

PRINCIPLES OF LEARNING

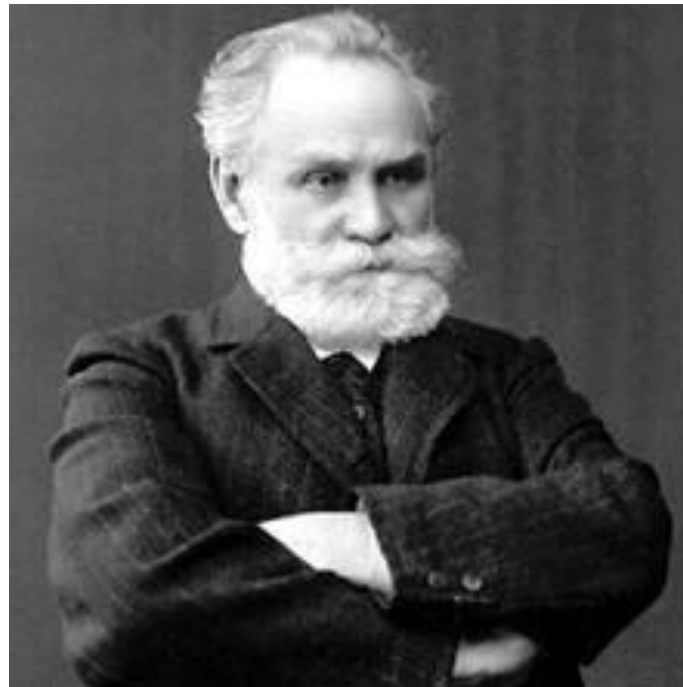
SECTION ONE

FOUR TYPES OF LEARNING

- ◉ Classical Conditioning- Physical responses developed based on association with past events.
- ◉ Operant Conditioning- Learning caused by consequences.
- ◉ Social Learning- Learning by observing others.
- ◉ Cognitive Approach- emphasizes thought processes in learning.

CLASSICAL CONDITIONING

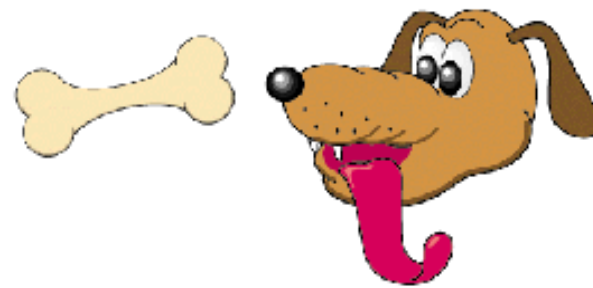
- ◉ Ivan Pavlov was the first to demonstrate the most primitive learning in the early 1900s.
- ◉ Pavlov's research on conditioning is the base of certain types of behavior therapy that are important now.



Before conditioning

**FOOD
(UCS)**

**SALIVATION
(UCR)**



BELL

NO RESPONSE



During conditioning

**BELL +
FOOD
(UCS)**

**SALIVATION
(UCR)**



After conditioning

**BELL
(CS)**

**SALIVATION
(CR)**



IMPORTANCE OF ASSOCIATION

- Pavlov wanted to discover how salivation and gastric juices aid in digestion
- He learned from an operation on a dog that separated the esophagus from the stomach that food cannot reach the stomach and food cannot be put directly into the stomach without having to travel through the mouth

IMPORTANCE OF ASSOCIATION CONT.

- Pavlov noted that food put directly into the stomach didn't generate enough gastric juices for digestion. Salivation is critical to proper digestion.
- Secondly noted that food wasn't placed in the dogs mouth yet the dog still salivated at the sight of food.
- Finally noted that the sight of the experimenter who fed the animal would cause the dog to salivate even if they didn't have any food.

OUTLINE OF CLASSICAL CONDITIONING

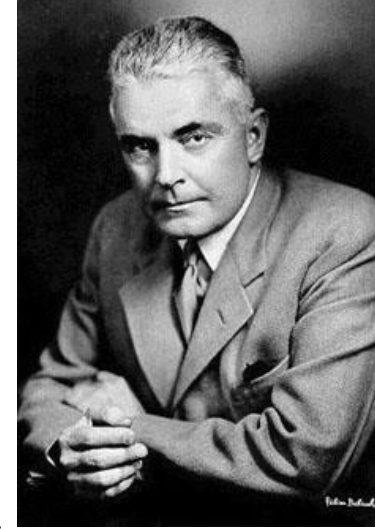
- ◉ Pavlov's method of conditioning, associations between natural, learned, and neutral stimulus is **classical conditioning**. Called classical because methods were first in era.
- ◉ Anything that elicits a response is a **stimulus**. A reaction to a stimulus is a **response**.
- ◉ **Ex.** Meat that makes a dog salivate, Meat is the stimulus, Salivating is the response.



OUTLINE OF CLASSICAL CONDITIONING CONT.

- ◉ **Unconditioned response and unconditioned stimulus** are when no special conditions are needed for the meat to cause salivation; natural and automatic.
- ◉ **Condition Stimulus** is when a previous neutral stimulus has been associated with a natural stimulus. **Conditioned response** is when a response is brought about by learning

JOHN B. WATSON



- Psychologist
- While taking care of laboratory rats, Watson taught the rats all kinds of tricks
- Watson decided that the rats' complex behavior was actually the result of a series of stimuli and responses
- From this Watson suggested that human “deep emotions” are also just the result of association and learning

LITTLE ALBERT

- ◉ Watson put a white laboratory rat into the room with Albert and Albert loved playing with the rat.
- ◉ Watson sneaked up behind Albert and banged a steel bar with a hammer.
- ◉ Albert would fall forward crying
- ◉ Each time Albert reached for the rat, Watson banged the steel bar.
- ◉ Little Albert became terrified of the rat

FEAR

- ◉ A sudden loud noise is an unconditioned stimulus for the unconditional response of fear.
- ◉ One of Watson's most famous experiments involved trying to get a human to spread fear from one object to another



SUMMARY OF FORMULA

Loud sound(UCS) → Fear (UCR)

Followed by the association phase:

Rat(NS) → Loud sound (UCS) → Fear (UC)

Which then becomes:

Rat (CS) → Fear (CR)



CONCLUSION

- ◎ **Stimulus generalization:** process in which a response spreads from one specific stimulus to other stimuli that resemble the original
 - Ex: Little Albert was also scared by a white rabbit and a fur coat because these items resembled the white rat

- ◎ **Watson's observations:**
 1. Conditioning of emotions to neutral objects is possible
 2. A conditioned emotion can generalize to other objects that have similar characteristics

VOCABULARY

- It is known from studies with adults that if you stop pairing something like a frightening noise with an object, the original association will disappear
- **Extinction:** the gradual loss of an association over time
 - Ex: Pavlov's dogs would stop salivating at the sight of the experimenter, unless the experimenter fed them occasionally
- **Spontaneous recovery:** the sudden reappearance of an extinguished response

REMOVAL OF FEARS

- One of Watson's students, **Mary Cover Jones**, made a very important discovery on how to *cure* fears.
- Rabbit Experiment
- Associating something with pleasant with a feared object is useful to conquer fears and even used today.

