Learning Objectives for Module 2A

- Be able to define the following terms in classical conditioning:
  - unconditioned stimulus (UCS)
  - unconditioned response (UCR)
  - conditioned stimulus (CS)
  - conditioned response (CR)

- Be able to define the following terms in operant conditioning:
  - positive reinforcement
  - negative reinforcement
  - positive punishment
  - negative punishment
  - extinction
  - continuous reinforcement
  - partial reinforcement

- Be able to recognize new examples of all of the concepts above.

- Be able to distinguish examples of autonomic responses and voluntary responses.

- Be able to distinguish examples of classical conditioning, operant conditioning, and observational learning.

- Be able to define the following terms:
  - shaping
  - discriminative stimulus
  - generalization
  - partial reinforcement effect

- Be able to recognize examples of the above concepts.

- Be familiar with the principles of using effective punishment.

- Be familiar with the things to avoid when using punishment.

- Be familiar with results of Bandura’s (1965) study.
• Distinguish between acquisition and performance.
• Be able to define and recognize examples of vicarious consequences.
• Be able to state what effect vicarious consequences have on observational learning.
• Be able to state the primary difference between Skinner’s learning theory and Bandura’s social cognitive theory (social learning theory).

**NOTE:** This module covers pp. 39-45 of Chapter 2. This material was covered on the previous module but not in the depth that it is here. Although it covers few pages in the text, there is a lot of supplemental information in this module.

**Watson: Classical Conditioning**

1. Watson's definition of behaviorism is:

Classical conditioning is a form of learning in which a stimulus that initially had no effect comes to __________ a response because of its ______________ with a stimulus that already __________ the response.

**NOTE:** A stimulus is some object or event in the environment that elicits a response. Response refers to the behavior. An object or event in the environment that elicits a response is called a ______________. When a puff of air is blown in your face, the natural reaction is to blink. In this example, the puff of air is a ____________ and blinking is a ____________ to that stimulus.

2. Briefly describe Pavlov's example of classical conditioning:

3. In the Pavlov example, the response was ______________. The stimulus that already produced the response (without any learning or conditioning) was ______________ and the stimulus that came to produce the response (as a result of conditioning) was ______________.

4. Briefly describe Watson and Raynor's demonstration of classical conditioning in the infant, Albert:
5. In the Watson and Raynor example, the response was ______________. The stimulus that already produced the response (without any learning or conditioning) was a ______________ and the stimulus that came to produce the response (as a result of conditioning) was a ______________.

6. A stimulus that produces a response without any prior learning or conditioning is called a(n) ______________ ______________.

7. A response produced by that stimulus is called a(n) ______________ ______________.

**NOTE**: Note that “un” means NOT, so the UNconditioned stimulus and UNconditioned response are linked before any learning or conditioning has occurred. It may help you to remember that unconditioned means unlearned (not conditioned) or innate.

8. A neutral stimulus is one that does not produce a response. In Pavlov's study, the __________ was at first a neutral stimulus because it did not cause the dogs to salivate. For Little Albert, the __________ was originally a neutral stimulus, because it did not originally produce fear.

9. How does the neutral stimulus differ from the unconditioned stimulus? How are they similar? The answer isn’t spelled out for you anywhere, so you will need to think about this.

**DIFFERENT** =

**SIMILAR** =

10. A stimulus that is originally neutral but comes to produce a response because it has been paired (associated) with an unconditioned stimulus is called a(n) ______________ ______________.

11. A response produced by that stimulus is called a(n) ______________ ______________.

12. In Pavlov's study:
   The unconditioned stimulus (UCS) was ____________________.
   The unconditioned response (UCR) was ____________________.
   The conditioned stimulus (CS) was ____________________.
   The conditioned response (CR) was ____________________.

13. In Watson’s study with Little Albert:
   The unconditioned stimulus (UCS) was ____________________.
   The unconditioned response (UCR) was ____________________.
   The conditioned stimulus (CS) was ____________________.
   The conditioned response (CR) was ____________________.
NOTE: The unconditioned and conditioned responses (UCR & CR) are the same or very similar to each other. In a new example, if you can identify one of them then you have pretty much identified both. The unconditioned and conditioned stimuli (UCS & CS), however, are NOT the same thing and you should be looking for two different stimuli. Remember that one stimulus elicits the response automatically, before any learning has occurred and this is the __________. The other stimulus was neutral at first (did not elicit any response) and after learning (conditioning) comes to elicit a specific response. This is the __________.

14. In addition to learning to fear a rat, Albert also began to show fear of other stimuli that resembled the rat, such as a rabbit and Santa Claus mask. Albert’s learned response ______________ to other furry items. This phenomenon is known as generalization.

NOTE: Classical conditioning best explains behaviors that are reflexive, involuntary responses controlled by the autonomic nervous system. The autonomic nervous system controls responses such as salivation, knee jerk reflexes, breathing, heart rate, eye blink, pupil dilation and constriction, perspiration, blood pressure, etc. (However, not all these responses are easy to condition in all species.)

The original example of classical conditioning was, of course, Pavlov’s demonstration of training dogs to salivate in response to a bell. The response of salivation is an autonomic, involuntary response. You don’t stop and think about salivating—it just happens whenever you put food in your mouth.

