

Behavioral Psychology



Behavioral Psychology

- Behaviorists: learning = conditioning
- Ability to connect stimuli (in environment) with responses (behaviors & actions)
- Learning is associative



Apple or Android/Windows?

- A. Apple
- B. Android/Windows
- C. Windows for
gaming, Apple for
everything else.
- D. I like both equally

Branding

- People associate brands with traits and goals.
 - Apple: Innovation, creativity
 - Windows & Android = sensible, predictable, customizable
-
- Apple logo prime higher creativity tests and creativity motivation



Behaviorism: brief history

- John Locke: Tabula Rasa
- Ivan Pavlov: Classical conditioning
- John Watson: Considered to be the founder of behaviorism
- B.F. Skinner: Neobehaviorism. Known for introducing operant conditioning

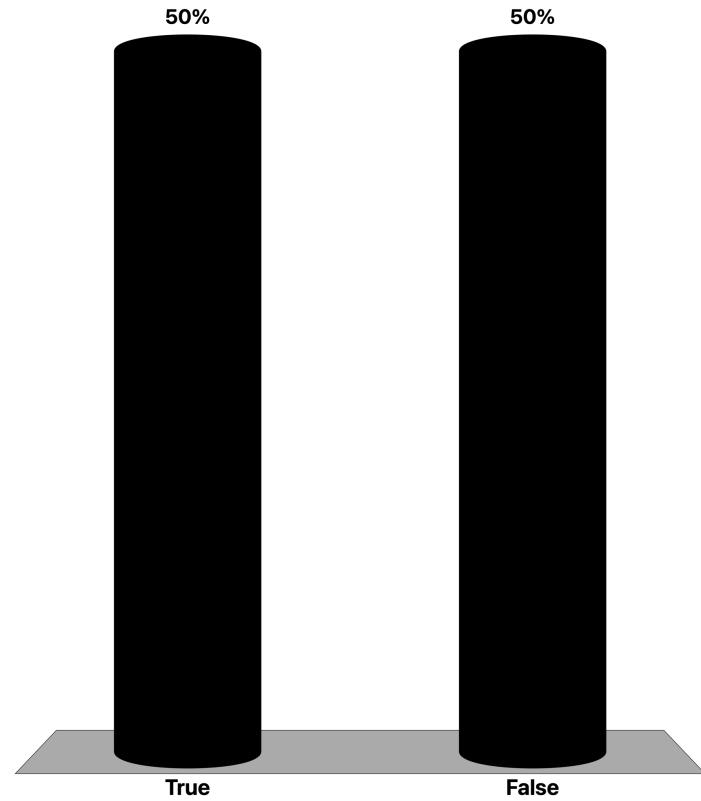
The **sound** of ice cream trucks reminds me of
ice cream

- A. True
- B. False



I associate specific songs with specific memories/places/events.

- A. True
- B. False

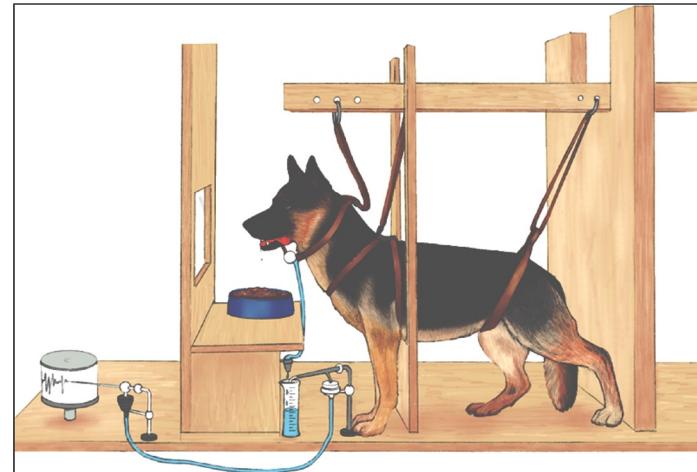




Classical Conditioning

Classical Conditioning

- Ivan Pavlov
- Key Terms:
 - Unconditioned Stimulus
 - Unconditioned Response
 - Neutral Stimulus
 - Conditioned Stimulus
 - Conditioned Response



Classical Conditioning

- **Conditioning** refers to a basic kind of learning based on association.
- In this type of learning, a neutral stimulus is paired with an **unconditioned stimulus (US)** that already elicits a certain **unconditioned response (UR)**.



