

1 Myers: Module 20
Classical Conditioning

2 Learning: definition
■ A relatively permanent change in an organism's behavior due to experience

3 Classical conditioning
■ Learning through association

4 Ivan Pavlov's experiments
UCS UCS
■ Meat powder → salivation

5
NS UCS UCS
Tone + Meat powder → Salivation

6
CS CR
Tone → Salivation

7
ucs ucr
meat powder → salivation
ns ucs ucr
tone + meat powder → salivation
cs cr
tone → salivation

8 Classical conditioning: examples
■ Nausea and poor eating habits in cancer patients
■ Fears
■ Asthma
■ Immune responses
■ Gustav research

9
Classical conditioning is learning by association: we naturally learn some ideas or behaviors because they are associated with each other in our experience

10 How do associations develop?
■ Would Pavlov's dogs have learned to salivate to the sound of the tone if the tone was presented at the same time as the meat powder????

- NO!!!!

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Would Pavlov's dogs have learned to salivate to the tone if the tone was presented after the meat powder?

NO!!!!!!

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Why not??

- The conditioned stimulus has the job of preparing the dogs for the coming of the food
- The dogs learn to anticipate the coming of the food when they hear the tone.
- The key to learning by association is anticipation.

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- If the metronome sounded after or at the same time as the meat powder was given, anticipation cannot occur.
- Result: no anticipation and no learning

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Examples

- Scraping nails on the blackboard
- A deer in the forest
- Domjan research

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Example

- | | | |
|-----|----|-----|
| ucs | —> | ucr |
| ns | + | ucs |
| cs | —> | cr |

 Passionate kiss—>sexual arousal
- Onion breath + p. kiss—> S. A.
- Onion breath—> sexual arousal

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Extinction

- What would happen if Pavlov kept playing the tone but didn't give the dogs any more meat powder?

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Spontaneous Recovery

- The tendency for an extinguished conditioned response to recur after a rest period

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Generalization

The tendency for the conditioned response to occur in response to stimuli similar to the original unconditioned stimulus.

19 **Generalization: Little Albert**

ucs ucr
Loud noise -> Fear
ns ucs ucr
White rat + loud noise -> Fear
cs cr
White rat-> Fear

20 **Little Albert and generalization**

Later, Little Albert was afraid of not only white rats, but also white bunnies and the white fur collar on his mother's coat.

21 **Other examples**

- Rape survivors
- Black boots at the cell door
- Round faces and big eyes

22 **Stimulus discrimination**

- The opposite of generalization
- The learned ability to distinguish between a conditioned stimulus and other irrelevant stimuli.

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- You want to teach a pigeon to peck at a button only when a red light is on?
- How do you do it?

24 **Discrimination: examples**

- You see a large dog running toward you, then notice that it is a golden retriever.
- You see a group of people coming toward you.
 - What if they are white-haired ladies? -- What if they are skinheads?

25 **Pavlov's Legacy**

- Why would anyone care about dogs salivating in the early 1900's in Russia?

26 **Biological predispositions in classical conditioning**

- Humans seem to be biologically prepared to learn some things and not others.
- Examples:
 - taste aversions
 - learned fears: Can you teach a monkey to be afraid of a daisy?