Watson and Raynor conditioned Albert to fear a rat. Is fear an autonomic response? What happens to you when you’re afraid? These changes in heart rate, respiration and perspiration are autonomic responses. They are not under voluntary control. You don’t say to yourself, “Oh, there’s a bear. I better start my heart beating faster so I can get more oxygen to my legs and run faster.” The responses that are under the control of classical conditioning, then, are usually responses that are reflexive, or occur without voluntary control.

15. Classical conditioning could explain how a child becomes frightened at the sight of bees, after being stung. Use Figure 2.2 on page 40 in your book and describe the three stages of classical conditioning as they might occur in this example:

HINT: If this is difficult for you, try doing the same thing with Watson’s Little Albert and Pavlov’s studies for practice first. Then try the same thing with the bee example. Think about what the stimulus is and what the response is. Think about what stimulus originally produced the response and what stimulus was paired with that UCS that came to elicit the same response (the CS).
STAGE 1: Preconditioning phase

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<th>Neutral Stimulus:</th>
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STAGE 2: Conditioning phase

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STAGE 3: Postconditioning phase

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In addition to bees, the child may also learn to fear any flying insect. This would be an example of _________________.

16. Try a few more examples. See if you can put each one in the chart below.

a) A nurse-practitioner is always stuck (😊) with the job of giving vaccinations to young patients because the pediatrician doesn’t want to do it. Now when she runs into these patients in the grocery store or around town, the children scream and run away from her.

b) Every afternoon, the clock in baby Joey’s house strikes three. Immediately afterward, his older brother comes home and slams the front door. Joey startles when the door slams. Now, whenever the clock chimes, Joey startles.

c) Young Emily hates thunder and jumps and cries when she hears it. Since lightening is associated with the thunder, she now cries whenever she sees the lightening. She also cries when her mother takes her to have her picture taken and the photographer uses a flash.

Being afraid of the photographer’s flash is an example of _________________.

### STAGE 1: Preconditioning phase

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### STAGE 2: Conditioning phase

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### STAGE 3: Postconditioning phase

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### Operant Conditioning

17. If Pavlov is the name we associate with classical conditioning, ____________ is the name we associate with operant conditioning.

**NOTE:** Many of the behaviors in which we are interested are not reflexive, autonomic responses but rather voluntary responses controlled by the central rather than the autonomic nervous system. These include a wide range of actions, such as working on this study module, going downtown, calling a friend to get help on an assignment, helping yourself to a large piece of pie in the refrigerator, etc. These responses are voluntary: in other words, you could ask yourself, “Should I study or go downtown?” or “Should I eat that last piece of pie or should I stick to my diet?” If that question makes sense, then probably the response in question is a voluntary response and is under the control of operant (rather than classical) conditioning. If the question makes no sense (e.g., “Should I dilate my pupils in the dark theatre so I can see better?” or “Should I start hyperventilating when I see a bee?”), then probably that response is reflexive and controlled by classical conditioning.

Classical conditioning involves responses which are __________ (reflexive or voluntary), and these responses are controlled by the __________ (central or autonomic) nervous system. In contrast, operant conditioning involves responses that are __________ (reflexive or voluntary), and these responses are controlled by the __________ (central or autonomic) nervous system. Thus, we should associate classical conditioning with the __________ nervous system and operant conditioning with the __________ nervous system.
Which of the following behaviors are **autonomic** responses? Which are **voluntary**?

______ 18. Jim calls Sue up to ask her out on Friday night.

______ 19. Sue’s heart starts to beat fast when she answers the phone and hears his voice.

______ 20. Mary finishes her homework.

______ 21. Joe works hard to earn his Webelos badge for Cub Scouts.

______ 22. Hannah gets panicky and starts to breathe rapidly whenever she sees a snake.

______ 23. Mark gets so nervous at his piano recital that his palms start to sweat and he blushes.

______ 24. Jo Ellen makes up her bed each day to earn part of her allowance.

______ 25. Rachel sets her alarm so that she can get up early and study for Psych 3206.

**NOTE:** Classically conditioned responses are controlled by the stimuli that precede them, e.g. a bell causing a dog to salivate. However operant conditioned responses are controlled by the stimuli that follow the response, e.g., Hannah finishes her homework and her mother praises her.

26. In operant conditioning, a learner’s behavior becomes ________ or ________ probable depending on the ____________ it produces.

27. When a response is strengthened by a consequence, this is called ________________.

28. If a child cleans his room and receives a hug from his mother, he will probably be more likely to clean his room again. This response has been strengthened through ________________ ________________.

29. In this example, ________________ means that something has been ________________ to the situation, and ________________ means that the response has been ________________.

30. Define what a positive reinforcer is:

31. How do continuous and partial reinforcement differ? When should each one be used?

32. Negative reinforcement occurs when:
True OR False  Negative reinforcement is the same thing as punishment.

33. Escape and avoidance behavior are examples of ____________ reinforcement. Behavior is ____________ (increasing OR decreasing) in order to escape or avoid an unpleasant consequence.

34. If your car beeps at you loudly until you fasten your seat belt and then stops, you may be more likely to fasten your seatbelt because doing so stops the annoying noise. This behavior has been influenced by ____________ ____________.

35. In this example, ____________ refers to the fact that something (the irritating noise) has been ____________ from the environment, and ____________ refers to the fact that the behavior has been ____________.

