Operant Conditioning

Module 19

Operant Conditioning

- Another form of <u>associative learning</u>, as classical conditioning also is
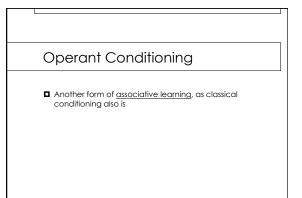
What's the difference?

- Classical: creates an association between a conditioned stimulus and a conditioned response, where there would not normally be one

- Operant: we associate our own actions w/consequences – good or bad.
  - Consequences: aka "Reinforcers"

Famous Theorists

- Edward L. Thornidike (1874-1949)
  - "The Law of Effect"
    - Rewarded behavior is likely to recur, and punished behavior is likely to not recur
      - "Cat in a Box" experiment

Famous Theorists
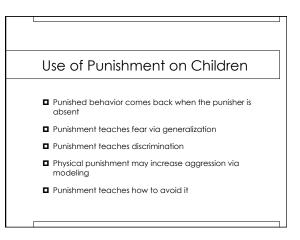
- B.F. Skinner (1904-1990)
  - Behaviorist
  - Used Thorndike's theory & expanded it
  - "The Operant Chamber" (aka the Skinner Box)
  - Shaping behavior by providing reinforcement when the desired behavior is achieved

Types of Reinforcers

- Reinforcement: Any consequence that strengthens or increases a behavior

- Positive: presenting a desirable stimulus

- Negative: taking away a bad stimulus
  - NOT PUNISHMENTS! THAT IS DIFFERENT…

Punishers

- A consequence that decreases the frequency of a behavior

Use of Punishment on Children

- Punished behavior comes back when the punisher is absent
- Punishment teaches fear via generalization
- Punishment teaches discrimination
- Physical punishment may increase aggression via modeling
- Punishment teaches how to avoid it

The difference

- Reinforcement tells you what to do
- Punishment tells you what not to do

Reinforcement Schedule

- Continuous
  - Learning is quick but goes extinct quickly
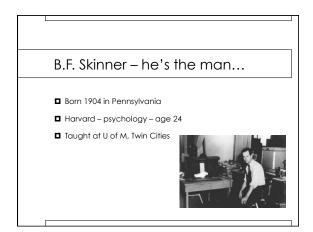- Partial/Intermittent
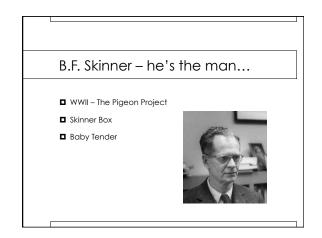 - Learning is slower but lasts longer

Reinforcement Schedule

- Fixed-Ratio –reinforce behavior after a set number of responses
  - Buy 10 get #11 free!
- Variable-Ratio –reinforce behavior after an apparently unpredictable number of responses
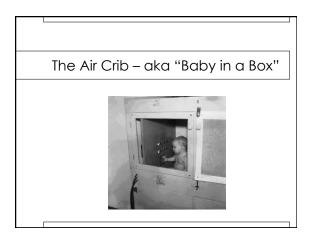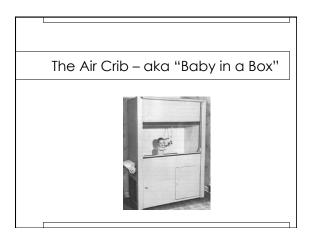 - Slot machine

Reinforcement Schedule

- Fixed Interval – reinforcement after a fixed time period
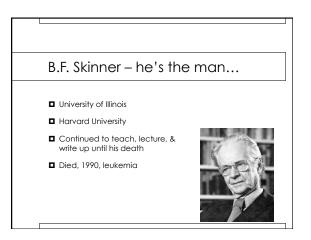- Variable Interval – reinforcement after varying times

B.F. Skinner – he's the man...

- Born 1904 in Pennsylvania
- Harvard – psychology – age 24
- Taught at U of M, Twin Cities

B.F. Skinner – he's the man...

- WWII – The Pigeon Project
- Skinner Box
- Baby Tender

The Air Crib – aka "Baby in a Box"

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B.F. Skinner – he's the man...

- University of Illinois
- Harvard University
- Continued to teach, lecture, & write up until his death
- Died, 1990, leukemia

Quiz Yourself

- ❑ What is the main difference between Classical and Operant Conditioning?