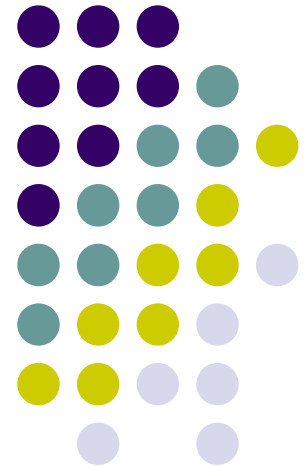
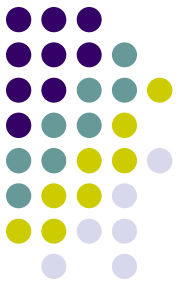


Learning

Modules 9 & 10
Psychology 1



How did you learn to....



Get queasy at the sound of the dentist drill?

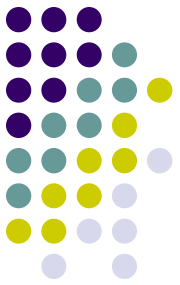


Fear this spider?

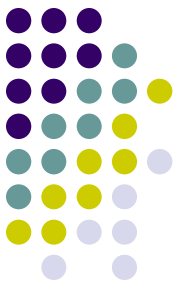
Think about your ex-girl/boyfriend when you smell this cologne?



Desire this Prada bag?

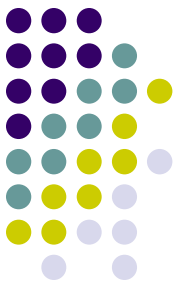


You've been conditioned!

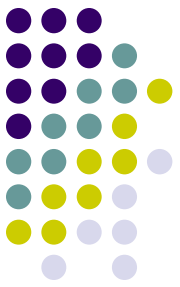


What is learning?

- Enduring or permanent change in **behavior** that results from previous experiences with certain stimuli and responses.
- Behavior can be mental (thought or image) or observable (fainting, throwing up, drooling)
- We will focus on three types of learning...



- **Classical Conditioning-** involve involuntary reflexes
- **Operant Conditioning-** involve voluntary behaviors
- **Cognitive Learning-** using mental processes, perhaps imitating others



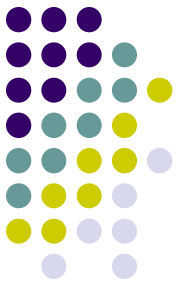
Associative Learning

- Both classical and operant conditioning are called

Associative Learning

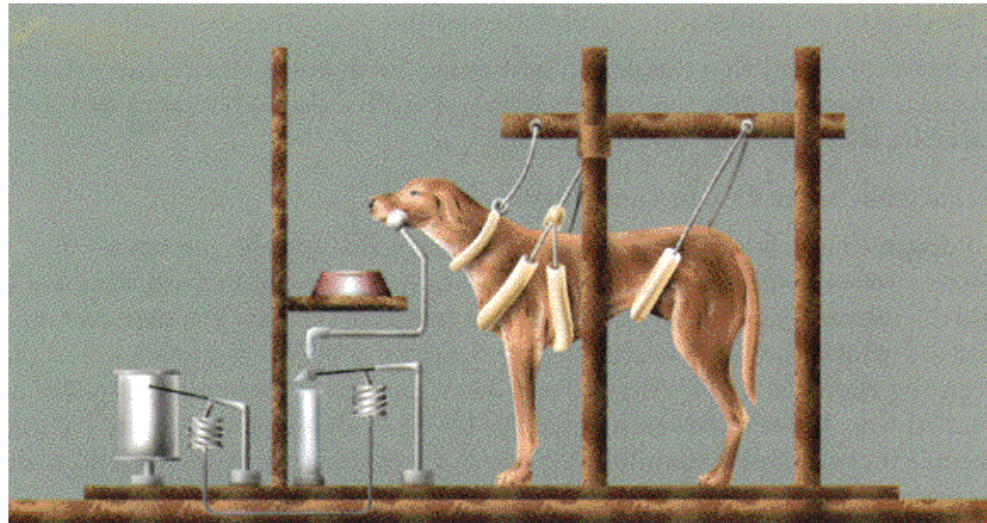
- Because you learn by associating two events together that happen at the same time

Pavlov and his Dog



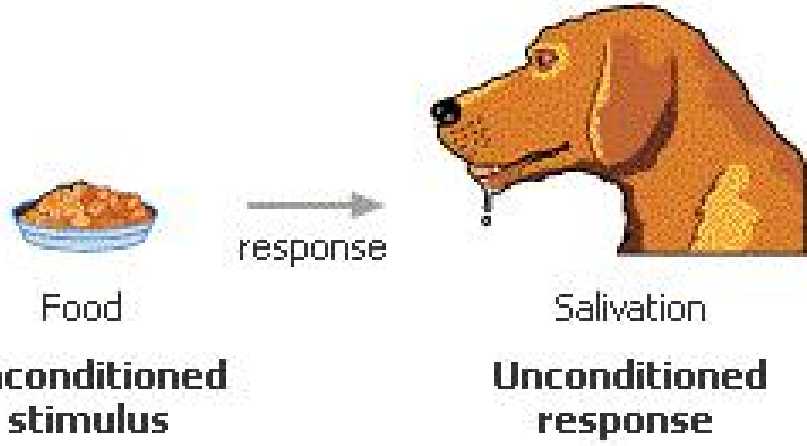
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Pavlov's Research Apparatus

