

Unit VI

Learning

Overview

How we learn is one of humanity's most enduring questions and Unit 6 defines and identifies four basic forms of learning: operant, classical, observational, and cognitive learning. This unit explores the early work and research of behaviorists Ivan Pavlov and B. F. Skinner, along with the more recent contributions of Edward Tolman and John Garcia. Significant time is spent comparing the applications of operant and classical conditioning to our real life of work, school and home. Alternate methods of learning, such as latent learning and cognitive maps, are examined and compared to classical and operant conditioning. Albert Bandura's research on modeling behavior and the research into mirror neurons and empathy are also reviewed.

Tip #6 Reinforce Yourself!

How perfect to study about learning while you are striving to be a better learner! Now is the time to put operant conditioning principles into play. This unit teaches positive reinforcement methods that can be used to increase repetition of desired behavior. You will find it simple to set up reinforcements to develop good study habits, and become a life-long learner. First, as we discussed in Tip #4, break your studying into small, 30 minute chunks. After each chunk of study time, reward yourself with some positive reinforcement. Rewards are relative (that is known as the Premack Principle) so make sure the reward works for you. It might be a food treat, an internet or texting break, a run around the block, or some quiet reflection outdoors. Whatever works to motivate you is great! Then, when you receive your desired score on a quiz or test, give yourself another positive reinforcement: perhaps a movie night, time with friends, or time to read a book you enjoy. Over time, you will find that you have developed stronger study habits and you won't need to reward yourself every time (remember this when you reach reinforcement schedules later in this unit!).

Modules

- 26** How We Learn and Classical Conditioning

- 27** Operant Conditioning

- 28** Operant Conditioning's Applications, and Comparison to Classical Conditioning

- 29** Biology, Cognition, and Learning

- 30** Learning by Observation

Module 26

How We Learn and Classical Conditioning

Before You Read

Module Summary

Module 26 defines learning and identifies some basic forms of learning. The components of classical conditioning and behaviorism's view of learning are presented alongside a discussion of the specific processes of acquisition, extinction, spontaneous recovery, generalization and discrimination. The module concludes with an explanation of the applications and evidence of the importance of Ivan Pavlov's and John B. Watson's work.

Before beginning the module, take a moment to read each of the following terms and names you will encounter. You may wish to make vocabulary cards for each.

Key Terms

learning
habituation
associative learning
stimulus
cognitive learning
classical conditioning
behaviorism
neutral stimulus (NS)
unconditioned response (UR)
unconditioned stimulus (US)
conditioned response (CR)
conditioned stimulus (CS)
acquisition
higher-order conditioning
extinction
spontaneous recovery
generalization
discrimination

Key Names

Ivan Pavlov
John B. Watson

While You Read

Answer the following questions/prompts.

26-1

1. Your text defines *learning* as the process of acquiring new and relatively enduring information or behaviors. Why would a behavior or information have to endure in order to be considered learned?

2. List three behaviors you have learned since middle school. (Remember . . . : enduring behaviors = learned.)

3. The text states that we learn by association or linking two sequential events. Refer to two of the learned behaviors you listed in #2 and detail the process of how you associated the events leading to each.

Behavior #1:

Behavior #2:

4. List and include a brief explanation of each of the three types of learning described in your textbook.

a.

b.

c.

5. A circus lion repeatedly receives a smack on the nose just after the trainer walks into the cage. The lion shrinks from the trainer's slap each time and eventually cowers in the corner of the cage when the trainer enters. What would a behaviorist call this increased withdrawal response? Explain your answer.

26-2

1. Define and give an example from your own life of classical learning.
2. Why were Pavlov's findings so important to behaviorism?
3. Complete the table below with the term, definition, and example from Pavlov's classic experiment. One has been filled in for you.

Component	Full Term	Definition	Pavlovian Example
US			
UR	<i>unconditioned response</i>	<i>an unlearned, naturally occurring response to an unconditioned response</i>	<i>salivation to the food in the mouth</i>
NS			
CS			
CR			

4. Using Figure 26.4 and the chart in #3, properly label the two associative learning examples below.
- a. A young man and woman who are in love listen to Beyoncé's love songs when they drive around together. Later, when the young man is alone in the car, he hears Beyoncé on the radio and thinks lovingly of his girlfriend and the great times they have together.