36. To reinforce a behavior means to ____________ the behavior.

**HINT:** How do we strengthen concrete?

37. We add steel to strengthen or ____________ concrete.

38. Similarly, when we add a stimulus to the environment to strengthen behavior we are ____________ ____________ the behavior.

39. Positive and negative reinforcement both ____________ a behavior.

40. What is the difference between positive and negative reinforcement?

41. What does the **positive** in positive reinforcement refer to?

42. What does the **negative** in negative reinforcement refer to?

**NOTE:** Positive reinforcement does NOT mean that it is something good to do or that we reinforce good behaviors in children. Sometimes, parents (and teachers) positively reinforce perfectly horrible behavior in children. For instance, you take a child to the store and he or she throws a tantrum because you won’t get a candy bar or small toy. You may give in to the tantrum in order to quiet the child down. You have positively reinforced the child for having a tantrum by providing a pleasant consequence for the tantrum. The term positive in this case is not used as a value judgment—that positive reinforcement is good. It simply means that a stimulus or consequence has been ____________ to the environment. The term negative, as in negative reinforcement, does NOT mean doing a bad thing or reinforcing a bad behavior. It simply means that something has been ____________ from the environment.
43. Whereas reinforcement ____________ the strength of the behavior that preceded it, punishment ____________ the strength of that behavior.

44. To strengthen a behavior we use ____________. To weaken a behavior we use ____________.

45. Strengthen is to reinforce as weaken is to ____________.

46. When an unpleasant consequence is added to the situation following a behavior and the behavior decreases, this is called ____________ ____________.

**NOTE:** Another word for unpleasant is **aversive.** An aversive consequence is one that is undesirable (e.g., a spanking, etc.) The term aversive is often used to described the consequences that weaken a behavior when added to the environment. You need to remember the definition of this word.

47. A child throws a block at the lamp and his parent spanks him. The child does not throw blocks again. This would be an example of ____________ ____________.

**BEWARE:** This type of punishment often results in emotional side effects that will be discussed later.

48. We call this type of learning ____________ because the stimulus is being added (+) and we call it ____________ because the behavior is weakened.

49. When a pleasant consequence is subtracted from the environment and the behavior weakens, we call this ____________ ____________.

50. Jack talks back to his father. His father takes away the car keys for two weeks. Jack stops talking back to his father. This would be an example of ____________ ____________.

51. We call this type of learning ____________ because the stimulus is removed (-) and we call it ____________ because the behavior is weakened.

**NOTE:** One familiar type of negative punishment is time out. Many people confuse time out with positive punishment (adding something unpleasant, i.e., isolation). However, the point of time out is to **remove** the child from reinforcing stimuli. When children are misbehaving, they often get a lot of attention from adults, siblings, classmates, etc. Attention is almost always a powerful reinforcer for children. By removing the child from the situation where he/she is getting attention, the undesirable behavior should decrease. Many people misuse time out so that it does not work very well. Many parents and teachers say, "Oh, I tried that time out stuff but it doesn't work." When you examine how they used time out, typically they 1) did not isolate the child completely or 2) they extended the length of time out too long. For example, parents may send a child to his or her room for time out. However, the child's room usually has some reinforcing stimuli available...toys, video games, TV, etc. This is not going to be a very
effective time out. Dennis the Menace in the comic strips gets put in the corner but he has his rocking chair, his teddy bear and his dog, Ruff, for company. Time out works only if it is a complete isolation from all reinforcing stimuli. In addition, many parents will send a child to time out for a longer period than is effective. The rule of thumb is one minute for each year old the child is: 1 minute for a 1-year-old, 2 minutes for a 2-year-old. Obviously, 15 minutes for a 15-year-old will not work well...time out is most effective if it is used, like all punishment, early in life and consistently. A child should know what behavior causes him or her to get into time out and know that the consequences of this behavior will be consistent. To summarize, time out should be a complete isolation for a short period of time which the child receives as a consequence for breaking a rule that he/she clearly understands.

**Review**: Time out is an example of of ___________ ___________. Time out works best when the following three things are true:

1) ___________

2) ___________

3) ___________

52. Identify each of the examples below:
   a) behavior is increasing because something pleasant has been added to the situation =

   b) behavior is decreasing because something pleasant has been taken away from the situation =

   c) behavior is increasing because something pleasant has been taken away from the situation =

   d) behavior is decreasing because something unpleasant has been added to the situation =

53. Look at Figure 2.3 on page 42 in your book. This illustrates the four types of operant conditioning. Use the figure to fill in the blanks below:

<table>
<thead>
<tr>
<th>Stimulus presented (+)</th>
<th>Pleasant stimulus</th>
<th>Unpleasant stimulus</th>
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<tr>
<td>Stimulus removed (-)</td>
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54. Be careful because the pleasant and unpleasant can be confusing. What's pleasant to one person may not be pleasant to another. It’s better to focus on whether the behavior is increasing or decreasing. Use what you have learned to fill in the blanks below. Pay careful attention because it is not that same as the chart above—note that we are now focusing on behavior increasing or decreasing rather than a pleasant or unpleasant stimulus.

<table>
<thead>
<tr>
<th>Behavior Increases</th>
<th>Behavior Decreases</th>
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<tr>
<td>Stimulus presented (+)</td>
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<tr>
<td>Stimulus removed (-)</td>
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55. Which two types of learning involves weakening a behavior?

