

**MODULE 26 HOW WE LEARN AND CLASSICAL CONDITIONING****HOW DO WE LEARN?**

- Psychologists define LEARNING as the process of acquiring new and relatively enduring information or behaviors. We learn to expect and prepare for significant events such as food or pain. We typically learn to repeat acts that bring rewards and to avoid acts that bring unwanted results. We learn new behaviors by observing events and by watching others, and through language we learn things we have neither experienced nor observed.
- John Locke and David Hume echoed Aristotle's conclusion: We learn by association. Eating popcorn in a movie theater is a behavior associated with the contexts.
- Behaviors become habitual after about 66 days. HABITUATION is an organism's decreasing response to a stimulus with repeated exposure to it.
- By linking two event that occur close together, both animals are exhibiting ASSOCIATIVE LEARNING. The events are important for survival and predicting the immediate future.
- In CLASSICAL CONDITIONING, we learn to associate two stimuli and thus to anticipate events. A STIMULUS is any event or situation that evokes a response.
- In OPERANT CONDITIONING, we learn to associate a response and its consequence. Thus we learn to repeat acts followed by good results and avoid acts followed by bad results.
- Through COGNITIVE LEARNING we acquire mental information that guides our behavior. OBSERVATIONAL LEARNING one form of cognitive learning, lets us learn from others' experiences.

**CLASSICAL CONDITIONING**

- The name IVAN PAVLOV rings a bell. Pavlov explored classical conditioning. JOHN B. WATSON referred to psychology as an objective science based on observable behavior. Watson called BEHAVIORISM, the view that 1. psychology should be an objective science that studies behavior 2. without reference to mental processes. Most research psychologists today agree with 1 but not with 2.
- Pavlov and his K9. Experiment: the researchers isolated the dog in a small room, secured it in a harness, and attached a device to divert its saliva to a measuring instrument. The researchers then presented food, first by sliding in a food bowl, later by blowing meat powder into the dog's mouth at a precise moment. Then paired various NEUTRAL STIMULI, events the dog could see or hear but didn't associate with food.
- Pavlov then paired a tone sound with the food in the dog's mouth. After several pairings of tone and food, the dog anticipated the meat powder and began salivating to the tone alone. A buzzer, a light, a touch on the leg, even the sight of a circle set off the drooling.
- The UNCONDITIONED STIMULUS (US) in this experiment is the dog food. The UNCONDITIONED RESPONSE (UR) in this experiment is the drooling. The

**CONDITIONED STIMULUS** (CS) in this experiment is the tone, buzzer, light, etc. The **CONDITIONED RESPONSE** (CR) in this experiment is the drooling.

- Conditioned = learned; Unconditioned = unlearned
  - **ACQUISITION** is the classical conditioning, the initial stage, when one links a neutral stimulus and an unconditioned stimulus so that the neutral stimulus begins triggering the conditioned response. In operant conditioning, the strengthening of a reinforced response. How much time should elapse between presenting the NS and the US?
  - Remember, classical conditioning is biologically adaptive because it helps humans and other animals prepare for good or bad events. Conditioning helps and animal survive and reproduce by responding to cues that help it gain food, avoid dangers, locate mates, and produce offspring.
  - **HIGHER-ORDER CONDITIONING** is a procedure in which the conditioned stimulus in one conditioning experience is paired with a new neutral stimulus, creating a second conditioned stimulus.
  - **EXTINCTION** is the diminishing of a conditioned response; occurs in classical conditioning when an unconditioned stimulus does not follow a conditioned stimulus; occurs in operant conditioning when a response is no longer reinforced.
- SPONTANEOUS RECOVERY** is the reappearance of a CR after a pause, suggested to Pavlov that extinction was suppressing the CR rather than eliminating it.
- **GENERALIZATION** is the tendency to respond likewise to stimuli similar to the CS.
  - **DISCRIMINATION** is the learned ability to distinguish between a conditioned stimulus and stimuli that do not signal an unconditioned stimulus.
  - John B. Watson and Rosalie Rayner worked together with “Little Albert”, and 11-month old that showed us classical conditioning does not need much complex thinking. Today, this experiment would be deemed unethical.

**BE ABLE TO ANSWER:** As we develop, we learn cues that lead us to expect and prepare for good and bad events. We learn to repeat behaviors that bring rewards. And we watch others and learn. What do psychologists call these three types of learning?

In slasher movies, sexually arousing images of women are sometimes paired with violence against women. Based on classical conditioning principles, what might be an effect of this pairing?

**PRACTICE FRQ:** Carter’s goldfish has been classically conditioned to swim to the top of the fish every time the light is turned on. This happened because Carter always turns on the light in the room just before feeding the fish. Identify what each of the following would be in this example, making sure you explain why you know your identification is correct. Conditioned response, Conditioned stimulus, and Unconditioned stimulus.