- The neutral stimulus then becomes a **conditioned stimulus (CS)**.
- It has the capacity to elicit a **conditioned response (CR)** that is similar or related to the UR.
- Pavlov showed that all sorts of things became conditioned stimuli for salivation if paired with food.



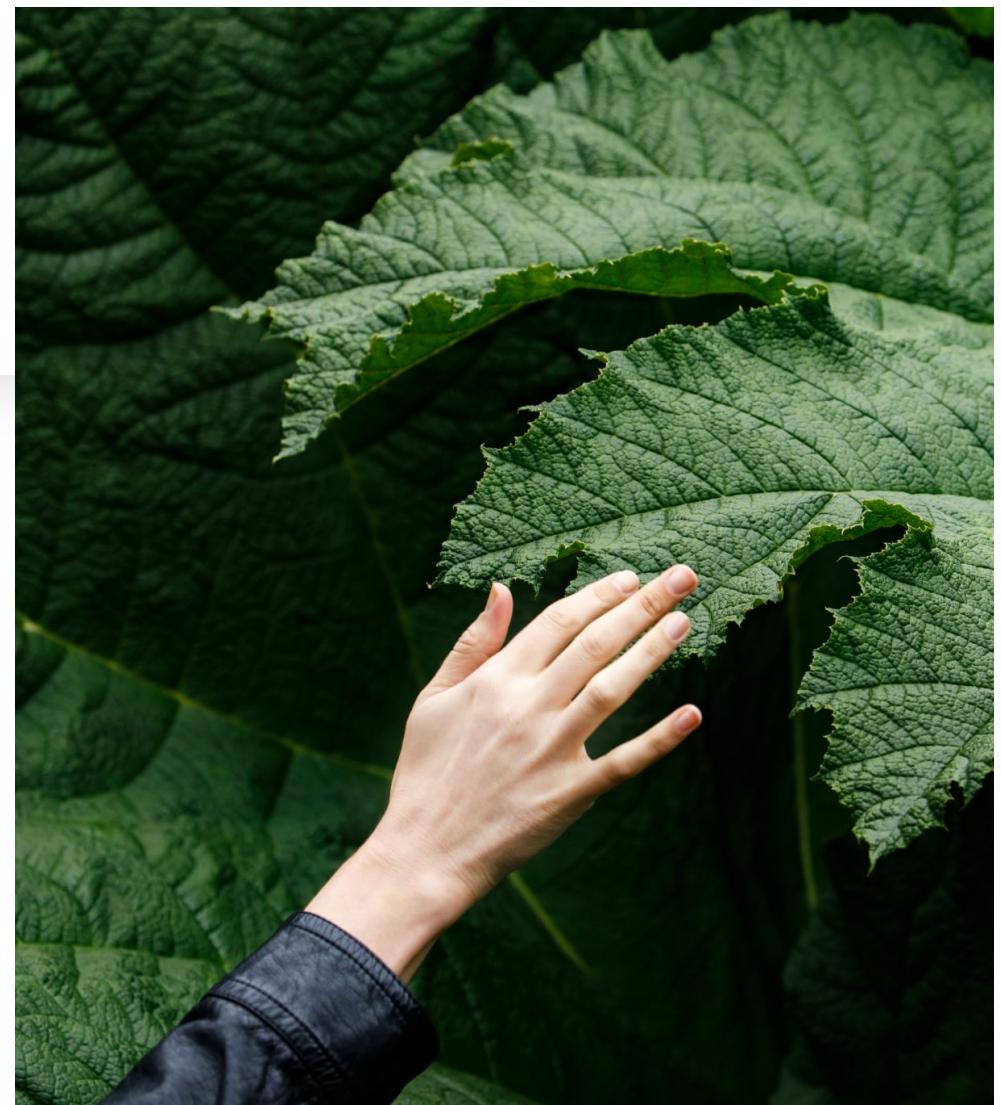
Classical Conditioning Terms	Definition
Unconditioned stimulus (US)	A stimulus that already elicits a certain response without additional learning.
Unconditioned response (UR)	A response elicited by an unconditioned stimulus.
Conditioned stimulus (CS)	An initially neutral stimulus that comes to elicit a conditioned response after being associated with an unconditioned stimulus.
Conditioned response (CR)	A response that is elicited by a conditioned stimulus; it occurs after the conditioned stimulus is associated with an unconditioned stimulus.

