

INTRODUCTION TO PSYCHOLOGY

Psychology 101

Learning

East-West University/Fall 2022

What is Learning?

- A systematic, relatively permanent change in behavior that occurs through experience

Behaviorism

- Concerned with observable behavior
- Principles of learning are the same whether applied to animals or humans

Types of learning

- Associative
- Observational

Associative learning

- Making an association or connection between two events
- Conditioning: Process of learning these associations
 - Classical
 - Operant (instrumental)

Classical conditioning

- Organisms learn:
 - The connection between two stimuli
 - To anticipate events (e.g., dark and temperature drop)

Operant conditioning

- Organism learns the association between a behavior and a consequence (e.g., a reward)
- Behaviors that rewarded increase
- Behaviors that are punished decrease

Observational learning

- Not the result of consequences
- Based on imitating a *model*
- Requires paying attention (mental processes)
- See, remember and reproduce what the model did

Stimulus: A thing or event that
causes a reaction

Stimulus: itching
Reaction: Scratching

Stimulus: Getting cut off in traffic
Reaction: Anger, fear

Classical conditioning

- Pavlov's dog
- Learning based on both unlearned and learned parts
- Unlearned: Some stimuli produce reactions (i.e., *reflexes*) that are not based on prior learning
 - Unconditioned stimulus (US): Food
 - Unconditioned response (UR): Salivation

Classical conditioning

- Learned:

- Conditioned stimulus (CS): Initially a neutral stimulus: Bell
- Conditioned response (CR): A learned response that happens when the US (food) is paired with a CS (bell)

- Acquisition:

- Initial learning of the connection between the US (food) and the CS (bell)
- After a while, the CS (bell) will produce a conditioned response (salivation)

Acquisition

- For CS (bell) to produce a CR (salivation), two things must be present:
 - Contiguity: CS (bell) must be followed quickly by US (food)
 - Contingency: CS (bell) has to not only be connected to the US (food), but it must be a reliable sign that the US is on the way

Generalization and Discrimination

- Generalization: The tendency of a new stimulus that is similar to the original CS to produce a response that is similar to the CR
- Discrimination: Learning to respond to certain stimuli and not others (bell Vs. whistle). Being able to tell the difference between one stimulus and another.

Extinction and Spontaneous Recovery

- Extinction: Weaking of the CR (salivation) when the US (food) is not present
- Spontaneous recovery: When a CR (salivation) can reoccur without any further conditioning

Classical conditioning in humans

- Fears: (Watson and Reyner experiment)
 - A neutral stimulus (rat) was paired with a loud noise. After this was done seven times, the rat alone was enough to make the baby cry.
- Breaking habits
 - Counterconditioning: Changing the relationship between a CS and CR (Antabuse/*aversive conditioning*)