US:

UR:

NS:

CS:

CR:

- b. Look at Figure 26.1 and correctly label the components of the classically conditioned relationship between thunder and lightning.

US:

UR:

NS:

CS:

CR:

26-3

1. How does higher-order conditioning differ from the initial acquisition of the stimulus-response relationship?

26-4

1. Complete the chart below to apply the principles of classical conditioning to the three examples discussed in the text.

Component	Example #1 Former Drug User	Example #2 Body's Immune System	Example #3 Little Albert
US			
UR	<i>craving</i>		
NS		<i>taste</i>	
CS			
CR			<i>fear</i>

After You Read

Module 26 Review

Label the five basic components of classical conditioning in each of the scenarios below.

1. Ahmed is a mediocre student in school and over the years has received many lectures from his parents about his poor study habits. He received another report card full of Cs and Ds today, and he knows that once his parents come home from work they will want to lecture him again. To distract himself from his nervousness, he plays his video games for several hours but later, as he hears the garage door open, Ahmed's heart begins to race.

US:

UR:

NS:

CS:

CR:

2. As a child, Charlotte was an avid reader who spent hours buried deep in classic and exciting literature. Her favorite reading spot was in the back yard in her swing under a strong oak tree. Years later, as an adult, Charlotte is looking through a magazine selling tree swings and feels the rush of good memories.

US:

UR:

NS:

CS:

CR:

3. Your history instructor enjoys incorporating student projects into the class. You, however, typically do poorly on projects and prefer to learn from lectures. When your instructor creates a project, she produces the guidelines on colored paper to make it stand out. Today, as she enters the class, you see that she has a stack of colored paper in her hands and immediately you become agitated and upset.

US:

UR:

NS:

CS:

CR:

In the following two scenarios, label the five basic components of classical conditioning and then respond to the prompt that follows it.

4. a. Each time you come home from school, you head to the kitchen to fill up your dog Lassie's food bowl. Lassie excitedly devours her food with her tail swinging. You notice after a few weeks that Lassie has conditioned your arrival home from school with a filled food bowl and eagerly comes running to the door to greet you when you come in.

US:

UR:

NS:

CS:

CR:

- b. After learning about higher-order classical conditioning, you become interested in teaching Lassie to respond to additional cues. Describe how you will teach Lassie to associate two new neutral stimuli with being fed.

5. a. Your 2-year-old cousin AnnaBeth giggles delightedly every time her father picks her up and tosses her into the air. Now each time she sees her father, she feels great love and enjoyment at being with him.
- US:
- UR:
- NS:
- CS:
- CR:
- b. Using the principle of generalization explain why AnnaBeth now runs up to her friends' fathers with the same delight and excitement with which she approaches her father.
- c. Using the principle of discrimination, explain how you can teach AnnaBeth only to respond this way to her father.

Choose the best answers to the following questions.

6. The repeated presenting of the conditioned stimulus without being followed by the unconditioned stimulus will result in
- discrimination of the unconditioned response.
 - generalization of the conditioned response.
 - extinction of the neutral stimulus.
 - extinction of the conditioned response.
 - generalization of the unconditioned response.
7. Which of the following best defines spontaneous recovery?
- The reappearance of a weakened conditioned response.
 - The reappearance of the original unconditioned stimulus.
 - The recovery of the generalized response.
 - The extinction of the original neutral stimulus.
 - The immediate resurgence of the unconditioned stimulus.
8. A pigeon pecking at an orange oval and not a red circle in order to receive a food reward is an example of
- shaping.
 - extinction.
 - stimulus generalization.
 - stimulus discrimination.
 - acquisition.

9. A behaviorist would most likely explain the pigeon's behavior above as a result of
 - a. being reinforced for desired behaviors.
 - b. brain structures that detect color variations.
 - c. unconscious avian instincts for color.
 - d. a free choice the pigeon made to prefer orange to red.
 - e. a deficit of cones along the retina for color detection.