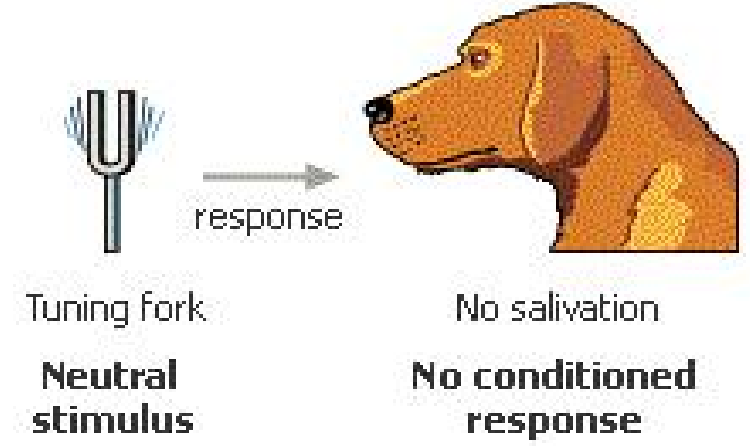




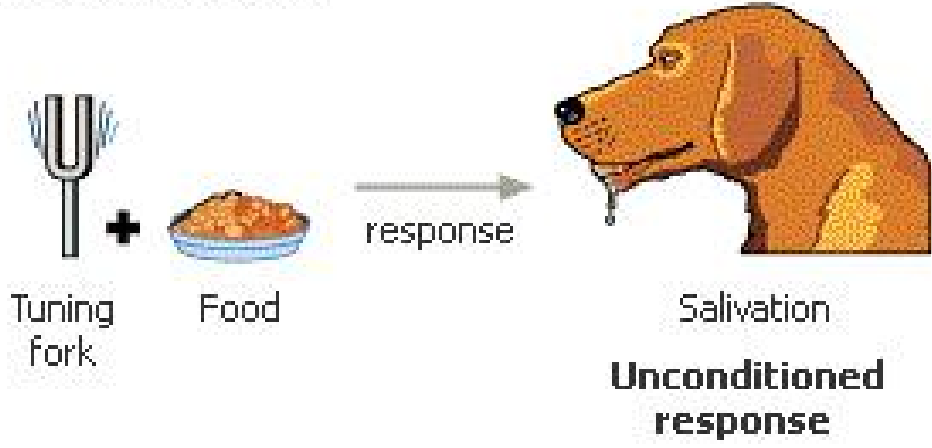
1. Before conditioning



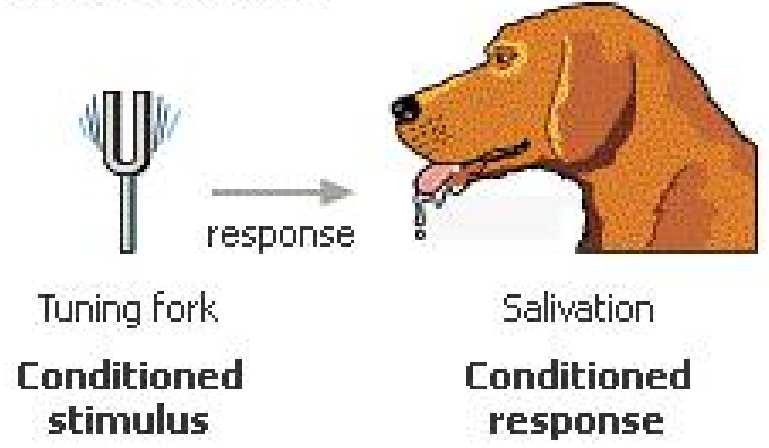
2. Before conditioning

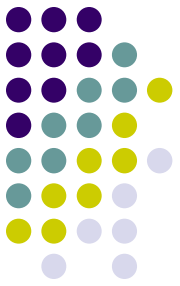


3. During conditioning



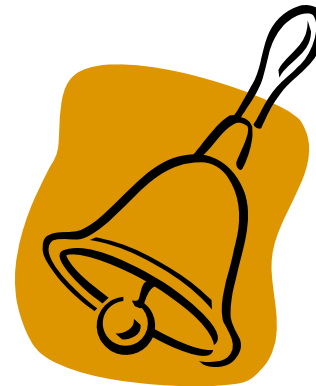
4. After conditioning

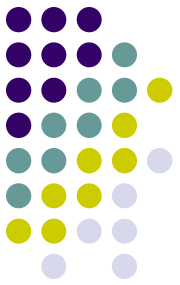




Review: What is the....

- UCS-
- UCR-
- NS-
- CS-
- CR-





Practice

- A young child who reaches out to pet a barking dog is bitten by the dog and cries. Every time she hears a dog bark, she whimpers.