56. Which two types of learning involves strengthening a behavior?

57. Which two involve adding a stimulus to the environment?

58. Which two involve taking away a stimulus from the environment?

59. When a behavior is ignored, or no longer reinforced, that behavior weakens. We call this process __________________.

60. We can weaken behaviors that are not dangerous by ignoring them or, in other words, through __________________.

61. It is not sufficient to stop a behavior that is undesirable if a child does not know what behaviors are desirable (in other words, what he or she should be doing.) For this reason, extinction should be used in combination with what else?

62. Too often, the well-behaved child is ignored (example of __________________) and the misbehaving child gets all the attention (example of __________________ __________________). Thus, the good behavior will ________________ (strengthen or weaken) and the bad behavior will ________________ (strengthen or weaken).

Mary brings home her report card with all As. Her parents barely notice. The next marking period, Mary's grades drop considerably. This is an example of ________________. Extinction occurs when: ________________________________.
NOTE: It is easier to memorize definitions for the types of operant conditioning than it is to recognize examples of them. It is important to know definitions, but memorized definitions are useless if you can’t recognize an example of operant conditioning when you see one in real life. We’ll spend some time giving you examples of these different concepts to practice on. Avoid memorizing one example of each and hoping that the example on the quiz will be the same one. We will give you a set of questions to ask that will enable you to analyze examples on the quiz that you’ve not seen before.

Thanks are due to Dr. Robert Graham for suggesting this way of analyzing operant conditioning examples.

63. **EXAMPLE A:**
Marcy is 11 months old and babbles incessantly. She says, “la la la la la” and “ba ba ba ba ba.” One day, Marcy says, “ma ma ma ma ma.” Her parents pick her up and hug her and exclaim over her “first word.” Marcy starts to say “ma ma ma ma ma” a lot more and “la la la la” and “ba ba ba ba” a lot less.

**Analysis:**
#1: isolate the response. What did Marcy do? She said “ma ma ma ma ma.”

#2: Is that response increasing or decreasing? It is increasing.

#3: Therefore, this is an example of punishment or reinforcement? Since the behavior is increasing, this must be ____________.

#4: What is the consequence of Marcy’s behavior? What happens when she does it? Her parents pick her up and hug her, etc.

#5: Is this consequence added (+) to her environment or taken away (-)? It’s added, of course.

#6: Since the behavior is added, this must be ____________.

Put # 3 and #6 together and this is an example of ____________ ____________.

64. **EXAMPLE B:**
Joey is a third grader. His teacher asks a question and Joey raises his hand and offers an answer. The answer is wrong and all his classmates laugh uproariously and the girl next to him says, “Man, are you ever dumb.” Joey never raises his hand in class again.

**Analysis:**
#1: What is the response? What did Joey do?

#2: Is the response increasing or decreasing?

#3: Therefore, this is an example of:
#4: What is the consequence of Joey’s behavior?

#5: Is this added to his environment or taken away?

#6: Therefore, this must be:

Put #3 and #6 together, and we have an example of:

**NOTE**: This is not positive because what happened to Joey was good or pleasant. Again, positive is not an evaluative term. It simply means that the consequence was something that Joey got rather than something that was taken away from him.

65. **EXAMPLE C**:
Two toddlers are playing with a toy that they both want but don’t want to share. They are playing tug o’ war with the toy and eventually start hitting each other and crying. To discourage this behavior, the father takes the toy and places it on a high shelf, saying: “If you can’t play nice with this toy, I’ll have to take it away.” The next time the toddlers play with the toy, they don’t hit and cry.

**Analysis**:
#1: What is the response? What did the toddlers do?

#2: Is the response increasing or decreasing?

#3: Therefore, this is:

#4: What is the consequence of the response?

#5: Is this something that is given to them or taken away from them?

#6: Therefore, this is:

Put #3 and #6 together and you have:

66. **EXAMPLE D**:
Hank wakes up from his nap with very dirty diapers. He cries and fusses. His mother comes in and removes the yucky diapers. The next time Hank is uncomfortable, he cries and fusses.

**Analysis**:
#1: What is the response? What did Hank do?

#2: Is the response increasing or decreasing?

#3: Therefore, this is:

#4: What is the consequence of the response?
#5: Is this something Hank gets or something he gets rid of?

#6: Therefore, this is:

Put #3 and #6 together and you have:

**NOTE:** In this analysis, we never ask whether the consequence is pleasant or unpleasant. The reason for this is that it is very subjective whether a consequence is pleasant or not. What is pleasant to one person may leave another person cold or may even be aversive or unpleasant to them. We have to judge whether the example of punishment or reinforcement by the effect on the behavior. If the behavior goes up, it’s reinforcement; if the behavior goes down, it’s punishment. Regardless of whether you think the consequence is desirable or not, you have to look at ____________________________________________________________.

Here are more examples of operant conditioning. Analyze these examples using the same set of questions above. Classify each of the following consequences as an example of positive reinforcement, negative reinforcement, positive punishment, negative punishment, or extinction. Focus on the person whose name is highlighted.

67. **Justin** decides to play wrestling with an older boy, Jeff, who lives down the block. They are having fun until Justin decides to get a stick and play swords. He hits Jeff with the stick. Jeff is angry but he simply picks up his book bag and goes in the house. Justin is disturbed that his friend left and never hits Jeff with the stick again.