10. Grandpa and Grandma Jackson's 4-year-old grandson Chandler frequently has temper tantrums to get his way when he comes to visit. Tired of giving into him, Chandler's grandparents choose to ignore his outbursts and not give in to his demands, and after a while they notice that Chandler is no longer misbehaving. Grandma and Grandpa Jackson succeeded by applying the behaviorist principles of
 - a. stimulus discrimination.
 - b. stimulus generalization.
 - c. cognitive learning.
 - d. positive punishment.
 - e. extinction.

Module 27

Operant Conditioning

Before You Read

Module Summary

Module 27 defines and describes operant conditioning and presents the difference between positive and negative reinforcement. B. F. Skinner's experiments and their importance to behavioral psychology are discussed. The basic types of reinforcers and the schedules in which those reinforcers most affect behavior are reviewed. This module also includes a detailed discussion of punishment and its effect on behavior as well as how it differs from negative reinforcement. The module wraps up with a discussion of the controversy surrounding B.F. Skinner's views of human behavior.

Before beginning the module, take a moment to read each of the following terms and names you will encounter. You may wish to make vocabulary cards for each.

Key Terms

operant conditioning

law of effect

operant chamber

reinforcement

shaping

discriminative stimulus

positive reinforcement

negative reinforcement

primary reinforcer

conditioned reinforcer

reinforcement schedule

continuous reinforcement

partial (intermittent) reinforcement

fixed-ratio schedule

variable-ratio schedule

fixed-interval schedule

variable-interval schedule

punishment

Key Names

Edward Thorndike

B. F. Skinner

While You Read

Answer the following questions/prompts.

27-1

1. How is operant conditioning different from classical conditioning? Describe these differences in your own words.

6. How does the process of shaping work? Describe how one of your behaviors has been shaped.
7. Design an experiment that would use the principles of shaping to teach a particular behavior to a person or animal in your life.

27-2

1. How does positive reinforcement differ from negative reinforcement?
2. Give an example (that is not mentioned in the text) of negative reinforcement.
3. Give an example from your life in school of a situation where positive and negative reinforcement both work to strengthen a particular behavior.
4. How do primary and conditioned (secondary) reinforcers differ?
5. Give an example of a conditioned (secondary) reinforcer in your life.

6. In what ways is a human's response to immediate and delayed reinforcers different from that of a rat?

7. Are there circumstances in which people are drawn to immediate reinforcers even though they know it might not be to their benefit? Explain.

27-3

1. Explain why an animal trainer would prefer using intermittent reinforcement schedules to continuous reinforcement schedules when teaching a lion to perform in a circus act. Are there times the trainer would prefer using continuous reinforcement? Explain.

2. Complete the chart below.

Reinforcement Schedule	Definition	Example From Text	Original Example
Continuous			
Fixed-ratio			
Fixed-interval			

Reinforcement Schedule	Definition	Example From Text	Original Example
Variable-ratio			
Variable-interval			

3. If the intent of conditioning is to create an enduring response, which of the five methods in your chart above is the best schedule to follow to reinforce desired behavior? Why? Which method of partial reinforcement would lead to the quickest extinction of desired behavior? Explain
4. Describe the typical patterns of response under fixed-interval, fixed-ratio, variable-interval, and variable-ratio schedules of reinforcement.

27-4

1. How does a punisher differ from a reinforcer?
2. Explain, using examples to illustrate your response, how punishment differs from negative reinforcement?

27-5

1. Why did Skinner's ideas provoke controversy?

2. Now that you have studied B. F. Skinner's operant principles, how would you attempt to
 - a. influence your classmate to study more thoroughly for tests?

 - b. shape your teacher's treatment of you?

 - c. increase the likelihood of having your stepmother say "Yes" more frequently to your requests to drive her car?

3. Use the chart below to give an example of how you would use each of the following four types of operant conditioning techniques to train your dog to pick up the newspaper off of the driveway.

	Reinforcement	Punishment
Positive		
Negative		

After You Read

Module 27 Review

Complete the following questions by identifying which response is being applied to shape the behavior of the subject in each example.

Positive reinforcement
Negative reinforcement
Positive punishment
Negative punishment

1. Juanita asks a useful and timely question in class and her teacher responds, "I am glad you asked that, Juanita." Juanita soon regularly raises her hand to contribute in class.
2. Dante cannot sit still in his kindergarten class and his teacher tells him he will have to remain inside while the other students go out for recess. Dante learns to sit still.

