

# Introduction of Psychology

## Tutorial 4 Classical Conditioning



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1

## Learning

### 1. Behaviorism

- Promoted by John B. Watson
- View that psychology...
  - should be an objective science
  - study behavior not mental processes

2

## Learning Defined

### 1. Learning

- relatively permanent change in an behavior due to experience

### 2. Associative Learning

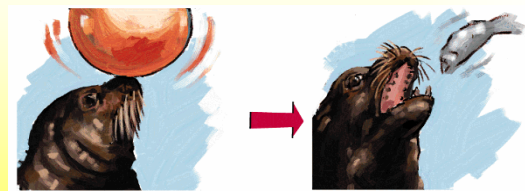
- learning that two events occur together
  - either two stimuli
  - or a response and its consequences

3

## Association

Event 1

Event 2



Seal learns to expect a snack for its show-off behavior

Learning to associate two events

4

## Two Kinds of Associative Learning

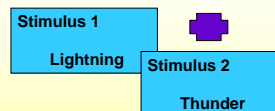
### 1. Classical Conditioning

### 2. Operant Conditioning

5

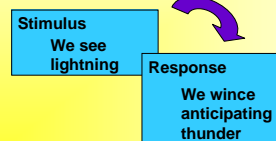
## Classical Conditioning

Two related events:



We learn to associate two stimuli

Result after repetition

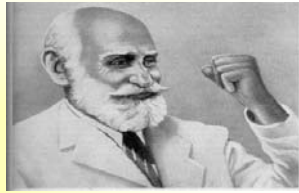


6

## Classical or Pavlovian Conditioning

### Ivan Pavlov

- 1849-1936
- Russian physician/ neurophysiologist
- studied digestive secretions
- invented Classical Conditioning



7

## Classical or Pavlovian Conditioning



Pavlov's device for recording salivation

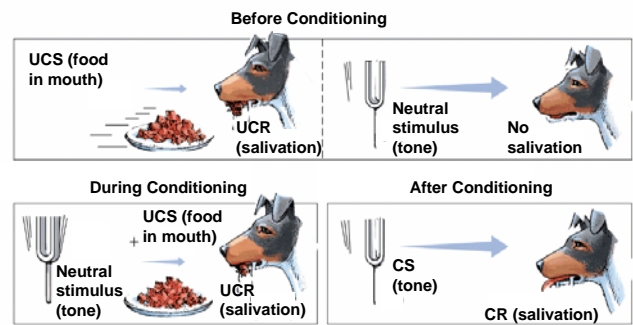
8

## Classical or Pavlovian Conditioning

1. organism reacts to stimulus with a reflex
  - e.g., loud noise → flinch (reflex)
2. then, a neutral stimulus is paired with a stimulus that evokes the reflex
  - e.g., lift podium → loud noise → flinch
3. organism associates two stimuli
  - examples: lift podium and noise; lightning and thunder; tone and food, sound and stop
4. neutral stimulus eventually comes to evoke the reflex (lift podium, flinch)

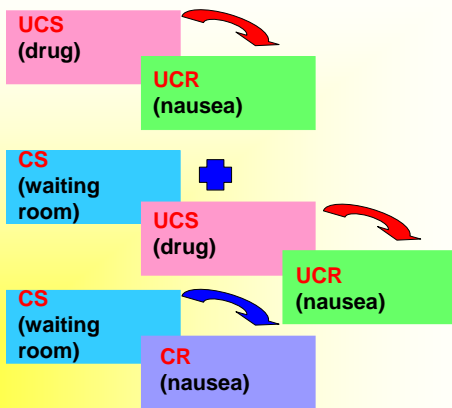
9

## Pavlov's Classic Experiment



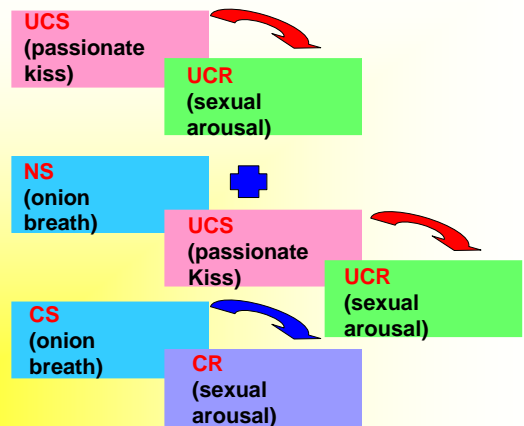
10

## Nausea Conditioning among Cancer Patients



11

## Classical or Pavlovian Conditioning



12

## Classical or Pavlovian Conditioning

1. Unconditioned Stimulus (UCS)
  - stimulus that automatically triggers a response
2. Unconditioned Response (UCR)
  - unlearned, automatic response to the unconditioned stimulus
    - salivation when food is in the mouth

13

## Classical or Pavlovian Conditioning

1. Conditioned Stimulus (CS)
  - an originally neutral stimulus that becomes associated with an UCS and therefore triggers a conditioned response
2. Conditioned Response (CR)
  - learned response to a previously neutral conditioned stimulus

14

## Classical or Pavlovian Conditioning

1. Acquisition
  - the initial stage of learning, during which a response is established and gradually strengthened

15

## Classical or Pavlovian Conditioning

- ### Extinction
- diminishing a conditioned response
  - occurs when an unconditioned stimulus does not follow a conditioned stimulus

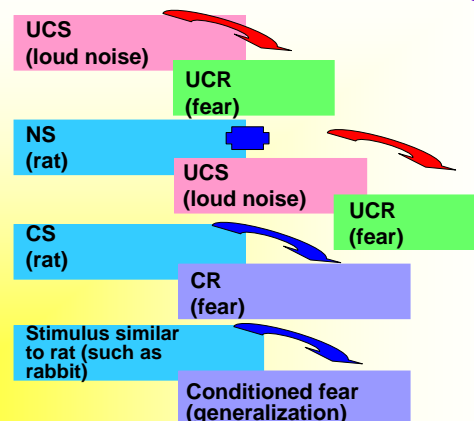
16

## Classical or Pavlovian Conditioning

1. Spontaneous recovery
  - reappearance, after a rest period, of an extinguished conditioned response
2. Generalization
  - tendency for stimuli similar to the conditioned stimulus to evoke similar responses

17

## Little Albert's Fear Conditioning



18

## Classical or Pavlovian Conditioning

### Discrimination

- the ability to distinguish between a conditioned stimulus and other similar stimuli that do not signal an unconditioned stimulus

19

## Summary

20

### Classical Conditioning:

1. **BEFORE Conditioning:**
2. NS
3. UCS → UCR
4. **Conditioning:**
5. NS
6. UCS → UCR
7. **AFTER Conditioning:**
8. CS → CR

21

### Operant Conditioning:

Behavior (???) → Consequence (???)

22



# The end

23