Another Example

- Developing a fear of dogs
- US
- UR
- NS
- CS
- CR

Extinction

- In **extinction**, the conditioned stimulus is repeatedly presented without the unconditioned stimulus.
- The conditioned response eventually disappears, although later it may reappear (spontaneous recovery).

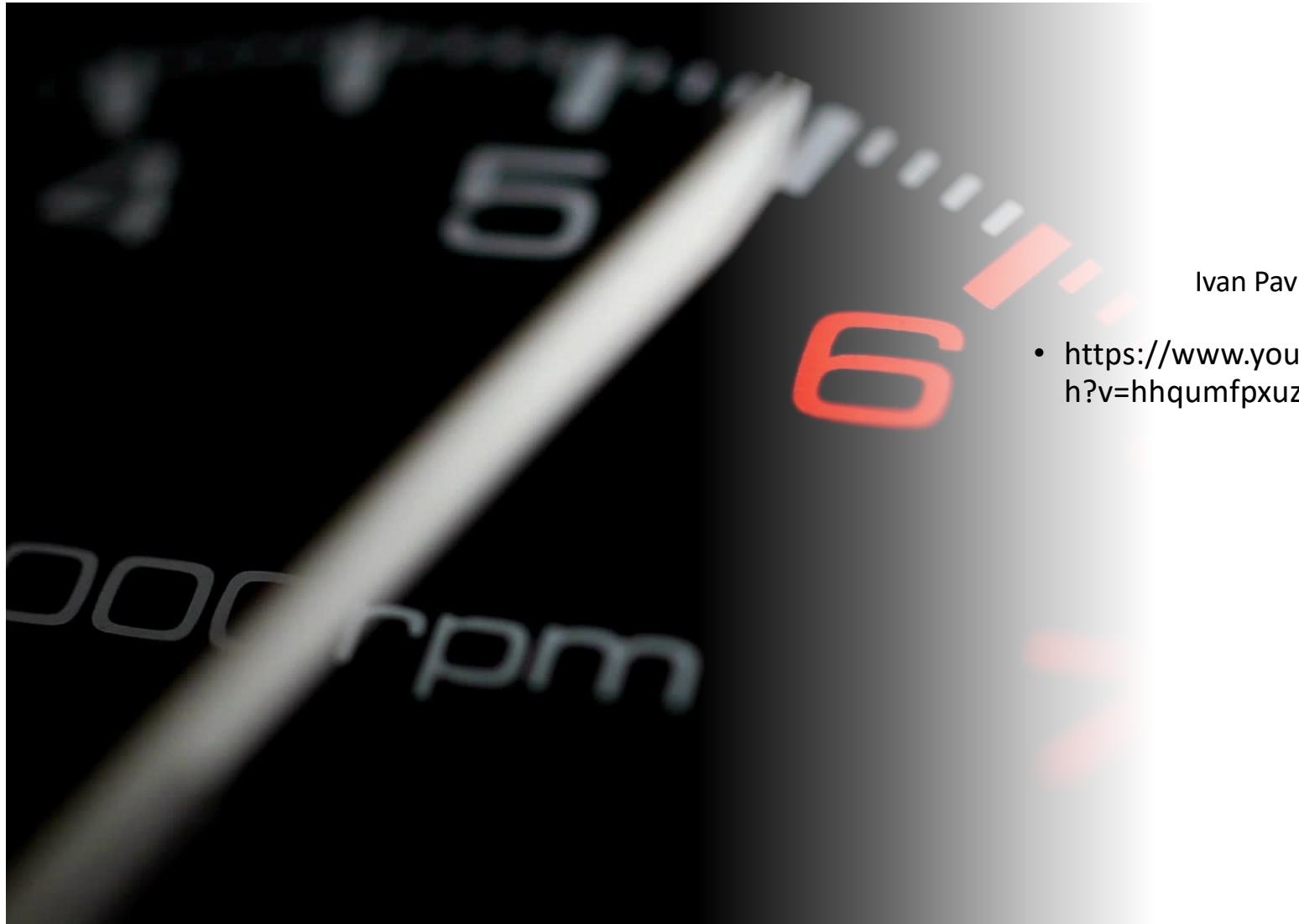




- In **higher-order conditioning**, a neutral stimulus becomes a conditioned stimulus by being paired with an already-established conditioned stimulus.