How is Dante's behavior being reinforced?

How is the teacher's behavior being reinforced?

3. Finnegan, your cat, has begun to bite more frequently. You read that if you squirt him with water from a spray bottle, he will learn not to repeat that behavior.
4. After promising your parents that you will follow the school rules and not use your cell phone in class, you check your text messages during Algebra and have your phone confiscated by the teacher. When your parents find out, they take your cell phone from you for 2 weeks. When you finally get your phone back, you do not check your texts in class any longer.
5. You are hoping that if you take a different route to your 5th period class each day, you can avoid the kid who has been bullying you. When you do not see them in the new hall, you feel relieved and take that route from now on.

Complete the following questions by identifying which intermittent reinforcement schedule is being applied to shape behavior

Variable-ratio
Variable-interval
Fixed-ratio
Fixed-interval

6. The local pet store offers a discount for buying dog food by the case, and if you save ten UPC bar codes on each case, you can receive a free case from the supplier. How is your dog food buying behavior being reinforced?
7. Your neighbors just had a new baby and are learning to be parents for the first time. They decide not to respond to every cry their new infant makes but instead allow the baby to fuss and cry for a while before they go to see what is wrong. From the baby's perspective, on what schedule is her crying behavior being reinforced by her parents' attention?
8. Tien has been unsuccessfully trying for years to perfect his golf game. Each time he decides to give up the game for good, he makes a beautiful shot that lands precisely where he wants it to and finds that he wants to continue perfecting his game.
9. Sasha works for a shoe store that pays her weekly and likes that she doesn't have to make a quota or sell a certain number of shoes in order to get paid. Her check comes every week regardless of how many customers come in and this gives her time to text on her phone, or finish homework in the back of the store.
10. On the other hand, Sasha's friend Monty works next door at the suit shop and receives a bonus for every 3 suits he sells. As he is trying to save for college, the bonus could really come in handy and this compels Monty to work hard to learn about suits and perfect his sales techniques so that he can sell more of them.

Module 28

Operant Conditioning's Applications, and Comparison to Classical Conditioning

Before You Read

Module Summary

Module 28 offers an application of the theories presented in Modules 26 and 27 and identifies key areas in home, work, and school where operant principles can be used. In addition, the module presents an easy-to-understand chart of the characteristics that distinguish operant from classical conditioning.

Before beginning the module, take a moment to read each of the following terms you will encounter. You may wish to make vocabulary cards for each.

Key Terms

biofeedback
respondent behavior
operant behavior

While You Read

Answer the following prompts, and complete the diagram below.

