

Learning

Classical Conditioning

- ✍ Pavlov
- ✍ study of digestion
- ✍ dogs salivate before getting food
- ✍ learning as signal detection: emphasis on what happens before a given behavior

Classical conditioning terms

- ✍ Stimulus: provokes a response
- ✍ Response: behavior elicited by a stimulus
- ✍ Unconditioned: unlearned, often times a reflex behavior
- ✍ Conditioned: learned

Classical Conditioning Procedure

- ✍ Neutral stimulus -> no response (ring a bell, no response)
- ✍ unconditioned stimulus -> unconditioned response (provide food, salivation response)
- ✍ want to teach the dog that the sound of a bell signals that food is on its way

Procedure, cont.

- ✍ Ring the bell, present the food, salivation
- ✍ (CS) (UCS) (UCR)
- ✍ do this several times and eventually get
- ✍ Ring the bell, salivation (even before food is presented)
- ✍ (CS -> CR) note that salivation is CR now, it is a learned response to the bell!

Important concepts

- ✍ Timing
- ✍ extinction (non-reinforcement)
- ✍ spontaneous recovery
- ✍ generalization
- ✍ discrimination

Operant conditioning

- ✎ B.F. Skinner
- ✎ behaviors are influenced by their consequences
- ✎ actions that are followed by reinforcement tend to be repeated (Thorndike)

reinforcement

- ✎ An event which strengthens a response - it increases the likelihood that the behavior will occur again

Kinds of reinforcement

- ✎ Positive reinforcement - encourages a response by the presentation or increase in intensity of something reinforcing (pleasant)

Kinds of reinforcement

- ✎ Negative reinforcement - NOT the same as punishment; it encourages a response in that the response avoids or removes something unpleasant

Kinds of reinforcement

- ✎ Primary reinforcement - an effective reinforcer without having been associated with other reinforcers (like a US), for example, food to a hungry person or rat

Kinds of reinforcement

- ✎ Secondary reinforcement - is only effective after having been associated with a primary reinforcer (e.g. \$)

Skinner's research

- ✍ Operant conditioning chamber
- ✍ naïve rat
- ✍ baseline measure of bar presses
- ✍ shaping process

shaping

- ✍ Reinforcement for successive approximations to the target behavior
- ✍ when rat learns that pressing the bar results in food, it presses repeatedly 'til full

Schedules of reinforcement

- ✍ Continuous reinforcement - get reinforced every time one does the target behavior
- ✍ partial reinforcement - four types (also called intermittent reinforcement)

partial reinforcement schedules

- ✍ Fixed ratio - reinforced after a set number of times a behavior has taken place (get a high rate of response with a pause after reinforcement)

Partial reinforcement (cont)

- ✍ Variable ratio - rate of reinforcers to response is varied, not predictable, based on an average
- ✍ get a steady response, e.g. slot machine gambling

Partial reinforcement (cont)

- ✍ Fixed interval - reinforced after a set amount of time has passed since the last reinforcement (still have to do the behavior) burst of behavior right around that time

Partial reinforcement

- ✎ Variable interval - reinforced after a varied amount of time
- ✎ get a slow, steady rate of response (fishing)

punishment

- ✎ An event that follows a response and decreases the likelihood that the behavior will reoccur. It can be unpleasant itself or take away something pleasant

Punishment & reinforcement

- ✎ Positive reinforcement - add something pleasant to encourage a behavior
- ✎ negative reinforcement - avoid or remove something unpleasant by the behavior

Punishment & reinforcement

- ✎ Positive punishment - add something unpleasant to stop a behavior
- ✎ negative punishment - remove something pleasant to stop a behavior

Application to parenting

- ✎ 1. Positive reinforcement - catch them being good and reinforce that!
- ✎ 2. Non-reinforcement - leads to extinction of behavior - ignore behavior you don't like

Parenting (cont.)

- ✎ Natural consequences - let the child experience the consequences of the behavior alone - spilling means cleaning up, not getting paper done on time means getting a lower grade

Parenting (cont.)

✍ Punishment - suppresses a response - best to use in combination with positive reinforcement (reward an alternative response) and teaching. New view of time out.

Problems with punishment and reward

✍ See your text for specific information on the problems of punishment as well as the problems of rewards!!!