- In **stimulus generalization**, after a stimulus becomes a conditioned stimulus for some response, other similar stimuli may produce the same or similar reaction.
- In **stimulus discrimination**, different responses are made to stimuli that resemble the conditioned stimulus in some way.



Ivan Pavlov

- <https://www.youtube.com/watch?v=hhqumfpxuzl>

I have a strong aversion to at least one food item

- A. True
- B. False

I like broccoli casserole

- A. True
- B. False



Garcia Effect

- Classical conditioning can also explain learned reactions to many foods and odors.





Fear

- A person can learn to fear just about anything if it is paired with something that elicits:
 - pain
 - surprise
 - embarrassment

Little Albert Experiment

John Watson and Rosalie Rayner attempt to demonstrate classical conditioning on a child.

Child developed fear/phobia of a white rat, Santa Claus mask, etc.

Major ethical problems.

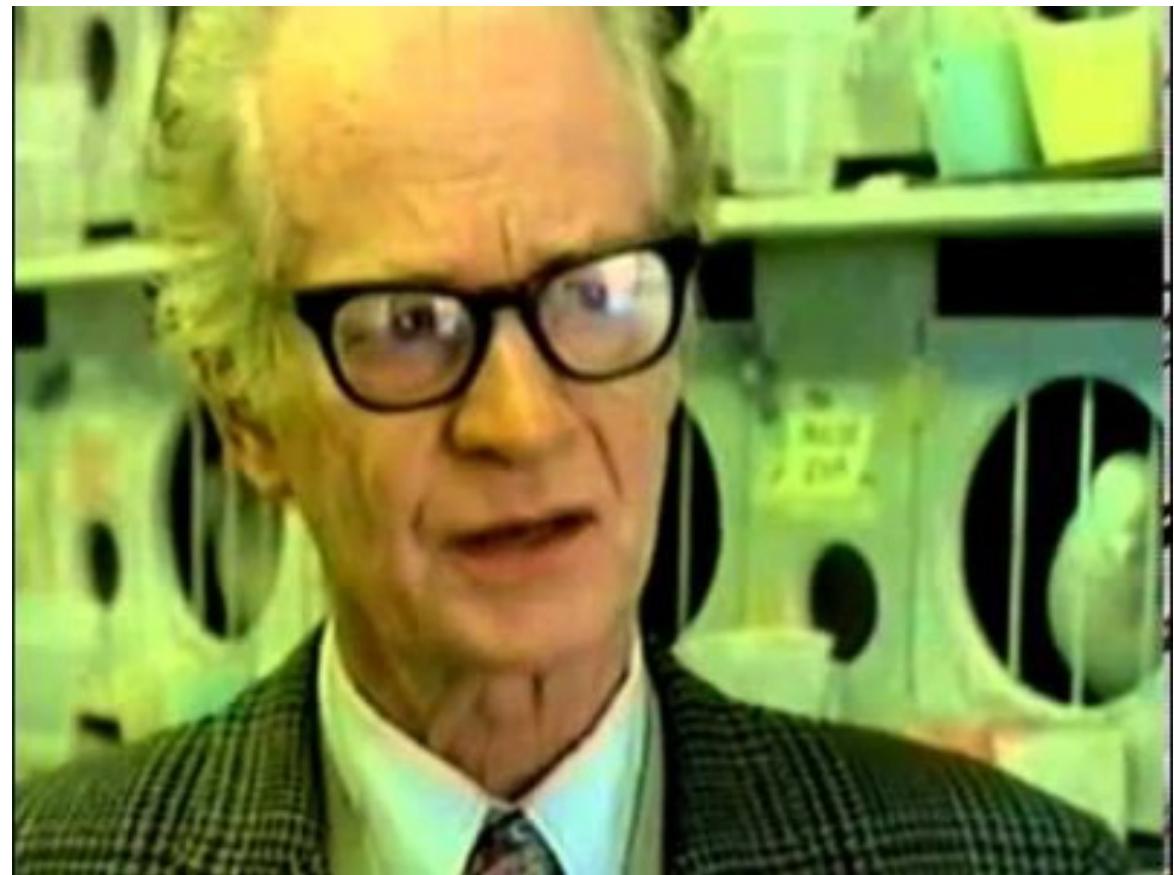


Operant Conditioning

- In **operant conditioning**, behavior becomes more or less likely to occur depending on its consequences.
- Edward Thorndike: "Law of Effects"
- Research in this area is closely associated with B. F. Skinner.