**HINT:** What did Justin do? Is it increasing or decreasing? What consequence followed the response? Was it something he got or something he lost?

68. At the dinner table, **Christopher**, aged 2, pulled his parents together on either side of him and said, “Hey guys. Wha’s doin’? Play ball!!!” Everyone laughed so hard that he continued to do this five or six times at each meal for the next two months.

69. **Zachary** gets into so much trouble in one afternoon (he pours out all his sister’s perfume, climbs out the window onto the roof, and many other similar things in a short period of time). His mother tells him that he cannot go on the camping trip that his best friend invited him on. He stops misbehaving.
70. On Monday, **Tony** slammed the screen door 3 out of 8 times as he left the house. Each time his mother would give him a tongue-lashing. "Tony, I have told you 'till I'm blue in the face DON'T SLAM THE SCREEN DOOR!!" On Tuesday, Tony slammed the screen door 7 out of 8 times.

**HINT:** This example confuses students sometimes. Remember not to focus on whether you think the consequence is pleasant or unpleasant. Look at the effect that it has on behavior. Whereas being screamed at may be aversive to some children, it obviously is not to Tony. This is one of the most common problem parents and teachers face in disciplining children. What they believe to be a reinforcing stimulus may not be reinforcing to the child and what they believe to be an aversive stimulus may not be aversive to the child. If the consequence does not have the desired effect, then you need to try a different consequence. It may be that the only way Tony gets attention is by acting out. Attention is usually a powerful reinforcer.

71. When Jennifer’s mother drops her off at day care each morning, **Jennifer** screams and yells. When she does this her mother stays and pays attention to her for a few minutes more. Jennifer’s screaming and crying goes on for a long time each morning.

72. When 5-year-old **Jonathan** draws lots of pictures. At first his parents look at the pictures and exclaim how pretty they are. After a while, they stop paying any attention to his pictures. Jonathan eventually quits drawing pictures.

73. **Jeffrey** is a very quiet, introverted, hardworking 5th grader who gets straight A's but who never speaks up in a group and, in general, seems to be frightened of people. His cub scout leader wants to reinforce James for paying attention so she asks him to lead the pledge of allegiance. James never pays attention again.

**HINT:** Look back at the previous hint. One man’s meat is another man’s poison.

74. **Ted** wakes up one Sunday morning complaining of a stomach ache. He complains so much that his parents do not make him go to church. The following Sunday morning, Ted again wakes up complaining of stomach pains.
75. David, age 10, is trying to get the remote control away from his sister Hannah, age 7. He twists Hannah’s arm until she gives him the remote. As soon as he gets it, David lets go of Hannah's arm. Over the weeks, this little scene repeats itself frequently with David's toy grabbing becoming more frequent and Hannah getting faster and faster at giving up the remote.

First examine the situation from David's perspective. What did David do?

Is this behavior increasing or decreasing?

What was the consequence of David’s behavior? Was it something he got or lost?

Type of learning for David:

Now look at the example from Hannah's perspective. What was Hannah’s response?

Is this behavior increasing or decreasing?

What was the consequence of Hannah’s behavior? Did she get something or get rid of something?

Type of learning for Hannah:

**NOTE:** Be careful not to confuse this last example with classical conditioning. You might think that because Hannah’s brother is forcing her to do something, that her response is involuntary. It is involuntary in the sense that she is being forced to give him the remote, but it is not involuntary in the neurological sense—it is not an autonomic response. There is no reflex that causes people to give up a remote control.

76. Don’t let the fact that two individuals are being conditioned in example above confuse you. These cycles of behavior are common, where one person is positively reinforced at the same time that the other person is negatively reinforced. Note that this cycle will continue because both partners’ behavior is being strengthened. Parents giving in to temper tantrums (giving candy at the grocery store because child is screaming) provides another example of a cycle where both partners are being reinforced. In this example, the child is being _______________ reinforced while the parent is being _______________ reinforced.

A) From the child’s perspective, what behavior is being strengthened?

B) From the parent’s perspective, what behavior is being strengthened?

77. Ms. Turner tries to ignore Sam's smart aleck remarks but she is afraid the other children are reinforcing him for such behavior. Ms. Turner decides to isolate Sam for 5 minutes each time he makes such a comment. Now, Sam has stopped making such remarks.
78. By now, you may have noticed that time out and taking away privileges are often examples of ________ ________, whereas scolding or spanking are often examples of ________ ________. However, always remember to analyze both the consequence (is something being taken away or added to the situation) and the behavior (is it increasing or decreasing). For example, scolding is ________ ________ only if the behavior decreases (as intended). If the behavior increases because a child enjoys this attention, then scolding becomes an example of ________ ________. And if the child increases his/her behavior in order to avoid the scolding, then it is an example of ________ ________. These examples show why thinking about consequences or behavior as good or bad (or pleasant or aversive) can easily get confusing. Just remember to ask yourself the basic questions:

1) What is the behavior/response and is it increasing or decreasing? This question tells you whether an example is __________________________.

2) What is the consequence and it is something that was added to or taken away from the situation? This question tells you whether an example is __________________________.

**Back to the Textbook – Physical Punishment**

79. Which of the 4 kinds of operant conditioning does Skinner and other behaviorists recommend as most effective in controlling children’s behavior?

80. Which of the 4 kinds of operant conditioning does Skinner and other behaviorists discourage as being least effective in controlling children’s behavior?

