

Chapter 5 Notes (Part 1)

- Learning- any relatively permanent change in the way an organism responds based on its experience
- Reflex- behavior elicited automatically by environmental stimuli
- Stimulus- something in environment that elicits a response
- Habituation- the decreasing strength of a response after repeated presentation of the stimulus
- Theories of learning:
 - Experience shapes behavior; responses are learned rather than innate
 - Learning is adaptive; ex: natural selection
 - Careful experimentation can uncover laws of learning
- Learning theory is foundation of behaviorist perspective
- Associative learning: classical and operant conditioning
- Laws of association- proposed by Aristotle; basic principles used to account for learning and memory that describe the conditions under which one thought becomes associated with another thought
 - Law of contiguity- two events will become connected in the mind if they are experienced together at the same time
 - Law of similarity- objects that resemble each other are likely to become associated

Classical Conditioning

- A procedure by which a previously neutral stimulus comes to elicit a response after it is paired with a stimulus that automatically elicits a response
- **Pavlov's Model**
 - Conditioning- form of learning
 - Unconditioned reflex- occurs naturally, without any prior learning
 - Unconditioned stimulus (UCS)- produces a reflexive response without any prior learning
 - Unconditioned response (UCR)- an organism's unlearned, automatic response to a stimulus
 - Conditioned response (CR)- response that has been learned
 - Conditioned stimulus (CS)- stimulus that the organism has learned to associate with the unconditioned stimulus
 - Conditioned taste aversion- learned aversion to a taste associated with an unpleasant feeling, usually nausea
- **Stimulus Generalization and Discrimination**
 - Stimulus generalization- tendency for learned behavior to occur in response to stimuli that were not present during conditioning but that are similar to the conditioned stimulus
 - The more similar a stimulus is to the conditioned response, the more likely generalization will occur
 - Galvanic skin response (GSR)- an electrical measure of the amount of sweat on the skin that is produced during states of anxiety or arousal

- Stimulus discrimination- tendency of an organism to respond to a very restricted range of stimuli
- **Extinction**
 - Acquisition- initial learning
 - Conditioning trial- pairing of the conditioned stimulus and unconditioned response
 - Extinction- process by which a conditioned response is weakened by presentation of the conditioned stimulus without the unconditioned stimulus
 - Spontaneous recovery- spontaneous reemergence of a response that has been extinguished
- **Factors Affecting Classical Conditioning**
 - Interstimulus Interval
 - Time between presentation of the conditioned stimulus and the unconditioned stimulus
 - If too much time passes between them, animal is less likely to associate the two, and conditioning is less likely to occur
 - Maximal conditioning- occurs when conditioned response precedes the unconditioned response
 - The Individual's Learning History
 - An extinguished response is easier to learn the second time around
 - Prior learning can hinder learning
 - Blocking- occurs when a stimulus fails to elicit a conditioned response because it is combined with another stimulus that already elicits the response
 - Latent inhibition- initial exposure to a neutral stimulus without a unconditioned response slows the process of later learning the CS-UCS association and developing a CR
 - Preparedness to Learn: An Evolutionary Perspective
 - Early behaviorists believed that classical conditioning could link any stimulus to any response; research shows that some responses can be conditioned much more readily to certain stimuli than others
 - Prepared learning- biologically wired readiness to learn some associations more readily than others
- **What do Organisms learn in Classical Conditioning?**
 - Organisms learn stimulus-response association
 - Stimulus-stimulus association- conditioned stimulus and unconditioned stimulus; Pavlov
 - Law of contiguity- Aristotle's rule that organisms should associate stimuli that occur repeatedly over time; not completely true because this would mean that order of UCS and CS would not matter; however, a CS that precedes a UCS is more potent
 - Law of prediction- replaces law of contiguity; CS-UCS association will form to the extent that the presence of the CS predicts the UCS
 - According to Pavlov, organism responds to CS as if it were UCS; research shows that responses are similar, but rarely identical