<https://www.youtube.com/watch?v=NeK8GNLylkc>

B.F. Skinner





Reinforcement and Punishment

- In the Skinnerian analysis, **reinforcement** strengthens or increases the probability of a response.
- **Punishment** weakens or decreases the probability of a response.



Positive and Negative

- In **positive reinforcement**, something pleasant follows a response.
 - if you get a good grade after studying
- In **negative reinforcement**, something unpleasant is removed.
 - when taking a pill eliminates your pain
- In **positive punishment**, something unpleasant follows the response.
 - if your friends tease you for studying
- In **negative punishment**, something pleasant is removed.
 - if studying makes you lose time with your friends

Strategy Used	Specifics	Example
Positive reinforcement	Adding stimulus to increase the likelihood of a response	Your teacher praises you for studying hard.
Negative reinforcement	Removing stimulus to increase the likelihood of a response	Your teacher stops scolding you when you attend class regularly.
Positive punishment	Adding stimulus to decrease the likelihood of a response	Your dating partner ridicules you for studying so much.
Negative punishment	Removing stimulus to decrease the likelihood of a response	Your parents take away your driver's license because you've been texting while driving.

I let my daughter watch Bluey if she eats all her vegetables is an example of:

- A. Positive Reinforcement
- B. Negative Reinforcement
- C. Positive Punishment
- D. Negative Punishment



The county gives you a ticket via its photo enforcement after you are speeding 12 miles per hour over the speeding limit so that you will not speed again

- A. Positive Reinforcement
- B. Negative Reinforcement
- C. Positive Punishment
- D. Negative Punishment



Schedules

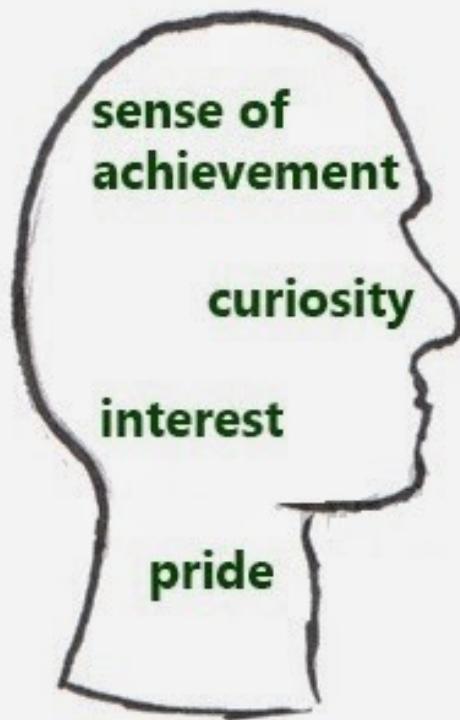
Schedule	Definition	Example
Fixed-ratio	Behavior is reinforced after a specific number of responses	Factory workers who are paid according to the number of products they produce
Variable-ratio	Behavior is reinforced after an average, but unpredictable, number of responses	Payoffs from slot machines and other games of chance
Fixed-interval	Behavior is reinforced for the first response after a specific amount of time has passed	People who earn a monthly salary
Variable-interval	Behavior is reinforced for the first response after an average, but unpredictable, amount of time has passed	Person who waits for an elevator.

Motivation

Motivation

- Reinforcements & punishments are *extrinsic*
- *Intrinsic motivation* → value in the activity itself, not external conditions

Intrinsic Motivation



Extrinsic Motivation



Over-justification effect

- Kids do creative (drawing) activity
 - Incentive – ribbons & gold stars
 - Same effect as money – kids played *less* after incentive



Over-justification effect

“Children showed *decreased interest* in the drawing activity after having undertaken it in order to obtain a goal which was extrinsic to the pleasures and satisfaction of drawing in its own right.”

- (Lepper et al., 1973)



Behaviorism

- Strengths of this theory?
 - High replicability
 - High internal validity



Behaviorism

- Limitations of this theory?
 - Limited generalizability (EV) & applications
 - Assumption that inner thoughts can't be studied
 - *Tabula Rasa/Blank Slate* idea

