of thought, also known as behavioral psychology, behavior can be studied in a systematic and observable manner regardless of internal mental states. Behavioral theory also says that only observable behavior should be studied, as cognition, emotions, and mood are far too subjective.

Strict behaviorists believe that any person—regardless of genetic background, personality traits, and internal thoughts— can be trained to perform any task, within the limits of their physical capabilities. It only requires the right conditioning.

1- Definition:

Behaviorism (also spelled behaviourism) is a systematic approach to understanding the behavior of humans and other animals. It assumes that behavior is either a reflex evoked by the pairing of certain antecedent stimuli in the environment, or a consequence of that individual's history, including especially reinforcement and punishment contingencies, together with the individual's current motivational state and controlling stimuli. Although behaviorists generally accept the important role of heredity in determining behavior, they focus primarily on environmental events.

2-History of Behaviorism:

Behaviorism was formally established with the 1913 publication of John B. Watson's classic paper, "Psychology as the Behaviorist Views It."³ It is best summed up by the following quote from Watson, who is often considered the father of behaviorism:

"Give me a dozen healthy infants, well-formed, and my own specified world to bring them up in and I'll guarantee to take any one at random and train him to become any type of specialist I might select—doctor, lawyer, artist, merchant-chief and, yes, even beggar-man and thief, regardless of his talents, penchants, tendencies, abilities, vocations, and race of his ancestors.

From about 1920 through the mid-1950s, behaviorism became the dominant school of thought in psychology. Some suggest that the popularity of behavioral psychology grew out of the desire to establish psychology as an objective and measurable science.

During that time, researchers were interested in creating theories that could be clearly described and empirically measured, but also used to make contributions that might have an influence on the fabric of everyday human lives.

Classical Conditioning

Classical conditioning is a technique frequently used in behavioral training in which a neutral stimulus is paired with a naturally occurring stimulus. Eventually, the neutral stimulus comes to evoke the same response as the naturally occurring stimulus, even without the naturally occurring stimulus presenting itself.

Throughout the course of three distinct phases of classical conditioning, the associated stimulus becomes known as the conditioned stimulus and the learned behavior is known as the conditioned response.

Learning Through Association

The classical conditioning process works by developing an association between an environmental stimulus and a naturally occurring stimulus.

In physiologist Ivan Pavlov's classic experiments, dogs associated the presentation of food (something that naturally and automatically triggers a salivation response) at first with the sound of a bell, then with the sight of a lab assistant's white coat. Eventually, the lab coat alone elicited a salivation response from the dogs.

Factors That Impact Conditioning

During the first part of the classical conditioning process, known as acquisition, a response is established and strengthened. Factors such as the prominence of the stimuli and the timing of the presentation can play an important role in how quickly an association is formed.

When an association disappears, this is known as extinction. It causes the behavior to weaken gradually or vanish. Factors such as the strength of the original response can play a role in how quickly extinction occurs. The longer a response has been conditioned, for example, the longer it may take for it to become extinct



Unconditioned Response
(Salivation)



Unconditioned Stimulus
(Food)



No Response



Neutral Stimulus
(Bell Ringing)



Unconditioned Response
(Salivation)



Neutral Stimulus
(Bell Ringing)



Unconditioned Stimulus
(Food)



Conditioned Response
(Salivation)



Conditioned Stimulus
(Bell Ringing)

Operant Conditioning

Operant conditioning, sometimes referred to as instrumental conditioning, is a method of learning that occurs through reinforcement and punishment. Through operant conditioning, an association is made between a behavior and a consequence for that behavior.

This behavioral approach says that when a desirable result follows an action, the behavior becomes more likely to happen again in the future. Conversely, responses followed by adverse outcomes become less likely to reoccur.⁹

Staddon JE, Cerutti DT. Operant conditioning. *Annu Rev Psychol.* 2003;54:115-44. doi:10.1146/annurev.psych.54.101601.145124

Consequences Affect Learning

Behaviorist B.F. Skinner described operant conditioning as the process in which learning can occur through reinforcement and punishment.⁹ More specifically: By forming an association between a certain behavior and the consequences of that behavior, you learn.

For example, if a parent rewards their child with praise every time they pick up their toys, the desired behavior is consistently reinforced and the child will become more likely to clean up messes.

Timing Plays a Role

The process of operant conditioning seems fairly straightforward—simply observe a behavior, then offer a reward or punishment. However, Skinner discovered that the timing of these rewards and punishments has an important influence on how quickly a new behavior is acquired and the strength of the corresponding response.⁹

This makes reinforcement schedules important in operant conditioning. These can involve either continuous or partial reinforcement.

- **Continuous reinforcement** involves rewarding every single instance of a behavior. It is often used at the beginning of the operant conditioning process. Then, as the behavior is learned, the schedule might switch to one of partial reinforcement.
- **Partial reinforcement** involves offering a reward after a number of responses or after a period of time has elapsed. Sometimes, partial reinforcement occurs on a consistent or fixed schedule. In other instances, a variable and unpredictable number of responses or amount of time must occur before the reinforcement is delivered.