28-1

1. Give an example (that is not mentioned in the text) of how operant principles can be applied
 - a. in school

 - b. in sports

 - c. at work

d. at home

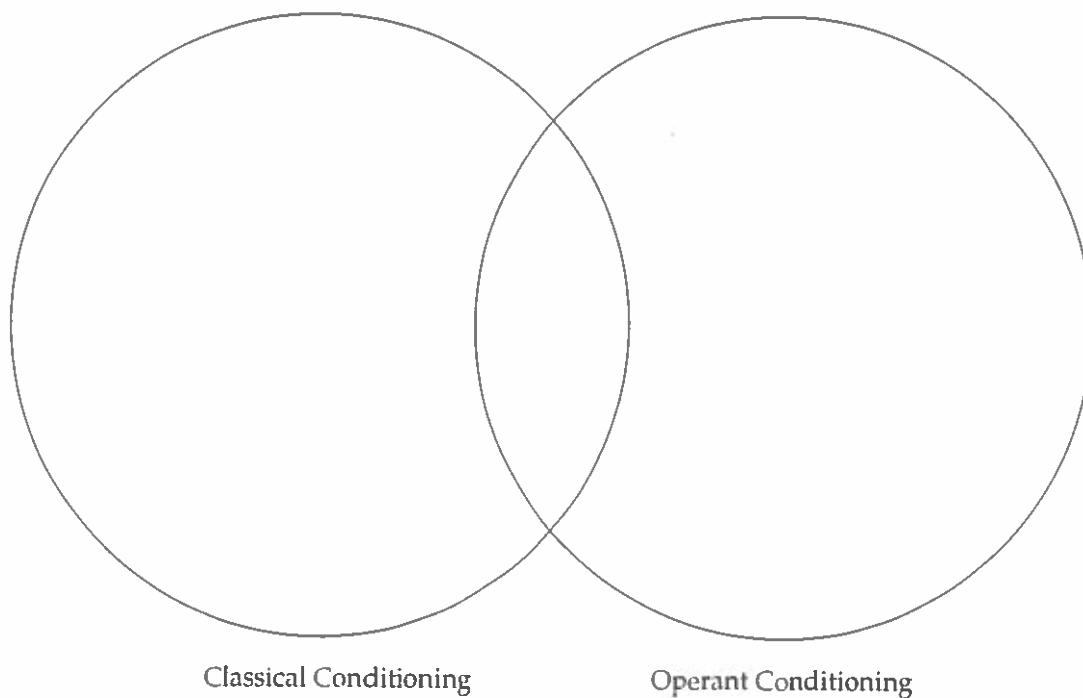
e. for self-improvement

2. How does biofeedback work to reduce tension headaches?

3. In what way are the principles of operant conditioning illustrated in the use of biofeedback to train people to reduce stress?

28-2

1. Using the information in Table 28.1 and the material in Modules 26 and 27, complete the Venn diagram below on the similarities and differences between operant and classical conditioning. Use your own words when possible.



After You Read

Module 28 Review

Answer the prompt to see if you have mastered the basics.

1. Shereen suffers from high levels of anxiety regarding academics and sports. As a psychology student, you know she can use operant conditioning principles to reduce her anxiety and increase her performance in both school and sports. Describe how Shereen can utilize a type of punishment, a type of reinforcement, and a specific schedule of reinforcement to modify her anxious behaviors.

2. Specify how you would apply the three operant principles listed in the previous question to a behavior in your own life that you would like to change.

Module 29

Biology, Cognition, and Learning

Before You Read

Module Summary

Module 29 explains how biological constraints and cognitive processes affect classical and operant conditioning. A detailed discussion of how different methods of coping with personal problems and feeling control over your life can impact people's health and behavior concludes the module.

Before beginning the module, take a moment to read each of the following terms and names you will encounter. You may wish to make vocabulary cards for each.

Key Terms

cognitive map
latent learning
insight
intrinsic motivation
extrinsic motivation
coping

problem-focused coping
emotion-focused coping
learned helplessness
external locus of control
internal locus of control
self-control

Key Names

John Garcia
Robert Rescorla
Edward Tolman

While You Read

Answer the following questions/prompts.

29-1

1. Summarize and explain the importance of John Garcia's work with taste aversion in rats.

2. Complete the chart below with components from Pavlov's work with dogs, Garcia's work with rats, and the work on sheep-eating coyotes.

Component	Example #1 Pavlov's Dogs	Example #2 John Garcia's Rats	Example #3 Sheep-eating coyotes
US		<i>radiation or drugs</i>	
UR	<i>drooling</i>		
NS			<i>sheep</i>
CS			
CR			

3. What is an evolutionary explanation for the development of taste aversions in both humans and animals?

4. What does it mean when psychologists say that there are biological constraints on classical conditioning?

5. What are the biological constraints on operant conditioning?

6. Shayna wants to put operant principles to use to train her pet gerbil to stand on its hind legs and raise its right paw in order to get food. Based on your knowledge of biological constraints on learning, how would you advise her?

29-2

1. What are the limitations of classical conditioning in addressing the cognitive processes of humans?

2. Summarize and discuss the importance of Robert Rescorla's work with rats' responses to tones and shocks. Relate this to the idea of a variable-ratio schedule of reinforcement and explain why this schedule is the best to prevent extinction.

3. How do cognitive processes impact operant conditioning? Why is this important to understand when training humans or animals?

4. Summarize Edward Tolman's work with rats in a maze. What does this research teach us about learning?
5. Give an example from your own life of latent learning.
6. How does insight learning differ from latent learning?
7. How does intrinsic motivation differ from extrinsic motivation? Give examples (that are not mentioned in the text) of intrinsic and extrinsic motivation.

