

1 MODULE 21: OPERANT CONDITIONING

Learning from the consequences of our behavior

2 Operant Conditioning

A type of learning in which the frequency of a behavior is based on the consequences of that behavior.

3 Operant conditioning always has 2 parts

* A behavior: the learner actually has to do something.

* A consequence: something happens as a result of that behavior.

4 B.F. Skinner and the Skinner Box

* Sniffy the rat is placed in a cage with a bar at one end.

* If the rat presses the bar, a piece of rat food will drop into a dish for Sniffy to eat.

* How does Sniffy learn to press the bar in order to get food?

5 Sniffy's operant conditioning required 2 things

1. A behavior: pressing the bar

2. A consequence: getting the food

6 Another name for a consequence is reinforcer

7 Sniffy's reinforcer was a positive reinforcer.

* A positive reinforcer increases the chances that a behavior will reoccur.

* Another name: reward

8 Shaping: the method of successive approximations

* Using a positive reinforcer to teach a learner a behavior in successive stages.

* Examples: Sniffy

Shaping your professor

Wasserman

Porter and Neuringer

9 Using a positive reinforcer

* The reinforcer must be something the learner actually likes.

- * The reinforcer should be given as soon as possible after the desired behavior.

10 Delayed gratification

- * What happens when a positive reinforcer can not be given immediately?
- * Does learning occur?

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- * Mischel research
- * Learning to delay gratification is an important social skill.
- * Problem: often immediate reinforcers control our behaviors much more than delayed reinforcers.

12 Reinforcement schedules

- * If you are teaching something to your children, how often should you give them a positive reinforcer when they perform the correct behavior???
- * Every time?? Occasionally?? When you remember??

13 For initial learning to occur: you must use a Continuous Reinforcement Schedule

- * Reinforce the child every single time she/he performs the desired behavior

14 Problems with continuous reinforcement

Extinction occurs very rapidly

Real life doesn't often provide continuous reinforcers for our behaviors.

15 Other Types of Reinforcement Schedules

16 Ratio reinforcement schedules

- * Based on the number of correct behaviors performed by the learner

17 2 Types of Ratio Reinforcement Schedules

- * Fixed ratio: The learner receive a positive reinforcer after a fixed number of responses.
- * Can lead to post reinforcement pause.

- * Extinguishes easily

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- * Variable ratio reinforcement schedule the learner does not know which specific correct response will be reinforced.
- * Slows down initial learning but good for behavior maintenance once learning has occurred.

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Interval schedules of reinforcement:.

- * Based on the passage of time, not the number of correct behaviors by the learner

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2 Types of Interval Schedules

1. Fixed interval schedule: The learner is reinforced after the passage of a specific amount of time.

2. Variable interval schedule: The learner does not know how much time will pass before he is reinforced. Good for maintenance learning but not initial learning.

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Other Types of Reinforcers

1. Aversive reinforcer

--aka "punishment"

--decreases the chance that a behavior will occur again.

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Problems with using Aversive Reinforcers

- * They increase anger in the learner.
- * They are hard to apply properly.
- * They only teach the learner what he/she should not do, not what he/she should do.
- * They are a poor role model.

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The best way to teach someone something is to ignore the inappropriate behaviors when possible and positively reinforce the appropriate behaviors on a continuous reinforcement schedule.

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An Aversive reinforcer (Punishment) is the worst way to teach anyone anything.

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Rules for using aversive reinforcers

- * Use the least amount of punishment necessary.
- * Use enough punishment.
- * Apply the punishment immediately after the undesirable behavior.
- * Do not use physical punishment.

- * Do not mix punishments and rewards.
- * When the behavior improves, don't threaten.

26 Other Types of Reinforcers

2. Negative Reinforcer: Allows the learner to avoid or escape something unpleasant.

27 Must a reinforcer always be present for learning to occur?

- * Latent Learning: Learning without reinforcers

28 Problems with using reinforcers for learning.

- * Overjustification: When promised a reward for something, people are more motivated by the reward than by the intrinsic interest in the task itself.

- * Research: Deci
Grolnick and Ryan