- What is the UCS-

UCR-

NS-

Always
becomes

CS-

CR-



More practice

- A boy who is trained in karate often practices by throwing mock punches at his sister. One day, he accidentally hits her in the eye and hurts her. From that day on, every time he raises his hands, his sister blinks.

- What is the UCS-

UCR-

Always
becomes

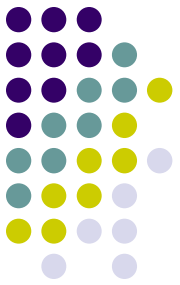
NS-

CS-

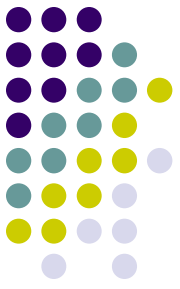
CR-



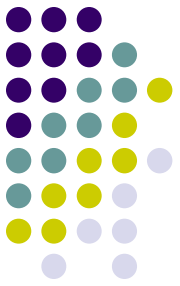
"I think Mom's using the can opener."



Demonstrations please....



Baby Albert



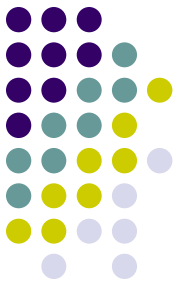
John B. Watson



Can emotional responses be conditioned?

Everyday examples of cc:

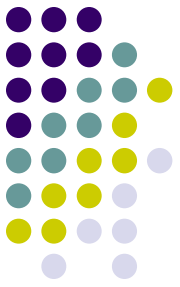




Everyday examples of cc:

- Police siren
- Warning tardy bell
- Smoke alarm goes off
- 2 year old visits the grocery store
- Smell of freshly baked cookies
- Ice cream truck in the summer
- Blue Light Special at K Mart
- Stomach growls at 10:30

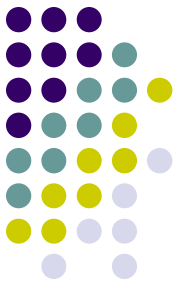
Classical Conditioning Review



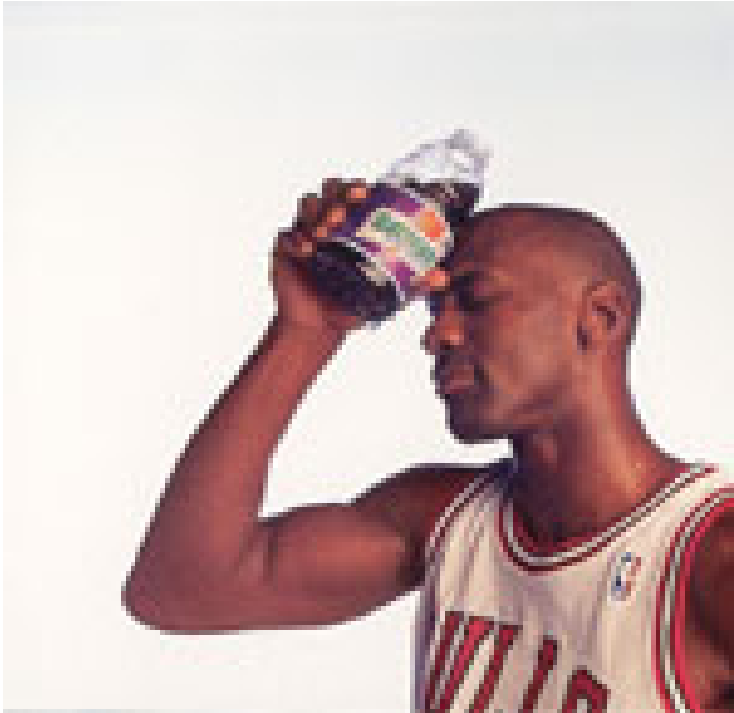
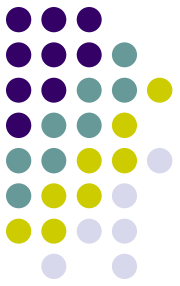
- Our behavior is changed due to stimulus in the environment acting upon us
- Most behaviors learned this way are **INVOLUNTARY REFLEXES** (salivation, eye blink, pupil dilation, flinching, butterflies in stomach) to the stimulus.
- Others are more subtle...

Learning terms:

