Learning

How do we learn behaviors from our direct and indirect experiences?

What are the implications of learning theories for our everyday lives?
How do we learn?

For the next few minutes brainstorm the word: LEARNING

• How do you define it?
• How do we learn?

Overview of learning theories

• Classical Conditioning
• Operant Conditioning
• Biology & Cognition Impact on Learning
• Observational Learning (Social Learning)
Defining Learning

Handout 26-2

- Which following situations describes learning taking place? Which do not? Explain why you think learning is or is not taking place in each situation

- DEFEND YOUR POSITION

HILGARD & BOWER DEFINITION

- Learning refers to the relatively permanent change in a subject’s behavior to a given situation brought about by his (or her) repeated experiences in that situation, provided that the behavior change cannot be explained on the basis of native response tendencies, maturation, or temporary states of subject (for example, fatigue, drugs, etc.).
Role of beliefs about learning: what and how...how much does culture matter
(J Li, 2005 article in Current Directions in Psychological Science)

Western Students (U.S.)
- See learning as a matter of understanding essentials of a given topic or developing expertise in a field
- When succeed feel pride in themselves; when fail feel disappointment and suffer low self-esteem
- Good teacher arouses students’ interest, explains clearly, uses effective instruction, organizes activities well

Eastern Students (Chinese)
- See learning mainly to perfect themselves morally and socially and to contribute to society
- Learners need to develop the virtues of diligence, perseverance, and concentration. Respectful of teaching authorities and demonstrate humility
- Good teacher one who has deep knowledge, readily answer questions, and good moral model
J Li continued...in a study comparing responses to questions about high achievers in a fictional story

**American emphasized**
- achiever’s intellectual growth
- feelings of happiness and pride
- Concern that peers might have negative feelings toward him

**Chinese emphasized**
- Higher status of the achiever
- Humility and ability to help others
- Belief that peers likely wanted to emulate him
Basic Concepts

- Associative learning & conditioning

- Habituation vs sensory adaptation

- Classical versus Operant
  - In an adaptive sense?
  - Cognitive?

- DOUBLE HIGH FIVE-CLASSICAL CONDITIONING TERMS AND PROCESSES
  - NS, US, UR, CS, CR
  - Acquisition, extinction, spontaneous recovery, generalization, discrimination
Classical Conditioning - Model

- Using textbook complete the handout on Pavlov’s study and classical conditioning

- Model:
  - NS + US → UR (repeated pairings)
  - CS → CR

- Processes:
  - Acquisition
  - Extinction
  - Spontaneous recovery
  - Discrimination
  - Generalization
Read story

• Identify the process of classical conditioning at work here
• How can classical conditioning help with her therapy/recovery from the assault?
Framing Operant Conditioning

- Consequences & Thorndike’s Law of Effect
- Handout 27-2: Consequences & Effects
  - Circle the situation in which behavior is more likely to be encouraged
  - KEY FACTORS?

- Handout 27-4: Sensitivity to Punishment & Reward
  - 1 point for Yes to odd Number; 1 point for yes for even numbered
  - Range of 0-24 (higher score=greater sensitivity-odd-punish/even-reward)

- Jeffrey Gray’s Reinforcement sensitivity theory (Brain theory)
  - Behavioral Activation System (BAS)-responds to rewards regulates approach behavior (accelerator)
  - Behavioral Inhibition System (BIS)-responds to punishments and regulates avoidance behavior (brakes)
  - People vary-BIS vulnerable to anxiety (sensitive to threat and punishment); BAS vulnerable to impulsivity (sensitive to incentives)
Operant Conditioning

Basic Concepts
- Operant Conditioning
- B.F. Skinner
- Shaping

Consequence Types
- Positive Reinforcement
- Negative Reinforcement
- Positive Punishment
- Negative Punishment
Operant Conditioning Concepts

- Primary vs Secondary Reinforcers
- Immediate and Delayed Reinforcers
- Schedules of Reinforcement
  - Continuous vs Partial
  - Ratio vs Interval
    - Fixed vs Variable

- TO SPANK OR NOT TO SPANK………..
Factors Influencing Conditioning

Biological & Cognitive Constraints
- Limits on classical & operant
- Latent Learning
- Intrinsic vs Extrinsic
- Learned Helplessness
- Locus of Control

Observational Learning
- What is “modeling” and what did Bandura conclude
- Mirror Neurons
Briefly explain how the concepts below could be used to help a child stop throwing temper tantrums?

