



Conditioned Learning

Classical and Operant Conditioning

Review:



What are the 4 processes necessary for observational learning???

Review: What is Conditioned Learning?



- Acquiring or changing patterns of behaviour as the result of an environmental stimulus.
- Examples?
 - Smile back when someone smiles at us
 - Stop at a red light
 - Fears developed after a traumatizing incident

Classical Conditioning



- Founded by **Ivan Pavlov**
- Learning to associate a neutral stimulus with an unconditioned stimulus that elicits the desired response.

Terminology



- **Unconditioned Response (UR)**
 - An automatic, unlearned or natural response to a stimulus
- **Conditioned Response (CR)**
 - A learned reaction to a previously neutral stimulus
- **Unconditioned Stimulus (US)**
 - An event that elicits a certain, predictable response typically without training
- **Conditioned Stimulus (CS)**
 - A previously **neutral stimulus** that elicits a conditioned response after a period of training in which it has been paired with an unconditioned stimulus.

An Example



- Food Aversions
- Try to identify:
 - Unconditioned response
 - Conditioned response
 - Unconditioned stimulus
 - Conditioned stimulus

Classical Conditioning Worksheet



Pavlov's Dogs



- Studying salivation and digestion in dogs
- Noticed that the dogs began to salivate before the food was presented
 - At the sight of food, the food dish, the presence of the researchers, or the sound of their approaching footsteps.

Pavlov's Discovery of Classical Conditioning



Eliminating a Response



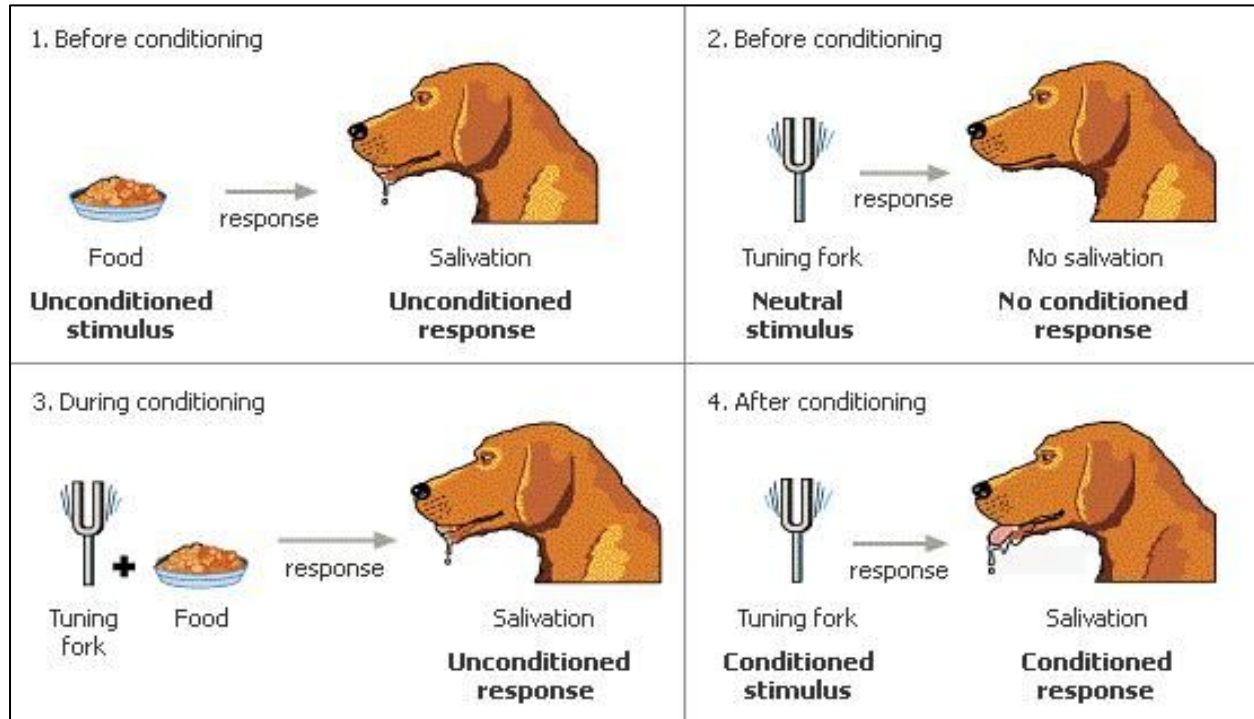
- **Extinction:** CR gradually dies out over time.
- **Spontaneous Recovery:** previously extinct CR may occur again when the CS is presented with the US.