81. Punishment (particularly physical punishment in the form of spanking) has always been a controversial issue in learning theory. Often parents and teachers use punishment in ways that make it ineffective or cause undesirable side effects. List the 6 guidelines given in your book for the effective use of punishment.

1) __________________________

2) __________________________

3) __________________________

4) __________________________

5) __________________________

6) __________________________

82. What are some of the undesirable consequences of using physical punishment?
The negative side effects of punishment are most obvious when the child is: ________________.

83. Identify whether the examples below should result in effective punishment and tell why or why not.

a) Mary’s mom always tries to wait a while before she punishes Mary so she can calm down and be more evenhanded in her punishment.

b) Tom’s dad is warm and affectionate most of the time but his children know that when they do certain things, they will inevitably be punished for it.

c) One-year-old Angela has a mom who punishes her for doing dangerous things but she never explains what Angela did wrong or why it was wrong because she feels that Angela doesn’t understand language very well.

d) Ms. Andrews sends Tim to the principal’s office because he hit another child in the class. Tim waits for 15 minutes until the principal gets out of a meeting before he is punished.

e) George’s parents rarely use physical punishment, but if he hits his little sister, they spank him severely.

f) When Dave runs out into the street, his dad holds him on his lap and softly talks to Dave about how dangerous it is to run into the street.

More Questions About Learning

NOTE: We need to expand on a few concepts about operant conditioning that are not completely covered in the textbook. You have learned about ways to increase behavior through positive and negative reinforcement and ways to decrease behavior through positive and negative punishment and extinction, but there are other questions about learning to which we need answers.

QUESTION #1: How does a response come about in the first place? You can’t strengthen a response if it doesn’t occur, so how do we learn complex new skills such as making friends, working long division, etc.? A teacher doesn’t wait for students to work a long division problem correctly by chance and then reward the response. These responses must be acquired.
Behaviorists explain the acquisition of a new response through a process called **shaping**:  
**Shaping = the reinforcement of successive approximations to a terminal behavior.**

84. So what does that mean? If you want to teach a child to feed him or herself, you don’t start by taking the child out to a restaurant and ordering a sirloin steak and expect him or her to use a steak knife and fork and napkins, proper table manners, etc. Instead, you set the child in a high chair with a bib and a splat mat and a bowl of strained prunes and a spoon with a baby handle and you prepare for a messy meal. In other words, you start with just a rough ____________ of the behavior you want to teach (terminal behavior). At first you praise the child if even some of the food reaches the mouth. Most of it will be on the high chair, the bib, the splat mat and the kid’s face and hair. But that’s OK at first.

85. You are ______________ the behavior. At this point you are ______________ a rough ______________ of the behavior.

86. Eventually, you expect to see some improvement and you withhold praise until the child does a bit better—gets a little more food in the mouth and less all over the place. Now you are reinforcing ______________ approximations to the behavior.

87. Gradually, you are ______________ the child into being able to eat more complicated food with more complicated utensils and a semblance of table manners. In this way, children might learn complex responses, such as blending sounds into words, working long division, and making friends—behaviors that don’t occur spontaneously.

88. Molly’s grandmother reinforces her first for peeing in the potty after being placed on the chair. Then she praises Molly for pulling her pants down, sitting on the potty and peeing. Eventually, she praises Molly for going to the bathroom on her own, pulling down her pants, peeing, wiping and flushing. Molly’s grandmother is ______________ a terminal behavior.

**QUESTION #2**: How do we know which response is appropriate in which situation?

We have many responses we can make in any given situation. Which one should we make? Behaviorists explain this as a process of **discrimination learning**. When we learn to respond one way in one situation and another way in another situation, we are discriminating. Children learn that they can behave differently on the playground than they do in the classroom. They are making discriminations. We learn which response to make when by learning to recognize a set of **discriminative stimuli**.

**Discriminative Stimulus = a stimulus that signals that a response will be reinforced.**

89. You may have witnessed a scene like this at a store: A child wants a toy or candy and the parent says, “No.” But then the child throws a tantrum and finally the parent gives in and lets the child have what he/she wants. You may think the child is spoiled but it may be that at home his/her behavior would be different. At home, the parent is less likely to give in to the child and more likely to ignore the tantrum. Ignoring the tantrum would be an example of ______________. In public, however, the child’s behavior embarrasses the parent and he/she gives in to stop the tantrum. The child learns that at home, temper tantrums do not work but in a
store the tantrum will have the consequence of getting the child what he/she wants. The store becomes a **discriminative stimulus** for throwing a tantrum. (Learning theorists may classify this as a setting event rather than a discriminative stimulus, but we do not need to distinguish between the two here.) Similarly, if a substitute teacher is present, he/she may be a _______________ _______________ for the students to try all sorts of misbehavior that they know they couldn’t get away with if the real teacher were there.

**NOTE:** Through discrimination learning, we learn to change our behavior in order to obtain reinforcement in different situations. The opposite of discrimination learning is **generalization.** Generalization takes place in operant as well as classical conditioning. Just as Albert learned to fear not only the white rat but other white fuzzy objects, operant behaviors can also be generalized. We learn that the same response is appropriate in more than one situation. Children learn to address their parents with polite terms, such as sir and ma’am. They also **generalize** this response to other adults, such as grandparents, teachers, aunts and uncles. But they **discriminate** between children and adults. They never address their friends as sir or ma’am.