- Generalization
- Discrimination
- Extinction
- Spontaneous Recovery



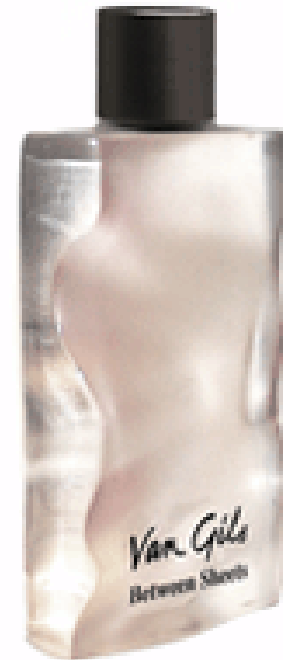
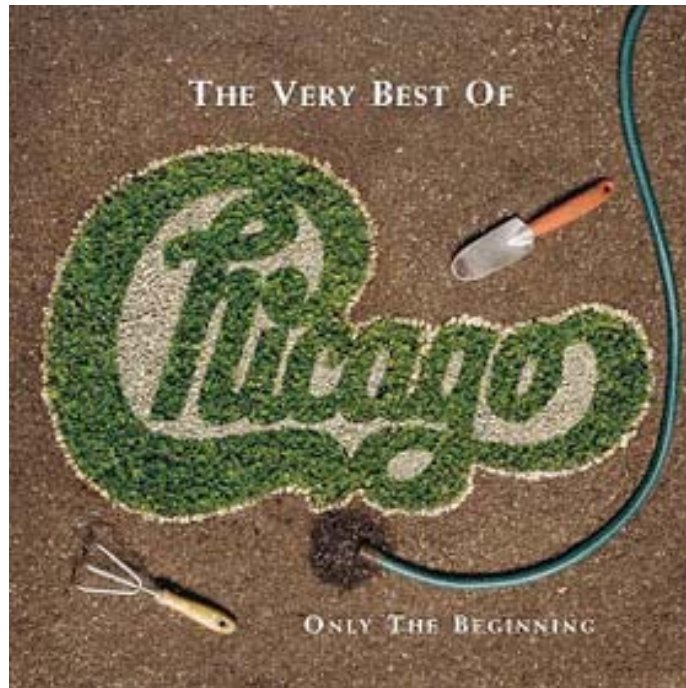
Conditioning & Advertising



Conditioned Emotional Responses



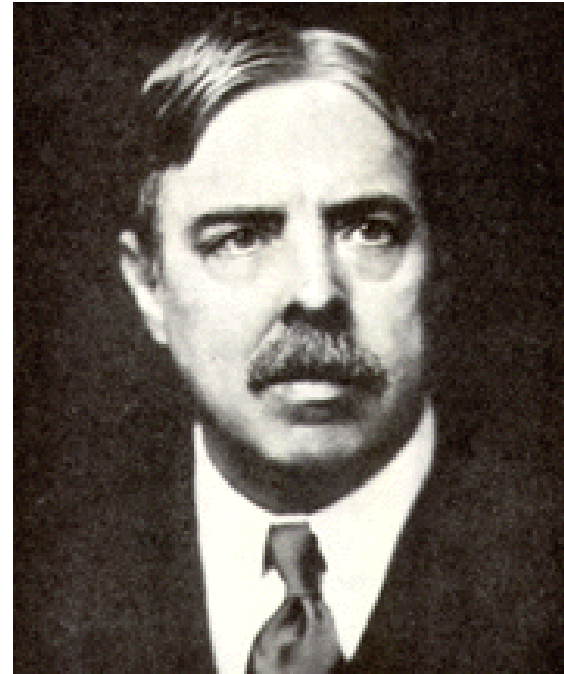
- When emotion is involved, conditioning can be even stronger...



Law of Effect

- Thorndike's observation that behaviors followed by reward are strengthened and behaviors followed by punishment are weakened.

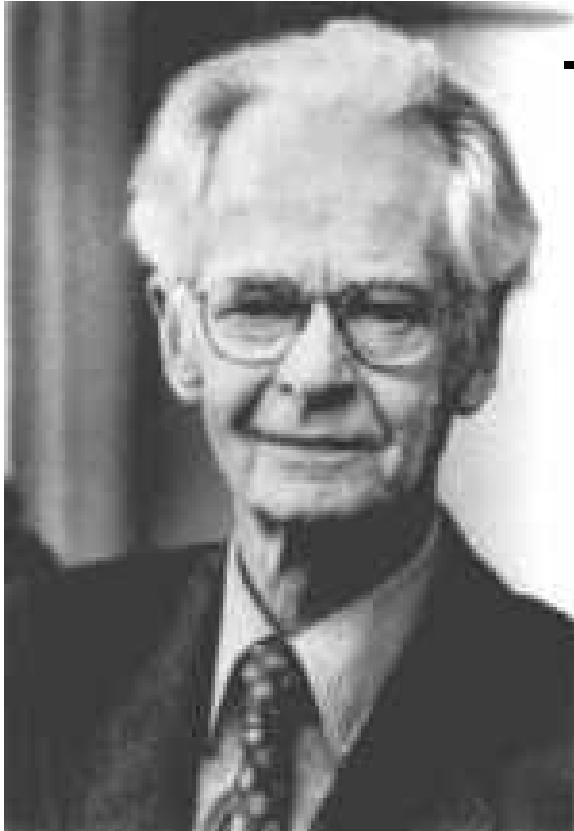
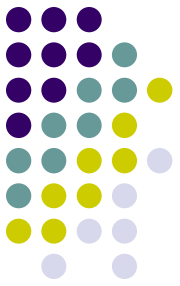
His cat



