



## Operant Conditioning Concepts Related to Reinforcement

Psychology 390

Psychology of Learning

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1

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### Discrimination

- Similar to Classical Conditioning.
- Responses which are reinforced in one situation and not in another will reoccur only in the situation where they were reinforced.

2

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### Examples

- In a bar, loud talking may be reinforced, but loud talking in the classroom is not.
- Kid is reinforced for yelling in the store, but when it is at home, other things may occur.

3

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### Generalization

- New stimuli similar to the original stimulus are reinforced.
- Occurs when the organism is reinforced for other responses similar to the original stimulus.

4

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### Primary Reinforcers

Are reinforcers that are innately reinforcing.

- Food
- Water
- Sex

5

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### Secondary Reinforcers

- Are reinforcers that acquire their ability to reinforce through experience (e.g., money).
- Become reinforcing when they can be exchanged for primary reinforcers. (e.g., money for food)

6

### Variables that Influence Secondary Reinforcers

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1. Amount of primary reinforcer that is given.
  - More primary reinforcement that is given, the stronger the secondary reinforcer becomes.
2. Number of pairings between the primary and secondary reinforcer.
  - More pairings, the stronger the secondary reinforcer becomes.

7

### Variables that Influence Secondary Reinforcers

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3. Time Between the Presentation of the Primary and Secondary Reinforcer
  - The more time between the primary and secondary reinforcers, the poorer the secondary reinforcer.

8

### Variables that Influence the Rate of Conditioning

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### Quantity of Reinforcers Given

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- The more reinforcement you give, the faster the organism will respond.

Problem. Too much food, the organism gets satiated.

10

### Quality of the Reinforcer

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The better the quality of the reinforcer, the higher the rate of responding and the faster the conditioning.

Alpo is better than something out of a bag.

CCC's are better than Oatmeal.

11

### Time Delay Between the Response and Reinforcer

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Reinforcers are more effective the sooner they are presented after the response.

- The longer the delay, the lower the response rate.

#### Rate of Reinforcement

Number of Reinforcers / Time period

- The smaller the period of time between reinforcers, the more responding that will occur.

12

### Deprivation

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- The longer the time period since the previous reinforcer was last consumed, the higher the response rate.
- The animal responds faster the more deprived it is.
- Can occur with the rate of reinforcers or be independent of it.

13

### Percent of Reinforcers that are Contingent on a Behavior.

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- You do not need to have a person respond to give reinforcers.
  - 0% contingent – all are free
    - The organism gets the reinforcer whether or not a response is made.
    - Welfare State
  - 100% contingent
    - All reinforcers must be obtained by responding.
    - Must work for a living.

14

### Context in Which the Reinforcement Occurs

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- The more reinforcers that are available, the less effective any particular one will be.
- Food, money, love, etc. are all available.

15

### Discriminative Stimuli and Related Notions

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Are stimuli that signal that a behavior will be reinforced  
Is called an  $S^D$

In contrast

There are stimuli that signal non-reinforcement

Is called an  $S^{\Delta}$  =  $S^{\triangle}$

16

### Differential Reinforcement

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- Refers to reinforcing a response in the presence of one stimulus and not reinforcing the same response in the presence of another stimulus.

17

### Generalization

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- Two Types
  - Stimulus Generalization
  - Response Generalization

18

### Stimulus Generalization

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- Transfer of a response to a situation other than those where training takes place.
- Several stimuli can cause the same response.

19

### Response Generalization

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The reinforcement of one response increases the probability of other responses which are closely linked to the original response.

Studying for Learning also increases studying for Cognition.

20

### Chaining

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- Here the organism must emit a chain of behaviors before they get reinforced.
- Often uses reverse shaping to get started.

21