29-3

1. How does problem-focused coping differ from emotion-focused coping? Provide a specific example and explain how each can impact individuals in different ways.

29-4

1. Summarize and discuss the importance of Martin Seligman's work with harnessed dogs. How does the issue of control impact the behavior of the dogs?

2. How can humans learn helplessness?
3. Describe how a student in high school might develop learned helplessness in one or more of her classes.
4. What is the relationship between learned helplessness and stress and health problems?
5. How does an internal locus of control differ from an external locus of control? How do each of these impact stress and health levels?
6. As defined by the text, what is self-control? How can high levels of self-control impact the outcome of a situation? Provide a specific example.
7. How is self-control depleted? Strengthened?

After You Read

Module 29 Review

Complete the Matching Questions below to see if you have mastered the basics.

Terms or Names

- _____ 1. John Garcia
- _____ 2. insight
- _____ 3. problem-focused coping
- _____ 4. emotion-focused coping
- _____ 5. learned helplessness
- _____ 6. external locus of control
- _____ 7. internal locus of control
- _____ 8. self-control
- _____ 9. Robert Rescorla
- _____ 10. Edward Tolman

Definitions or Associations

- A. the hopelessness and passive resignation an animal or human learns when unable to avoid repeated aversive events
- B. the ability to control impulses and delay short-term gratification for greater long-term rewards
- C. the perception that chance or outside forces beyond our personal control determine our fate
- D. showed that an animal can learn the predictability of an event
- E. attempting to alleviate stress directly-by changing the stressor or the way we interact with that stressor
- F. tested cognitive maps in rats
- G. attempting to alleviate stress by avoiding or ignoring a stressor and attending to emotional needs related to one's stress reaction
- H. a sudden realization of a problem's solution
- I. tested taste aversion in rats
- J. the perception that you control your own

Answer the following questions.

11. When a well-learned route in a maze is blocked, rats sometimes choose an alternative route, acting as if they were consulting a _____.
12. Animals may learn from experience even when reinforcement is not available. When learning is not apparent until reinforcement has been provided, _____ is said to have occurred.
13. The desire to perform a behavior for its own sake is called _____, while motivation to seek external rewards and avoid punishments is called _____.
14. The researcher(s) most likely to challenge Ivan Pavlov's concept of the simplistic and mechanistic associations dogs seem to make between two stimuli would be
 - a. Robert Rescorla through his work on the cognitive component of associative learning.
 - b. Charles Tolman through his research on latent learning.
 - c. B. F. Skinner because of his work on shaping pigeons.
 - d. John Garcia with his studies on taste aversion in rats.
 - e. John B. Watson and Rosalie Rayner based on their work with Little Albert.
15. As a soon-to-be college student you have decided that although you feel education is important, it does not make much sense to overemphasize it. You have heard from students who graduated before you and you believe that getting into college is more a matter of luck than a reflection of hard work and study. Your beliefs most illustrate
 - a. latent learning.
 - b. learned helplessness.
 - c. an external locus of control.
 - d. an internal locus of control.
 - e. self-control.

Module 30

Learning by Observation

Before You Read

Module Summary

Module 30 describes the process of observational learning and the impact of mirror neurons. A discussion of modeling, both prosocial and antisocial, and its impacts on human behavior concludes the module.

Before beginning the module, take a moment to read each of the following terms and names you will encounter. You may wish to make vocabulary cards for each.

Key Terms

observational learning
modeling
mirror neurons
prosocial behavior

Key Name

Albert Bandura

While You Read

Answer the following questions/prompts.

30-1

1. Summarize and explain the implications of Albert Bandura's work with the Bobo doll and the modeling of aggression.
2. How does vicarious reinforcement or punishment differ from modeling?

3. What are mirror neurons and how do they work? What is their significance in life?

4. How does the work with mirror neurons explain children's theory of mind?

30-2

1. What are some outcomes of prosocial modeling? Provide an example from your life.

2. What are some outcomes of antisocial modeling? Provide an example from your life.

3. Connect the work of Bandura to the question of media violence.
 - a. How would his research support the view that media violence triggers violent behavior?

 - b. Suggest two alternative explanations for the existence of this violent behavior.