Edward
Thorndike



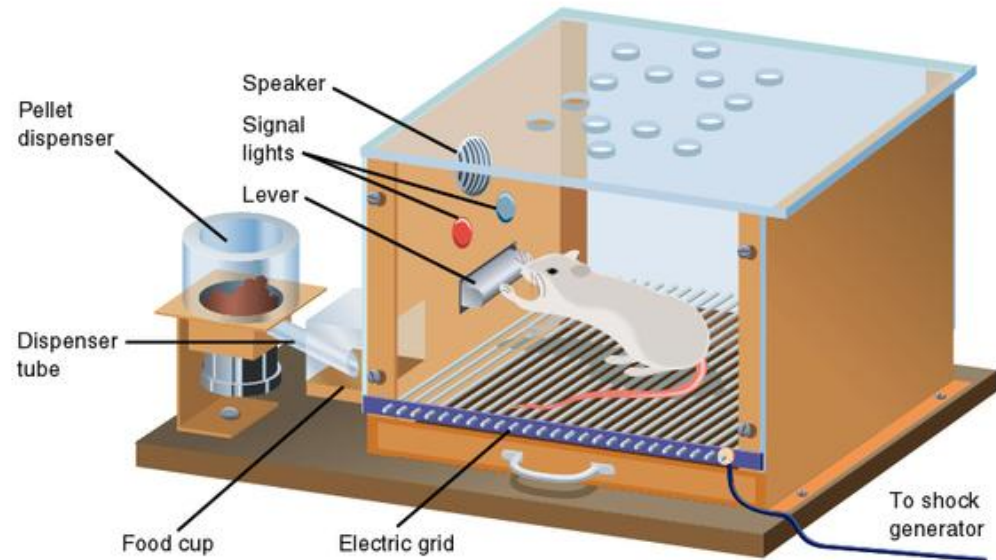
Operant Conditioning



B. F. Skinner



Looked for objective (unbiased) way to measure behaviors



Skinner Box

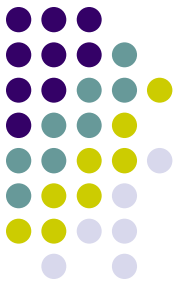


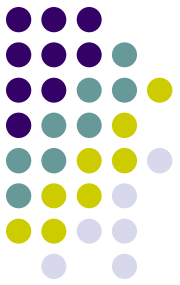
Operant Conditioning

- Like classical, we learn to associate two events or things together.
- However, instead of the environment acting on us (stimulus), WE choose to act on the environment (“we operate on it”)
- Instead of an involuntary reflex (CC), operant conditioning deals with VOLUNTARY BEHAVIORS.
- We may change our behavior (aka LEARNING) based on the consequences that follow our choice.

Shaping

- Do I have a volunteer?





Consequences

- Two kinds:
- REINFORCERS (rewards)

- Positive

- negative

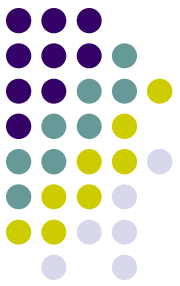
Both INCREASE the chance the behavior will be repeated.

- PUNISHMENTS

- Positive

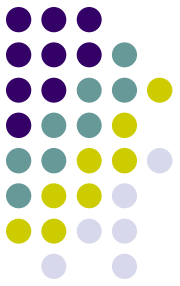
- negative

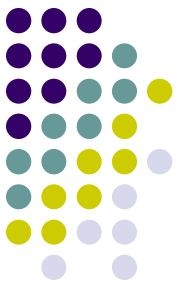
Both DECREASE the chance the behavior will be repeated



- POSITIVE (reinforcement or punishment)
MEANS ADDING SOMETHING
- NEGATIVE (reinforcement or punishment)
MEANS TAKING SOMETHING AWAY
- THEY DON'T MEAN GOOD OR BAD!

Everyday Examples of OC:

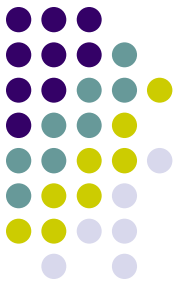




Everyday Examples of OC:

- Getting a sticker or smiley face
- Being grounded for staying out late
- Taking an aspirin for a headache
- Getting spanked for running out in the street
- Using a Northwest VISA card
- Teeth cleaning every 6 months to avoid....
- Fastening seatbelt to avoid nagging bell

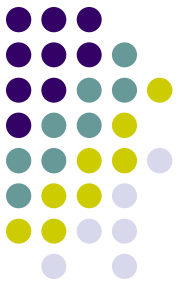
Using Operant Conditioning Principles



- Erica is watching too much tv!
- How could you change her behavior using:
 - Positive reinforcement?
 - Negative Reinforcement?
 - Positive Punishment?
 - Negative Punishment?

