

# Learning

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# Learning

## Objectives

(1) Explain respondent conditioning (learning relationships between stimuli) and operant conditioning (learning relationships between responses and results).

(2) Explain social learning (observation and imitation).

(3) Discuss factors affecting learning`

# Definition of Learning

- Relatively permanent change in an organism's behavior or knowledge due to experience or practice
- Behavioral definition would focus exclusively on overt or measurable behavior

# Importance of Learning

- Learning helps us mastering new skills and academic subjects.
- It is also involved in emotional development, social interaction, and personality development.

# Approaches to Learning

1. The Behavioral Approach

2. The Cognitive Approach

# Behavioral Approach

- Learning is understood in terms of external causes.
- It is based on associations
- Associative learning means that certain events go together.
- Two kinds of associative learning: classical and operant conditioning.

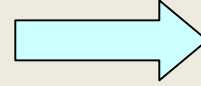
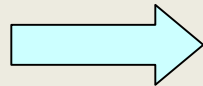
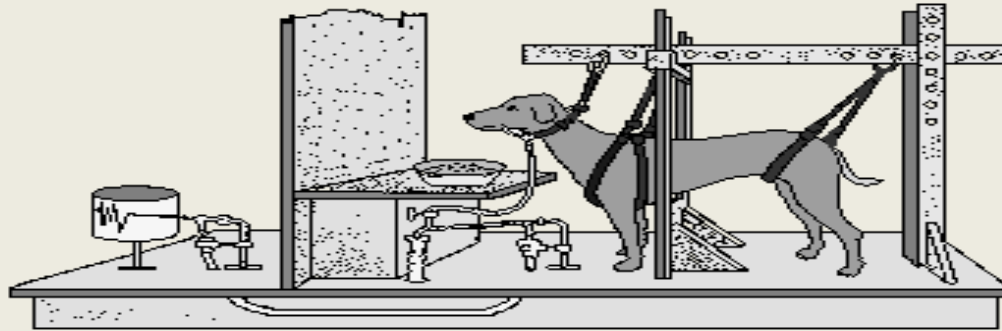
# Cognitive Approach

- Cognitive learning involves the **acquisition of knowledge or understanding**
- It **needs not be directly reflected in behavior**, i.e., it involves changes that occur within one's cognition.
- They include our **ideas, beliefs, understanding and knowledge.**

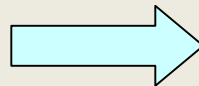
# Types of Learning

1. Classical Conditioning
2. Operant Conditioning
3. Observational Learning

# Classical Conditioning: The Elements of Associative Learning



salivation



salivation



# Classical Conditioning

- Organism comes to associate two stimuli
- Begins with a reflex
  
- **This form of learning was described by Pavlov**

# Classical Conditioning

## Unconditioned Stimulus (UCS)

- Stimulus that unconditionally--**automatically and naturally**--triggers a response
  - Food

## Unconditioned Response (UCR)

- **Unlearned, naturally occurring** response to the unconditioned stimulus
  - salivation when food is in the mouth

# Classical Conditioning

## Conditioned Stimulus (CS)

- Originally **irrelevant stimulus that, after association** with an unconditioned stimulus, comes to **trigger a conditioned response**

## Conditioned Response (CR)

- **Learned response** to a previously neutral conditioned stimulus

# Classical Conditioning characters

## Acquisition

- The initial stage in classical conditioning
- The phase associating a neutral stimulus with an unconditioned stimulus so that the neutral stimulus comes to elicit a conditioned response

# Classical Conditioning

- **Stimulus generalization** : stimuli that are similar to the original stimulus produce the same response

# Classical Conditioning

- stimulus discrimination : the ability to differentiate between stimuli.

# Classical Conditioning

- **Extinction:** If a conditioned stimulus is repeatedly presented without the unconditioned stimulus, the conditioned stimulus tends to no longer elicit the conditioned response.

# Classical Conditioning

- Spontaneous recovery is the tendency for the conditioned response to reappear after a period of rest with no further conditioning.

# OPERANT CONDITIONING

- Type of learning in which behavior is strengthened if followed by reinforcement or diminished if followed by punishment

# B.F. Skinner: The Operant Chamber

- B. F. Skinner, like Ivan Pavlov, pioneered more controlled methods of studying conditioning.
- The operant chamber, often called “the Skinner box,” allowed detailed tracking of rates of behavior change in response to different rates of reinforcement.