After You Read

Module 30 Review

Select the best answers below to see if you have mastered the basics.

1. After viewing adults kick and throw an inflatable Bobo doll around a room, children who are purposely frustrated and then placed in a room with the same Bobo will be most likely to
 - a. attempt to make up for the poor adult treatment of Bobo by playing nicely with it.
 - b. invent new and unique ways to treat Bobo.
 - c. kick and throw Bobo as the adults did.
 - d. ignore Bobo and choose other more appropriate toys.
 - e. fear that the adults will treat them as they treated Bobo.

2. According to Bandura's research on vicarious reinforcement and punishment, we are especially likely to learn from people we perceive to be
 - a. similar to ourselves.
 - b. successful.
 - c. admirable.
 - d. likable.
 - e. all of the above.

3. Mirror neurons are believed to play a role in
 - a. everyday imitation and observational learning.
 - b. facial recognition.
 - c. personal self-esteem.
 - d. occipital lobe visual processing.
 - e. language.

4. When Jennie was trying to learn to play baseball, her mother noticed that she was holding the bat wrong. Jennie's mom said, "Here, Jennie, let me show you how you hold it." This method of teaching is best explained by
 - a. cognitive maps.
 - b. observational learning.
 - c. vicarious learning.
 - d. classical conditioning.
 - e. latent learning.

5. Which of the following is an example of a prosocial behavior that might be learned through modeling?
 - a. Justin acts like a bully to the kids at school after watching his favorite TV character bully on a TV show.
 - b. Manahil learns to lie by watching her older brother get away with it.
 - c. Emma learns to tease her cousin James by watching her aunt tease him as well.
 - d. Ahad learns to care for his younger brother by watching his father feed and change him.
 - e. Melissa thinks women are incapable of a career in business because all the important women in her life are stay-at-home mothers.

✓ Check Yourself

Now that you have mastered the basics, work through the problems below to see if you can *synthesize*, *evaluate*, and *analyze* what you have learned.

1. Apply the principles of operant, classical, and observational learning, and your knowledge of psychological vocabulary, to explain

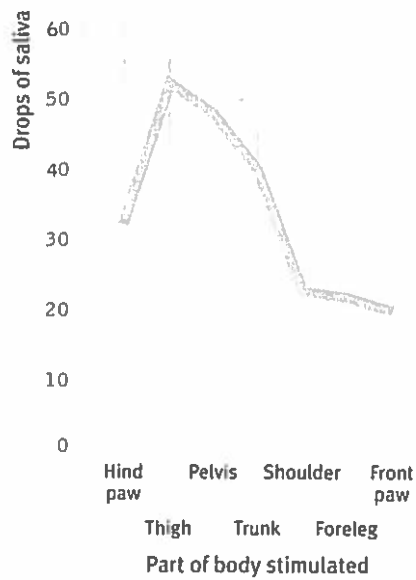
Taste aversion:

Superstitious behavior:

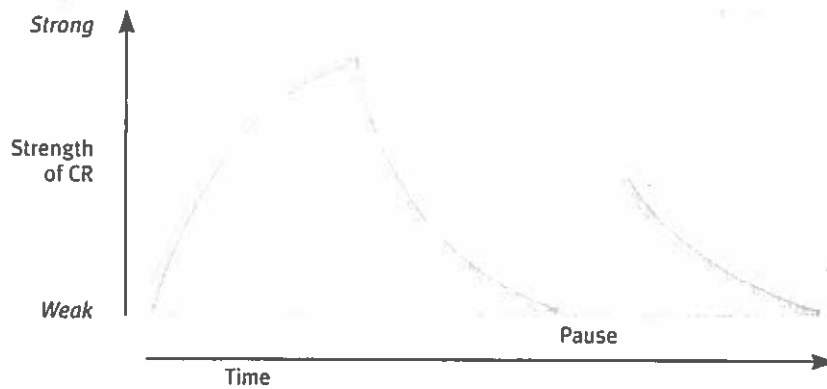
Learned helplessness:

2. Austin is a teenager who has been suspended from school for possessing illegal substances. He has a long history of acting out, enraged resistance to adult authority and other antisocial behaviors. Suggest how the following can be used to address Austin's behavioral problems:
 - biofeedback
 - coping strategies
 - self-control