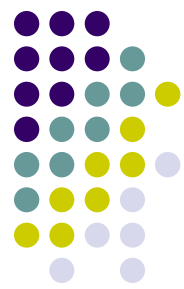


Reinforcers



- Can be primary or secondary





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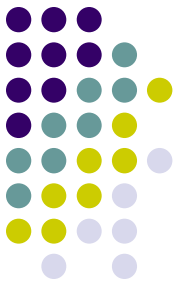


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Learning terms:

- Generalization
- Discrimination
- Extinction
- Spontaneous Recovery

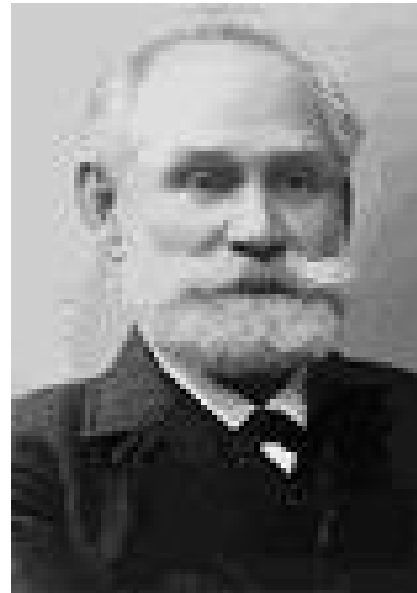


REVIEW:

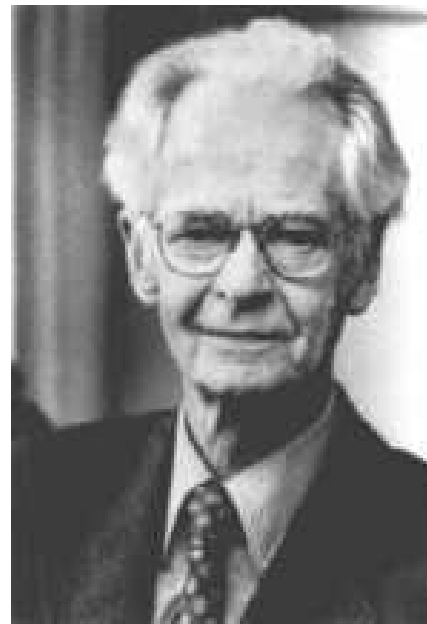
- Classical conditioning

Or

- Operant Conditioning?



Pavlov



Skinner

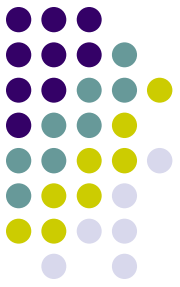




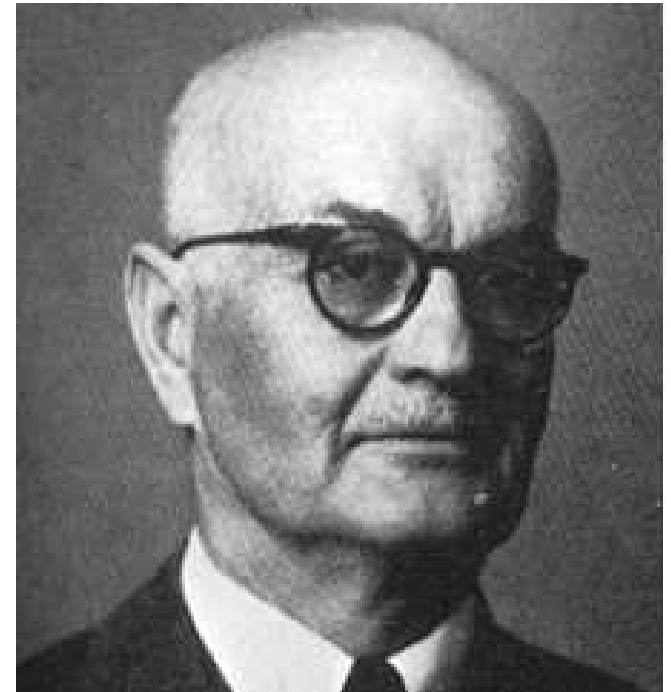
Cognitive Learning

- Learning that involves mental processes (attention or memory), that may be learned through observation or imitation, and may NOT involve rewards or observable behavior.

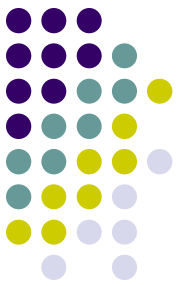
Cognitive Maps



- Rats learned a maze without reward
- They developed a “cognitive map” to remember how to get to the end.
- Laid groundwork for human learning