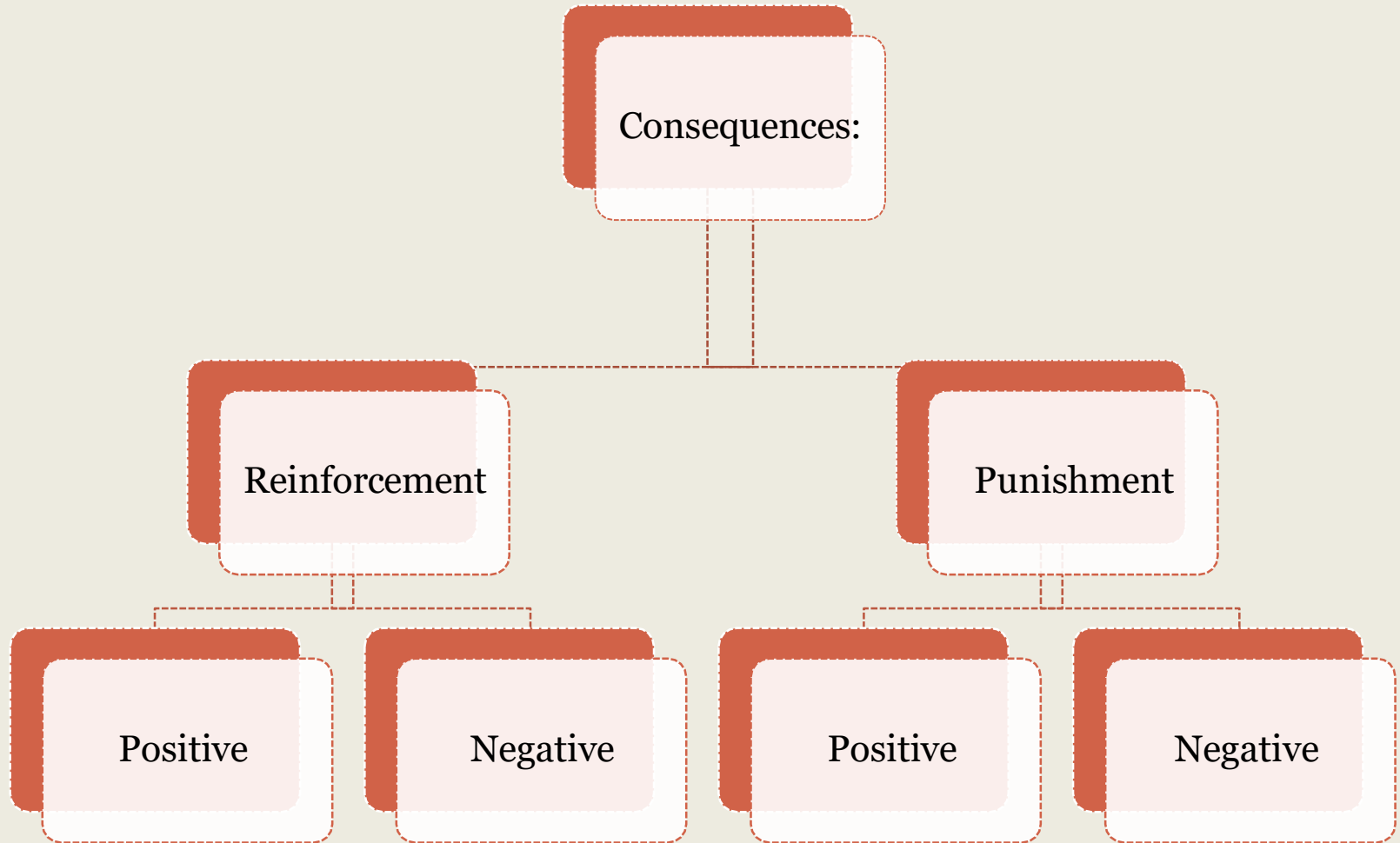


# Reinforcer

- Any event that **STRENGTHENS** the behavior it follows.
- **Two Types of Reinforcement**
- Positive and Negative

# Basic Consequences of Behavior...

## Reinforcement vs. Punishment



# Positive Reinforcement

- Strengthens a response by presenting a stimulus after a response.



# Negative Reinforcement

Strengthens a response by reducing or removing an aversive stimulus



# Punishment

- Positive punishment refers to presenting an aversive (unpleasant) stimulus after a response. The aversive stimulus decreases the chances that the response will recur.

# Punishment

- Negative punishment refers to removing a reinforcing stimulus (a child's allowance) after a response.
- This removal decreases the chances that the response will recur.

	Classical conditioning	Operant conditioning
<b>Goal:</b>	is to create a new response to a <b>neutral stimulus</b> .	is to <b>increase or decrease the rate of some</b> response.
<b>Responses:</b>	Involuntary, autonomic nervous system(salivation)	Voluntary (lever pressing)
<b>Animal:</b>	passive	active

# OBSERVATIONAL LEARNING

- **Observational learning**: Learning by observing the behavior of another person, or model.
- A key point of observational learning approaches is that the behavior of models which are rewarded for a given behavior is more likely to be imitated than behavior in which the model is punished for the behavior.

# Factors in Observational Learning

## Observational learning depends on these:

- **Attention** – the extent to which we focus on others' behavior
- **Retention** – our ability to retain a representation of others' behavior in memory
- **Production Processes** – our ability to act on these memory representations
- **Motivation** – the usefulness to us of the information acquired

**After observing the fearless model, the woman may learn not to fear spiders.**



# Methods of learning

1 Imitation

2 Trial and error

3 Insight learning

- Insight is a mental process marked by the **sudden and unexpected solution to a problem**

4- Conditioning: operant or classical

5- Modeling(OBSERVATIONAL LEARNING)

# Factors affecting learning:

## A. Factors in the individual:

### 1. Permanent factors (cannot be changed):

- a) **Intelligence:** Generally there is a direct relation between intelligence quotient (IQ) and rate of learning.
- b) **Previous learning:** Previous learning can improve our rate of learning
- a) **Acquired habits:** Habits of observation and accurate attention, improve learning process.
- d) **Physical factors:** e.g Sensory impaired, and motor handicapped persons are weak in learning certain skills related to their handicaps.

# Factors affecting learning:

## A. Factors in the individual:

### 2. Temporary state:

a) **General health:** e.g if I am feverish I will learn with difficulty.

b) **Emotional state:** e.g if I am depressed I will learn with difficulty.

c) **Motivation:** e.g If I am highly motivated to learn a subject I will learn it easily.

# Factors affecting learning:

## B. Factors in the environment:

### 1. The object to be learned:

If the object is well organized, well introduced it will be easily learned and vice versa.

2. **The surrounding circumstances:** If properly prepared learning will be easier.

### 3. Methods of practice

# Factors affecting learning:

4. **Trainer's role:** The good trainer should follow certain roles to improve learning:

i) Improving motivation

ii) Arrange for practice of skill.

THANK YOU