

Unit 6 – Learning – Study Guide

Learning

Associative learning

Associating two different stimuli

Classical Conditioning

Pavlov

Found out that he could teach his dogs to drool with the sound of a bell

- Unconditional response (UR)- the food in the dogs mouth automatically makes him drool
- Unconditional stimulus (US) the food was an unconditional stimulus
- Conditioned response (CR) the dogs drooling at the sound of the bell
- Conditioned stimulus (CS) the bell being associated with food

Acquisition

- Pavlov had to find out when to give the food to make the strongest connection
- Found that doing the CS before the food came out that the acquisition would be the strongest

Extinction

- When CS is no longer being paired with US then the CR diminishes

Spontaneous recovery

- After a period of time the CS will illicit the CR but only briefly after the response has been extinct

Generalization

- Learning to generalize fears

Example: a toddler learns to fear a moving car will carry that generalization to fear motorcycles, and trucks too.

Discrimination

- The ability to distinguish between CS and an irrelevant stimulus

Taste Aversion

- After becoming violently ill eating something a person will avert the taste or sometimes the sight of that particular food because it made them sick eating it
- Operant Conditioning

Operant Conditioning

A type of learning in which behavior is strengthened if followed by a reinforcer or diminished if followed by a punisher

Classical conditioning also involves respondent behavior

- Behavior that occurs as an automatic response to some stimulus; Skinner's term for behavior learned through classical conditioning
 - A CS and the US it signals (stimulus)
 - Learning associations between events that it does not control

Operant conditioning involves operant behavior

- Behavior that operates on the environment, producing consequences.
 - Learning associations between its behavior and resulting events

Skinner's Experiments----

Skinner became behaviorism's most influential and controversial figure

He elaborated a simple act of life that psychologist Edward L. Thorndike called the Law of Effect

- Principle that behaviors followed by favorable consequences become more likely, and that behaviors followed by unfavorable consequences become less likely

Skinner designed an operant chamber, popularly known as the skinner box

Containing a bar or key that an animal can manipulate to obtain a food or water reinforcer, with attached devices to record the animal's rate of bar pressing or key pecking- Used in operant conditioning research

Shaping Behavior-----

In his experiments, Skinner used Shaping

A procedure which reinforcers, such as food, gradually guide an animal's actions toward a desired behavior

Types of Reinforcers----

Reinforcer

In operant conditioning, any event that strengthens the behavior it follows

- **Positive reinforcement**
 - Increasing behaviors by presenting positive stimuli, such as food. A positive reinforcer is any stimuli that, when presented after a response, strengthens the response
- **Negative reinforcement**

- Increasing behaviors by stopping or reducing negative stimuli, such as shock. A negative reinforcer, is any stimulus that, when removed after a response, strengthens the response
 - Reinforcement is any consequence that strengthens behavior
 - Primary and Conditioned Reinforcers-----
 - **Primary reinforcers**- An innately reinforcing stimulus, such as one that satisfies a biological need
 - **Conditioned reinforcers**- A stimulus that gains its reinforcing power through its association with a primary reinforcer; also known as secondary reinforcer
 - Reinforcement Schedules-----
 - **Continuous reinforcement**- Reinforcing the desired response every time it occurs
 - **Partial reinforcement**- Reinforcing a response only part of the time; results in slower acquisition of a response but much greater resistance to extinction than does continuous reinforcement
 - Acquisition is the strengthening of a reinforced response, Extinction occurs when a response is no longer reinforced
 - **Fixed-ratio schedules**- A reinforcement schedule that reinforces a response only after a specified number of responses
 - **Variable-ratio schedules**- Provide reinforcers after an unpredictable number of responses
 - **Fixed-interval schedules**- Reinforce the first response after a fixed time period
 - **Variable-interval schedules**- Reinforce the first response after varying time intervals
 - Punishment-----
 - **Punishment**- An event that decreases the behavior that it follows
- Extending Skinner's Understanding-----
 - Cognition and Operant Conditioning-----
 - **Latent learning**- Learning that occurs but is not apparent until there is an incentive to demonstrate it
 - **Cognitive map**- A mental representation of the layout of one's environment
 - **Intrinsic motivation**- A desire to perform a behavior for its own sake
 - **Extrinsic motivation**- A desire to perform s behavior due to promised rewards or threats of punishment
- Contrasting Classical and Operant Conditioning
 - Response
 - C- Involuntary/automatic, O- Voluntary
 - Acquisition
 - C- CS announces US, O- Associating response with consequence
 - Extinction
 - C- CR decreases when CS is repeatedly presented alone, O- Responding decreases when reinforcement stops
 - Cognitive Processes
 - C- Organisms develop expectation that CS signals the arrival of US, O- Organisms develop expectation that a response will be reinforced or punished

Observable behavior

Imitating a specific behavior is often called modeling

Mirror neurons

In frontal lobe and are the neural basis for observational learning

Albert Bandura

- After the columbine shootings he set up a study to see if kids got violence from their parents and found that kids learn a lot of their behaviors from their parents which is the basis for most people saying that violent video games make kids more violent