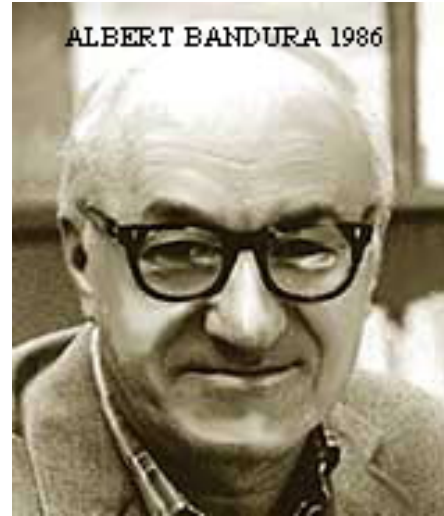


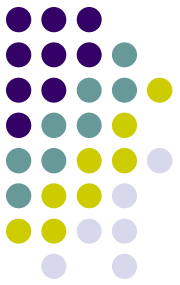
Edward Tolman



Bandura and Bobo

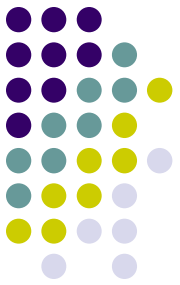
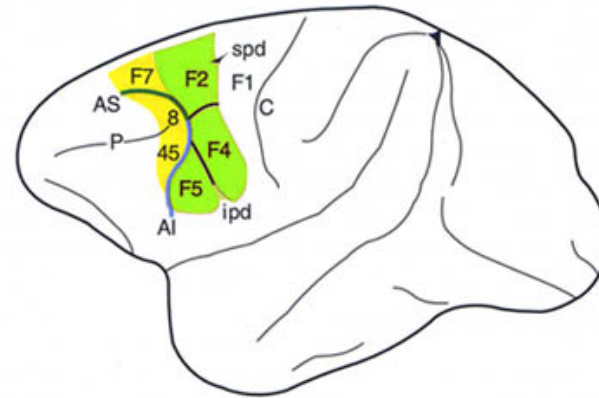
- Albert Bandura-learning takes place through observation
- Classic experiment in psychology
- Challenged the idea that learning was either classical or operant
- We learn not by practicing or reinforcing, but by simply modeling



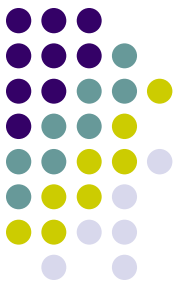


- Kids modeled their behavior after the adults
- No rewards or reinforcers were made
- Also known as observational learning
- Developed Social Learning Theory

Mirror Neurons



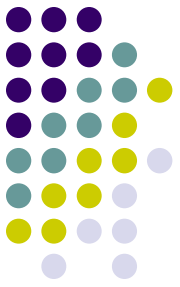
- After researchers implanted electrodes into the heads of monkeys, they noticed a **burst of activity in the premotor cortex** when the animals clutched a piece of food.
- Neuroscientist Giacomo Rizzolatti was licking ice cream in the lab when this **same region again** fired in the monkeys.
- The neurons in this region did, in fact, fire when the monkeys **merely watched** researchers handle food.



Implications for Learning

- May explain observational learning
- These neurons also serve language and empathy.
- Autistic children may not have these neurons well developed.
- What does this say about parents' influence on smoking? Religion? Reading?

Examples of cognitive learning



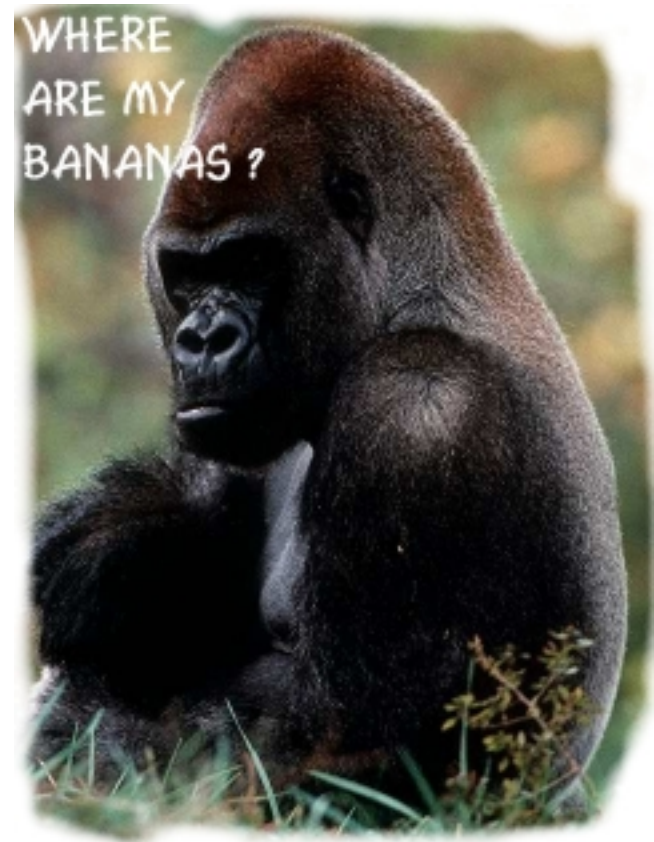
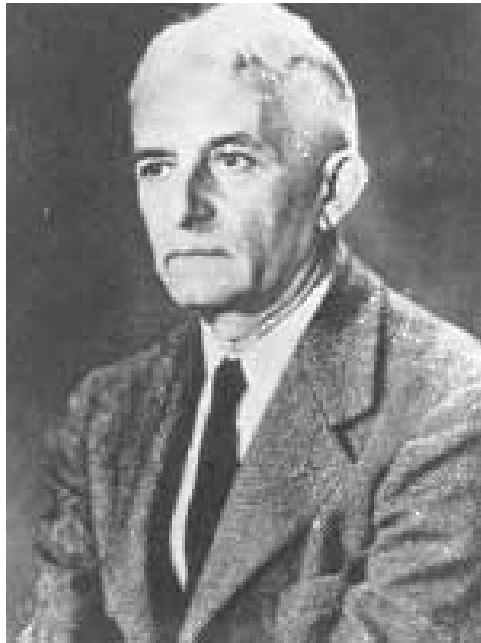
Examples of cognitive learning



