

2017-03-08

What is Learning?

- **Learning** = a persistent change in an organisms behavior
 - At a basic level, learning can be thought about *associations*
 - * Kind of similar to **classical conditioning**
 - A **neutral stimulus** preceeds an **unconditioned stimulus**, and the neutral stimulus produces a response to anticipate the unconditioned response

Classical Conditioning

- **Classical Conditioning**
 - **Unconditioned stimulus(UCS)** = a stimulus that *naturally* triggers a response
 - * The dog senses food and salivates
 - **Unconditioned response(UCR)** = an unlearned response that naturally happens as a result of a UCS
 - **Neutral stimulus** = a stimulus that does not trigger a UCR
 - **Conditioned stimulus** = a neutral stimulus that has become a trigger for the desired UCR through a process of classical conditioning
 - * The response is now called a **conditioned response**
 - Two steps of classical conditioning
 1. **Acquisition** = the initial stage where the association is made
 2. **Extinction** = the gradual reduction in the strength of the association
 - **Generalization** = the application of a conditioned behavior to a broader set of stimuli then intended
 - * *e.g.*
 - a child thinking every tall male person is their dad
 - Conditioning only works when the UCS and neutral stimulus are paired in close proximity during acquisition

2017-03-14

Positive Reinforcement and Negative Reinforcement

- **Positive reinforcement** = the addition of a pleasing stimulus to reinforce behavior

- **Negative reinforcement** = the removal of an aversive stimulus to reinforce behavior
- Note that negative reinforcement is *not* the same thing as **punishment**
 - **Punishment** = the addition of an aversive stimulus to inhibit a behavior
 - * Two types
 1. **Positive punishment** = the addition of an aversive stimulus to reinforce behavior
 2. **Negative punishment** = the removal of a pleasing stimulus to reinforce behavior
 - * Punishment is sometimes effective, but not encouraged
 - Does not teach what the *acceptable* pattern of behavior is
 - Can produce hostility, passivity, or fear
 - Not very durable
 - Models aggression

Primary Reinforcement and Secondary Reinforcement

- **Primary reinforcement** = a form of operant conditioning that uses unlearned stimuli to reinforce behavior
 - *e.g.*
 - * Using sugary foods to positively reinforce behavior by adding a pleasing, unlearned response
 - * Using a drug to negatively reinforce behavior by removing an aversive, unlearned response
- **Secondary reinforcement** = a form of operant conditioning that uses learned stimuli to reinforce behavior
 - *e.g.*
 - * Using the learned desire to accrue wealth to reinforce behavior

Schedules of Reinforcement

- **Immediate reinforcement** = a type of reinforcement where the duration between action and reinforcing stimulus is short
 - In contrast to **delayed reinforcers**
- **Continuous reinforcement** = a type of reinforcement where the stimulus and desired behavior are always paired
- **Intermittent reinforcement** = a type of reinforcement where the stimulus and desired behavior aren't always paired
 - Makes the process of learning the behavior more difficult

- * But, when it is learned, it is more durable
- Also called **partial reinforcement**
- Four types of Reinforcement Schedules
 1. **Fixed ratio** = behavior and reinforcement are paired after a predictable amount of actions
 - *e.g.*
 - * Tenth car wash is free!
 2. **Variable ratio** = behavior and reinforcement are paired after an unpredictable amount of actions
 - This proves to be the *most* durable form of reinforcement
 - * Because the lack of reinforcement is *expected*
 - *e.g.*
 - * Gambling
 3. **Fixed interval** = behavior and reinforcement are paired after a predictable amount of time
 - *e.g.*
 - * Wage labor
 4. **Variable interval** = behavioral and reinforcement are paired after an unpredictable amount of time
 - *e.g.*
 - * Weather
 - * Pop quizzes
 - * DUI checkpoints