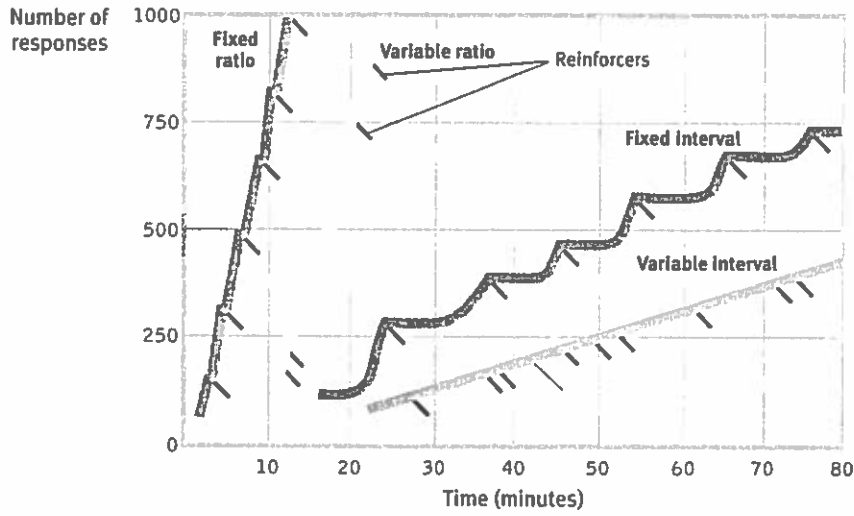
3. Interpret the graphs below and show how they depict the components of classical and operant conditioning. Be sure to incorporate correct usage of psychological terms.
- a. Discuss how the graph below, based on Pavlov's experiments with salivating dogs, demonstrates generalization and discrimination.



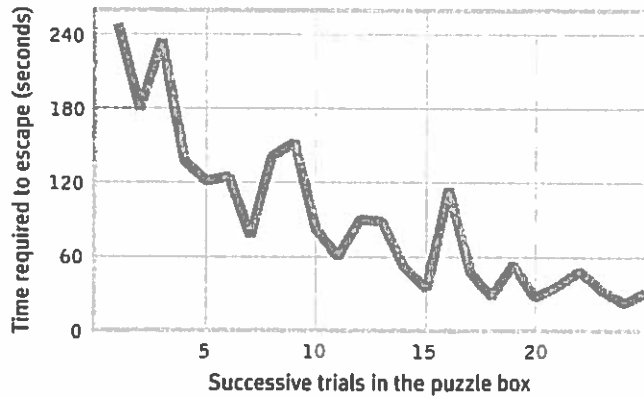
- b. Discuss how the graph below demonstrates extinction and spontaneous recovery.



c. Discuss how the graph below demonstrates the impact of various reinforcement schedules on learning.



d. Discuss how the graph below demonstrates Thorndike's law of effect.



4. Draw a graph that would show the results of Seligman's experiments with learned helplessness. Be certain to label the x-axis and y-axis correctly.



Before You Move On

Use the checklist below to verify your understanding of the unit's main points.

- Do I know the difference between classical conditioning, operant conditioning and observational learning?

Can I describe the basic components of classical conditioning?

- acquisition
- extinction
- spontaneous recovery
- generalization
- discrimination
- higher-order learning

Can I describe the basic components of operant conditioning and their effects on behavior?

- positive reinforcement
- negative reinforcement
- positive and negative punishment

Do I understand the difference between schedules of reinforcement?

- continuous
- partial (intermittent): fixed-interval, fixed-ratio, variable-interval, variable-ratio

- Can I provide examples of how biological constraints create learning predispositions?

- Can I describe the characteristics and differences between insight learning, latent learning and social learning?

- Can I apply learning principles to explain emotional learning, taste aversion, superstitions and learned helplessness?

- Can I describe how operant conditioning techniques can be used for behavior modification?

- Can I describe how biofeedback, coping strategies, and self-control can be used to address behavioral problems?

Can I describe the work of:

- Albert Bandura
- John Garcia
- Ivan Pavlov
- Robert Rescorla
- B. F. Skinner
- Edward Thorndike
- Edward Tolman
- John B. Watson