- Standing ovation
- Violence on t.v. and in video games
- Macarena
- Fear of spiders
- Discrimination against others
- Learning the “rules” from older siblings
- How to use your silverware at a fancy dinner
- Wearing what the stars wear

Wolfgang Kohler

- Developed insight (or AH-HA!) learning



Let's Review:



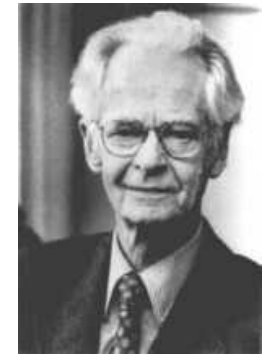
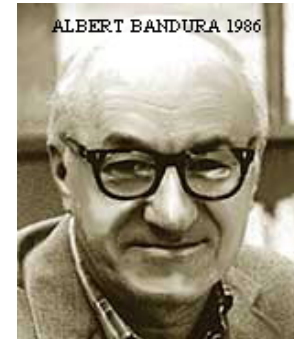
Thorndike



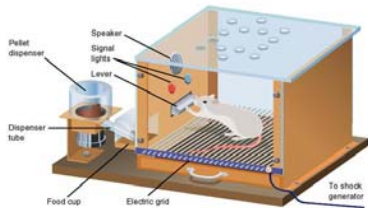
Watson

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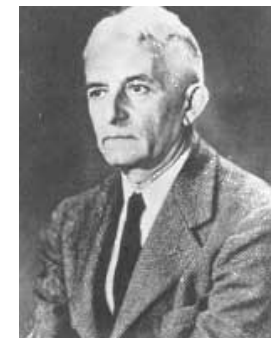
Pavlov's Research Apparatus



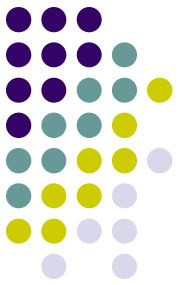
Skinner



Pavlov



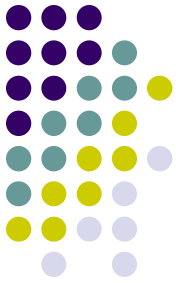
Köhler



Questions to ponder....

- What would Skinner say about cognitive learning? (remember behaviorism)
- Should you spank your kids?
 - 64% approve of spanking
- What form of discipline will you use?

Module 9/10 Learning Ten Box Questions



<p>1. Explain how advertisers use classical conditioning in their approach to selling products</p>	<p>6. Place a <input type="checkbox"/> or a <input type="checkbox"/> to indicate the chances of the desired behavior being repeated.</p> <p style="text-align: center;">Positive Reinforcement Negative Reinforcement Positive Punishment Negative punishment</p>																				
<p>2. Give an example (<u>not a definition</u>) of the following: Generalization Discrimination Extinction Spontaneous recovery</p>	<p>7. Explain how Skinner felt that we are conditioned through the process of shaping. Give an example.</p>																				
<p>3. What is: A cognitive Map? Insight Learning?</p>	<p>8. Match:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 60%;">Hearing an old song & remembering your old boy (girl) friend</td> <td style="width: 40%; text-align: right;">Operant Conditioning</td> </tr> <tr> <td>Watching your mom eat at a fancy dinner so you'll know which fork to use.</td> <td style="text-align: right;">Classical Conditioning</td> </tr> <tr> <td>A toddler is given a treat when he begins to use the potty chair.</td> <td style="text-align: right;">Modeling</td> </tr> </table>	Hearing an old song & remembering your old boy (girl) friend	Operant Conditioning	Watching your mom eat at a fancy dinner so you'll know which fork to use.	Classical Conditioning	A toddler is given a treat when he begins to use the potty chair.	Modeling														
Hearing an old song & remembering your old boy (girl) friend	Operant Conditioning																				
Watching your mom eat at a fancy dinner so you'll know which fork to use.	Classical Conditioning																				
A toddler is given a treat when he begins to use the potty chair.	Modeling																				
<p>4. Explain the difference between a primary and a secondary reinforcer. Give an example of each.</p>	<p>9. Circle the correct answer: <i>Classical conditioning</i> explains <u>voluntary/involuntary</u> reflexes. <i>Operant conditioning</i> explains <u>voluntary/involuntary</u> behaviors.</p>																				
<p>5. Define learning in your own words:</p>	<p>10. Fill in the following:</p> <table style="width: 100%; border: none;"> <tr> <td></td> <td style="text-align: center;">Classical</td> <td style="text-align: center;">Operant</td> <td style="text-align: center;">Cognitive</td> </tr> <tr> <td>Learning</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Key word:</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>Famous Psychologist:</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>Experiment:</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> </table>		Classical	Operant	Cognitive	Learning				Key word:	_____	_____	_____	Famous Psychologist:	_____	_____	_____	Experiment:	_____	_____	_____
	Classical	Operant	Cognitive																		
Learning																					
Key word:	_____	_____	_____																		
Famous Psychologist:	_____	_____	_____																		
Experiment:	_____	_____	_____																		