90. The technology of learning theory has been very useful in studying a number of developmental issues, including the development of visual perception. Let's look at an example of a study that uses operant conditioning to ask such a question. T.G.R. Bower, in an ingenious (although very difficult to replicate) study, conditioned babies to turn their heads when presented with a 30-centimeter cube at a distance of 1 meter. When the infants saw the cube, they turned their heads and a face would pop up and say "Peek-a-boo." The infants learned to turn their heads only when they saw the cube. In this experiment, head turning would be the **response.** The peek-a-boo face would be a **reinforcer.** Since head turning increases when the peek-a-boo face is presented, this would be an example of _______________ _______________. So far, simple, yes? After this, however, Bower also presented the babies with a 90-centimeter cube at a distance of 3 meters. Even though this stimulus was a different size and distance, it would cast the same size image on the retina of the eye and might "fool" the babies into thinking it was the same. However, babies are smarter than that and they did not turn their heads in response to the 90-centimeter cube. In this study, the 30-centimeter cube would be a(n) _______________ _______________ (a signal that head turning would be reinforced.) The fact that the babies responded to the 30-cm cube and not to the 90-cm cube would be an example of _______________ learning. In addition, Bower presented a 30-cm cube at a distance of 3 meters. Although this cube may appear to be smaller (in terms of the size of the retinal image), the babies seemed to know that it was the same cube as the original one and they responded to it by turning their heads. By responding to the 30-cm cube at both distances, the babies demonstrated _______________.

91. Identify the following examples as generalization or discrimination:

a) A driver’s ed student is praised for stopping at red lights, stop signs and railroad crossings. The student has learned to _______________ the same response (stopping) to different stimuli.

b) A child learns that when the teacher asks what sound the letter “b” makes, he will be praised for saying, “buh” but if she asks what sound the letter “d” makes, he should say “duh.” This child is learning to _______________ two different stimuli.
c) A child learns that at school you are supposed to be quiet while the teacher is speaking and at church you are also supposed to be quiet while the minister is speaking.

d) Melissa and her classmates learn that when they ask Mr. Sullivan to postpone a history test, he always does but when they ask Ms. Bennett to postpone an algebra test, she never does. They always pester Mr. Sullivan to postpone his tests, but never ask Ms. Bennett to.

e) An infant in a perception experiment is conditioned to turn his head in response to a 2000 Hz tone. When a 1500 Hz tone is presented, he also turns his head and does so as well when a 2500 Hz tone is presented.

f) In another infant perception experiment, a baby is conditioned to slow down his rate of sucking in order to keep a tape recording of his mother's voice playing. He does not adjust his sucking rate in response to another mother's voice.

g) A child's parents teach her to say, "Yes, ma'am." and "No, sir." when speaking to them. The child also uses polite phrases when speaking to adults in the neighborhood.

h) A child's parents teach her to say, "Yes, ma'am." and "No, sir." when speaking to them. However, the child does not use these phrases when speaking to her friends.

**QUESTION #3:** How do we learn in the apparent absence of reinforcement?

Although learning theorists, such as B.F. Skinner believed that no learning is possible without reinforcement, we often seem to make responses that look like learning but no reinforcement is present. You are working on this study module and making responses that look like learning but no one is praising you or giving you M&Ms for the responses you're making. (By the way, “Good job!!”) What is maintaining your behavior? Obviously you have been rewarded in the past for studying your text, taking notes coming to class and working on study guides, so that you have been rewarded for these responses, not every time they occur but every once in a while.

92. REVIEW: Behaviors that are rewarded every time they occur are on a schedule of ______________ reinforcement.

93. REVIEW: Behaviors that are rewarded occasionally are on a schedule of ______________ reinforcement.
94. REVIEW: Behaviorists recommend using __________________ reinforcement when shaping a new response, and __________________ reinforcement to maintain the behavior after it has been established.

**NOTE**: When shaping a new response, you must reinforce every instance of improvement in the response. Once a response is acquired, continuous reinforcement is not longer necessary. Because you are an experienced student taking a junior level course, you no longer need continuous reinforcement. Partial reinforcement is sufficient to sustain your behavior (hopefully).

Partial reinforcement has an interesting effect on behavior. Behaviors that are on a schedule of partial reinforcement are behaviors that become resistant to extinction. In other words, when you remove the reinforcer, the behavior tends to continue. This is known as the partial reinforcement effect and it is a very useful law in psychology.

95. Mrs. Watson is working with Jeffrey, a student who is very good at math. She checks his division work sheet every once in a while and gives him a sticker for getting them all right. One day, Mrs. Watson gets hung up working with Jack who is struggling with division. She works with Jack so long she forgets to check Jeffrey’s work for quite a while. Jeffrey continues to work even though the teacher’s isn’t checking on him. Jeffrey is working on a schedule of ____________ reinforcement.

96. Jeffrey’s behavior is ______________ to extinction.

97. This is an example of the ____________________________________________________________________.

98. Mr. Hassled is putting his daughter Polly to bed and she goes through her usual routine. When he turns the lights out, Polly asks for one more story. Her father says no. Then she waits 5 minutes and asks for a drink of water. He says no. She waits another five minutes and calls out, “I gotta go potty really BAD!” Her father doesn’t want to change wet sheets, so he goes in and takes her to the bathroom and puts her back to bed. Polly is on a schedule of ____________ reinforcement. One night, Mr. Hassled is fed up and decides that no matter what Polly says, he is not going to pay attention to her requests after the lights go out.

