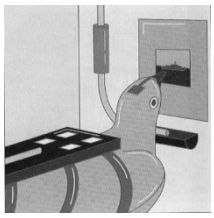
Learning

Applications and New Directions

Applications: Society

- Kamikaze pigeons
- Walden 2
  - Utopia
  - Scientifically managed
- Existing societies are badly managed
  - Belief in myths
- Should apply laws of learning to ourselves



Applications: School

- Teaching machines and textbooks
  - Constructed with the laws of learning in mind
- Not realized in Skinner's lifetime
- Advances in computer technology make it currently possible
  - Many applications employ such a design
- Not incorporated into the school curriculum

Applications: Work

- Business managers have capitalized on psychological research
  - Profit sharing
- Effective reinforcement
  - Desired performance is well defined and achievable
  - Immediate

Applications: Home

- Spending behavior is controlled by its consequences
  - Energy use
- Tax policies
- Parenting

Applications: Dangers

- Rewards sometimes carry hidden costs
- Overjustification effect
  - Justifiable activity becomes overjustified by the promise of added reward
- Tang & Hall (1995)
  - Children playing with toys
- Grolnick & Ryan (1987)
  - Teaching and learning
- Rewards, rightly administered, have positive effects

Cognition in Learning

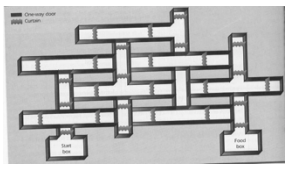
- Motives, cognitions, and expectations appear to influence learning in humans
  - Cognitive phenomena
  - Not proper domain of psychology
- Skinner
  - Resisted proposal that cognitive processes have a place in psychology research
- Many types of learning can not be explained without resorting to explanations based on cognitive processes

Biological Predispositions

- Natural predispositions constrain capacity for operant conditioning
- Facilitated conditioning
  - Reinforce natural behaviors

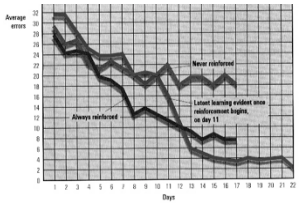
Cognitive Maps: Tolman

- 3 Conditions
  - Reinforced on all 10 days
  - Not reinforced on any day
  - Not reinforced on any day
- 11th Day
  - Condition 1: reinforced
  - Condition 2: reinforced
  - Condition 3: not reinforced



Latent Learning

- Latent learning
  - Only becomes apparent when there is some incentive to demonstrate it
- Cognitive Map
- Learning can occur without reinforcement

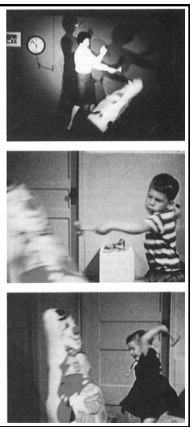


Observational Learning

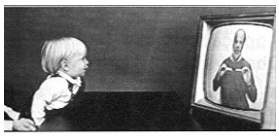
- Vicarious conditioning
  - Observe the consequences of another persons behavior
    - Conditioning by observing another person's conditioning
- Classical and operant conditioning components
- Cognitive components

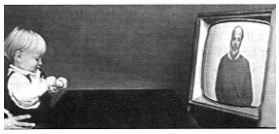
Direct Observation

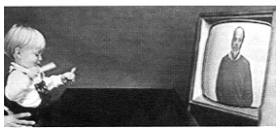
- Bandura
- Preschool children
  - Adult abuses Bobo doll
- Experimenter frustrates child
- Puts child in room with Bobo doll
  - Child directly mimics adult's behavior towards doll



Indirect Observation







Observation: Key processes

- Four key processes to observational learning
  - Attention
  - Retention
  - Reproduction
  - Motivation
- Cognitive and conditioning components