Extinction and Punishment
Ways to Decrease a Response

Psychology 390
Psychology of Learning
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Extinction

• The failure of a response to produce a reinforcer causes the response to decrease until the organism no longer emits the response.

• When reinforcers are no longer provided, the behavior stops.

Extinction Burst

When you begin to stop delivering a reinforcer, the behavior first increases before it decreases to zero.

Factors that Influence Extinction

• Size of the Reinforcer
  • Greater the size, the longer it takes.

• Delay of the Reinforcer.
  • If you occasionally the reinforcer is delayed, the response will take longer to extinguish.

• Partial Reinforcement Schedules
  • Intermittent reinforcement schedules take longer to extinguish.
Punishment

• Is a very misused procedure
• Often is used in ways where behavioral changes do not ultimately occur (Criminal Justice System).
• Often is used when using a reinforcement procedure would get better results.

Two Classic Papers

• Punishment by Azrin and Holz
• Punishment by Campbell and Church

Azrin and Holz

• Definition – A consequence of a behavior that reduces the future probability of that behavior.
• Is a reduction of the future probability of a specific response as a result of the immediate delivery of a stimulus for that response.

Important Aspects

• The definition is not in terms of subjective feelings or states of being.
  • Something is not a punishing stimulus just because it makes you unhappy.
• A specific event must be produced by a specific response in order for it to be considered a punishing stimulus
  • Simple decreases in responding are not sufficient reasons to classify a procedure as punishment.
Requirements for an Ideal Punishing Stimulus.

- Must have precise physical specification.
- Must be able to be measured accurately.
- Must have constancy in terms of actual contact it makes with a subject.
  - A stimulus measured at its source may be different from its contact on the organism.
- The organism must not be able to perform behaviors to reduce or escape from the aversive stimulus.
- Cannot perform unauthorized escape behavior.
- There must be few skeletal reactions to the stimulus.
  - Cannot paralyze the organism.
- The punishing stimulus must have the capability to be varied over a wide range of values.

Types of Punishing Stimuli

- Many types
  - Air blast
  - Skinner
  - Noise
  - Electric shock
  - Smells
  - Water Mist

Two Different Types of Punishment

Positive Punishment
When a response is followed by a stimulus and the behavior decreases, the procedure is called positive punishment and the stimulus is called a punisher.

  e.g., Response is followed by a Zap

Difference Between Positive Punishment and Negative Reinforcement.

- In Positive Punishment, the response is followed by something aversive and the behavior decreases.
- In Negative Reinforcement, the response is followed by the removal of an aversive stimulus and the behavior increases.
Negative Punishment

- Two types

Response Cost (RC)

- In response cost the response is followed by the removal of a goodie and the behavior decreases.
- Is not like positive punishment where you give something aversive and the behavior decreases.
  - Kid yells in the house and parents take away its TV time.

Time Out (From Positive Reinforcement)

- In Time Out, the response is followed by the removal of the reinforcing stimulus and the behavior decreases in frequency.
- Generally, the organism is placed in a neutral situation where no reinforcers or stimuli are available.
- e.g., Kid yells in the house and parents place the kid in the corner.

Problem

- The neutral situation may have reinforcers. Must make sure there are no reinforcers are available.
- e.g., Kid yells
  - Parent says "Go to your room."
  - What's in the room - TOYS
- Alternative, sit on your bed quietly
  - Not many stimuli or things to do on the bed.

Next Section

Variables that are related to punishment