99. What can Mr. Hassled expect to happen?

100. This illustrates the ________________ ________________ effect.

**NOTE**: Parents and teachers should be aware that when they reward a child’s behavior intermittently, the child may become very stubborn because they have learned that sooner or later the parent will give in. This is good when it comes to working math problems, but not when it comes to stalling at bedtime. Be aware that attempts to extinguish these behaviors will require a lot of time and patience.
Back to the Textbook – Bandura: Social Cognitive Theory

NOTE: If you've done this module in one sitting and you're getting tired, take a break if you have enough time. Many people don't pass this quiz because they ignored Bandura. Take your time and make sure you know this part as well the operant and classical conditioning parts.

101. The person we associate with social cognitive theory is _______________.

102. Bandura’s social cognitive theory used to be called __________________________ (don’t be surprised if we occasionally slip up and use the old name).

103. Bandura now refers to social learning theory as ____________________________.

104. As we learned in the last module, the main difference between traditional learning theory (Skinner) and social cognitive theory (i.e., Bandura) is that Bandura places more emphasis on ____________ factors in learning. Skinner and the behaviorists focus only on behavior that is _________________.

105. In contrast to Skinner, Bandura argues that people ______________ about the connections between their behavior and its consequences, they ______________ consequences, and they often are more affected by ____________________________ than by the consequences they actually encounter.

106. Bandura also argues that people reinforce or punish themselves with mental pats on the back and self-criticism, and these ______________ affect behavior.

107. The most important mechanism through which human behavior changes, according to Bandura, is ____________________________.

108. Observational learning refers to:

109. What are examples of behaviors that can be learned through observation?

110. Observational learning is a more cognitive form of learning than conditioning because:

111. Bandura (1965) demonstrated that preschool children could learn ______________ through observational learning. In this classic experiment, all children watched a short film of an adult model attack a Bobo doll. Bandura tested three experimental groups. Describe how the groups differed.
112. The independent variable in Bandura’s study was ____________________________ and the dependent variable was __________________________________________. The three levels of the independent variable were:

113. Briefly summarize the results of Bandura’s study.

114. After the initial observation, Bandura brought back the children and offered them a prize for reproducing as many of the model’s actions as they could remember. What did the children in the group who saw the model punished do?

115. Observing a model being reinforced for his/her behavior is called _______________ reinforcement. Observing a model being punished for his/her behavior would be called _______________ punishment. What does the term vicarious mean? (Look it up if necessary.) People often talk of parents living vicariously through their children. In other words, when their children earn an award, the parents feel proud of themselves, and when they buy the child a gift, they feel as if the gift was for them. In this context, vicarious means that these parents are living life _______________, or through someone else.

**NOTE:** Learning theorists distinguish between performance and acquisition. In observational learning, performance refers to whether you actually imitate the model’s behavior (do you show the behavior that you saw). Acquisition refers to whether you learn (remember) about the model’s behavior regardless of whether you actually perform the behavior. Thus, it is possible to acquire a behavior even if you don’t perform it. Doing what the model did is ______________. Remembering what the model did is ______________.

116. Vicarious consequences (reinforcement and punishment) influence ______________ of the behavior. They do not influence ______________ of the behavior.

117. Bandura didn’t know whether the children who saw the model being punished had ______________ the aggressive behavior because at first they did not ______________ the behavior. However, later they showed evidence of ______________ of the behavior through their ______________ of the model’s aggressive actions.

118. The fact that these children were able to imitate the model’s behavior at a later time suggests that they ______________ what they saw. Memory is a ______________ process.
119. The fact that children can remember a model's behavior whether or not they actually perform the behavior supports Bandura's idea that learning is a more _______________ process than Skinner allowed for.

120. Here's another example to illustrate the distinction between acquisition of a behavior versus performance of a behavior. Jack is in the kitchen with his little brother Brent. Jack pulls a chair up to the counter and climbs up on the counter to reach the cookie jar in the top shelf. Brent has never seen anyone do this before and didn’t realize that you could get to the cookie jar. Their mother comes into the kitchen and Jack gets in trouble. Brent’s observing Jack getting into trouble is an example of _______________ punishment.

121. Whether or not Brent imitates Jack’s behavior refers to _______________ of the behavior.

122. Do you expect that Brent will imitate Jack?

123. Why or why not?

124. Will Brent remember what Jack did?

125. Remembering how Jack got to the cookie jar refers to _______________ of the behavior.

126. Vicarious reinforcement and punishment affect the _______________ of the behavior, not the _______________ of the behavior.

127. If Brent remembers what Jack did, under what circumstances might he imitate Jack’s behavior?

Thus, even though a child may not imitate a model's behavior immediately, he or she is still learning from those models. The effects of observational learning may not be seen for some time. But the child can store representations of that information and may imitate the model's behavior under the right circumstances. For example, your parents are powerful role models for how to be a parent and you may find yourself imitating them when you become a parent. (Even though you swore you would never do those same things when you had children of your own!) Parents need to be aware of what models their children are exposed to (in real life and on television) and make sure those models are teaching your children things you want them to learn.