- Extinction (operant conditioning)
- Positive Reinforcement
- Modeling
- Negative Reinforcement
- Shaping
- Extinction (Classical Conditioning)
Briefly explain how the concepts below could be used to help a child stop throwing temper tantrums?

- **E (OC)** - the child might be throwing a temper tantrum because the behavior is being reinforced. Extinction could be used to stop the temper tantrum by removing the reinforcement. Without the reinforcement, eventually the behavior (tantrums) should decrease.

- **PR** - (reading a favorite book) could be used to encourage a behavior other than temper tantrums. The child could be given the positive reinforcement after a “prosocial” behavior, such as sharing a toy with a friend instead of throwing a tantrum.

- **NR** - a parent or adult could sit the child on a “time-out” seat as soon as temper tantrum begins. The child could leave the time out seat as soon as she or he stops crying. The removal of the aversive stimulus of the time out seat could reinforce not crying, and help to stop the temper tantrums.

- **S** - could shape the child’s negative behavior toward desired behavior by rewarding successive approximations. Could be rewarded for crying more quietly during a tantrum, then for stopping yelling, then avoiding the tantrum completely.

- **E (CC)** - Not very useful in this case; a behavior becomes extinct because a CS (NS) is repeatedly presented without the unconditioned stimulus. Tantrum thrown in presence of brother who always pinches the child. Could become extinct by getting the brother to stop pinching the child. After repeated pairings of brother without the unconditioned stimulus it becomes extinct.
Martin is a sixth-grade teacher who feels he is not able to connect with some of his students. Several of them have had academic problems in the past and although Martin feels that they can do the work, he believes that these students have given up. Explain how Martin could use each of these concepts to learn how best to help his students succeed.

- External locus of control
- Self-control
- Learned helplessness
- Intrinsic motivation
Teacher helping students succeed

- ELC - people with it are more likely to believe that they have the power to control their own destiny. Martin’s students could take a survey to determine their locus of control and discover and discuss what areas in their lives they have power to change.

- SC - ability to control impulses and delay short-term gratification for long term rewards; help his students develop and strengthen their willpower. Studies show it requires attention and energy. Educate them about importance of self-control and provide opportunities to practice how to focus and use their attention and energy to control themselves.

- LH - if they have given up they are experiencing learned helplessness; they may be convinced that no matter how hard they try, their efforts will not lead to success. Key is loss of control so he could find ways to empower the students in his classroom-planning activities or researching their own topics

- IM - encourage them to focus less on extrinsic motivation (grades) and more on intrinsic (inner satisfaction and pride of accomplishments) extra time to work on a project they enjoy for its own sake rather than what is required by curriculum
Researchers investigating conditioning throughout the history of psychology reached very different conclusions about how humans learn behaviors. Explain how these theorists might explain this example of behavior and response: A child cries when she sees a large pile of peas on her dinner plate.

- Edward Thorndike
- B.F. Skinner
- Ivan Pavlov
- Albert Bandura
A child cries when she sees a large pile of peas on her dinner plate.

- ET-behaviors follow law of effect-behaviors that are rewarded are more likely to be repeated those punish are less likely to be repeated, the child’s crying had been rewarded in the past
- S-described law of effect in more specific terms-reinforcement and punishment; must have been reinforced in the past for crying (possibly the removal of the peas which would have been a negative reinforcement)
- P-researched how organisms are conditioned to respond to NS after paired with US that cause responses, what was the NS of peas paired with in the past, might have been paired with an US of parent yelling at child for not eating, might elicit the CR of child crying
- B-learn through modeling (observational learning)-would predict that child had observed someone crying when presented with peas, and child is imitating behavior
Unit VI MC Review (312-315)

1. C
2. A
3. C
4. A
5. A
6. E
7. D
8. D
9. E
10. B
11. D
12. A
13. A
14. C
15. C