What Is Learning?
- Learning

Classical Conditioning
- Classical conditioning:
Classical Conditioning
- Neutral stimulus (NS):
- Unconditioned stimulus (UCS):

Classical Conditioning
- Conditioned stimulus (CS):
- Unconditioned response (UCR):

Classical Conditioning
- Conditioned response (CR):
Classical Conditioning

**BEFORE CONDITIONING**
- Neutral stimulus: clicks
- No particular response

**DURING CONDITIONING**
- CS (conditioned stimulus, the former NS, clicks)
- UCS (unconditioned stimulus, heat)
- US (unconditioned response)
- CR (conditioned response)

**AFTER CONDITIONING**
- CS (clicks)
- CR (conditioned response)

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Classical Conditioning

- **Acquisition:**

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Classical Conditioning

Acquisition patterns in classical conditioning when the UCS is presented at different percentages on trials (a series of presentations of stimuli).
Classical Conditioning

- Extinction:

- Spontaneous recovery:

- Generalization:
  - Discrimination:
Classical Conditioning

- John Watson and Rosalie Rayner

Phobia:
Classical Conditioning

- Learned motives:
- Learned goals (incentives):

Classical Conditioning

- Blocking:

Classical Conditioning

<table>
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<th>PHASE 1</th>
<th>PHASE 2</th>
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<td>Base CS</td>
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<td>No conditioning</td>
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Classical Conditioning

- Taste-aversion learning:
- Preparedness:

Operant Conditioning

- In operant conditioning:
- The law of effect:
- B.F. Skinner

Operant Conditioning

- Skinner box.
Operant Conditioning

- A reinforcer:
- Positive reinforcers:
- Negative reinforcers:

Operant Conditioning

A primary reinforcer:
A secondary reinforcer:
Operant Conditioning

- Skinner coined the term operant conditioning because…

Operant Conditioning

- Positive reinforcement:

Operant Conditioning

- Shaping:
Operant Conditioning

- Negative reinforcement:

Operant Conditioning

- Escape conditioning:
- Avoidance conditioning:

Operant Conditioning

- Extinction:
Operant Conditioning

- Extinction burst:
- Stimulus control:
- A discriminative stimulus:

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Operant Conditioning

- Cumulative record:

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Operant Conditioning

- Schedule of reinforcement:
Operant Conditioning

- The most basic schedule of reinforcement is **continuous reinforcement**:

Operant Conditioning

- Intermittent (or partial) reinforcement:
  - Ratio:
  - Interval:

Operant Conditioning

- Fixed-ratio (FR):
- Variable-ratio (VR):
Operant Conditioning

- Fixed-interval (FI) schedule:
- Variable-interval (VI) schedule:

Operant Conditioning

- Partial reinforcement effect:

Operant Conditioning

- Punisher:
Operant Conditioning

- Punishment:

Cognitive and Social Perspectives on Learning

- Insight learning:

Cognitive and Social Perspectives on Learning

- Latent learning:

![Graph showing average errors in the maze over days.]
Observational learning (modeling):

Vicarious reinforcement or vicarious punishment:

Classical conditioning, operant conditioning, observational learning, and punishment are not mutually exclusive. They can, and do, occur simultaneously.