Storyboard Assignment



1. **Create a storyboard that illustrates how Pavlov`s dogs were conditioned.**
2. **Create another storyboard using a different example of classical conditioning. (5 marks)**

Example



Operant Conditioning



- Founded by B.F. Skinner
- Learning in which a certain action is reinforced or punished, resulting in corresponding increase or decrease in that action's occurrence.

Terminology



Reinforcement: a stimulus or event that follows a response and **increases** the likelihood that response will be repeated.

- **Positive Reinforcement:** something good is added
 - Ex) teaching a child to say “please”
- **Negative Reinforcement:** something bad is removed
 - Ex) shutting off an alarm clock

Terminology



Punishment: a stimulus or event that follows a response and **decreases** the likelihood that the response will be repeated.

- **Positive Punishment:** something bad is added.
 - Ex) shock collars on dogs
- **Negative Punishment:** something good is removed.
 - Ex) putting children in “time out”

Disadvantages of Punishment



- Can lead to unwanted side effects such as anger, aggression and fear.
- Subjects learn to avoid the person delivering the consequences
- Does not teach the desired behaviours
- Not very effective long-term

Example



Operant Conditioning Worksheet



Review



- **Classical Conditioning**

- Learning to associate a neutral stimulus with an unconditioned stimulus that elicits the desired response.

- **Operant Conditioning**

- Learning in which a certain action is reinforced or punished, resulting in corresponding increase or decrease in that action's occurrence.

Reinforcement Schedules



- **Continuous Reinforcement** – receives the reinforcement every time the behaviour occurs.
- **Intermittent Reinforcement** – receives reinforcement occasionally. May be a fixed schedule or random (*more resistant to extinction*).

Skinner's Rat Study



- An example of operant conditioning
 - Read the information on page 251-254 and answer the following questions on the back or on a spare sheet of paper.
 1. Which type of reinforcement/punishment did Skinner use with his rats?
 2. How is the response affected by different schedules of reinforcement. Give 2 specific examples.
 3. Explain why reinforcement is more effective than punishment. Give 3 reasons based on your textbook (page 257) and our notes.

Quiz



1. Jody almost drowns at a public pool when she is 7, now whenever she goes boating at the lake she gets nervous. List the Unconditioned Stimulus, Unconditioned Response, Conditioned Stimulus, and Conditioned Response.
2. Which type of conditioning involves the use of rewards and punishments?
3. Who is the founder of this type of conditioning?
4. A reckless driver is caught speeding. The police officer who catches him gives him a \$200 ticket. What type of reinforcement or punishment is this?
5. The same reckless driver is caught speeding the very next day. The police officer this time decides to suspend his license. What type of reinforcement or punishment is this?

Answers



1. US - drowning
CS - water (boating)
UR - nervousness/distress
CR - nervousness/distress
2. Operant Conditioning
3. B.F. Skinner
4. Positive Punishment
5. Negative Punishment



Compare & Contrast

Use your notes and textbook to create a table comparing classical and operant conditioning when it comes to:

- type of stimulus
- type of response
- role of the learner
- how learning is acquired

	Classical	Operant
Stimulus		
Response		
Role of Learner		
Acquisition		



Compare & Contrast

Use your notes and textbook to create a table comparing classical and operant conditioning when it comes to:

- type of stimulus
- type of response
- role of the learner
- how learning is acquired

	Classical	Operant
Stimulus	Always a specific stimulus (US) that elicits the desired response	No identifiable stimulus. Learner must first respond, then is reinforced.
Response	Involuntary	Voluntary
Role of Learner	Passive - unconscious process that is not dependent on learner	Active - learner changes behaviour depending on the consequence
Acquisition	Associating two or more events (CS with US)	Associating a behaviour with a consequence