# Learning

# Basic characteristics

- _____
  - The belief that the universe is lawful and orderly

- _____
  - The occurrence of phenomena as a function of the operation of specific variables

- _____
  - Objective observation

- _____
  - Controlled experiments with manipulation of independent variables

- _____
  - Requirement that simple, logical explanations are considered before complex ones

  **We should study behavior not for what it can tell us about _____, but for its own _____!**

# _____ conditioning

- A.K.A. _____conditioning
- A.K.A. _____conditioning
- Important area in _____research, but underrepresented in _____research
- Deals with _____responses (called _____)
  - Responses _____by certain stimuli
  - Not affected by _____
  - Examples
    - Salivating
    - Heart rate
    - Emotional responses

# Important Terms

- _____stimulus (_____)
  - Stimulus that elicits a response _____any prior _____history ("_____" elicits the response)
- _____response (_____)
  - Response that occurs _____ ("_____") when the UCS is presented
  - _____

# Important Terms

- _____stimulus (_____)
  - Stimulus that is initially _____with respect to the _____response (_____)
- _____stimulus (_____)
  - Previously _____stimulus that elicits a response due to pairing with the _____
- _____response (_____)
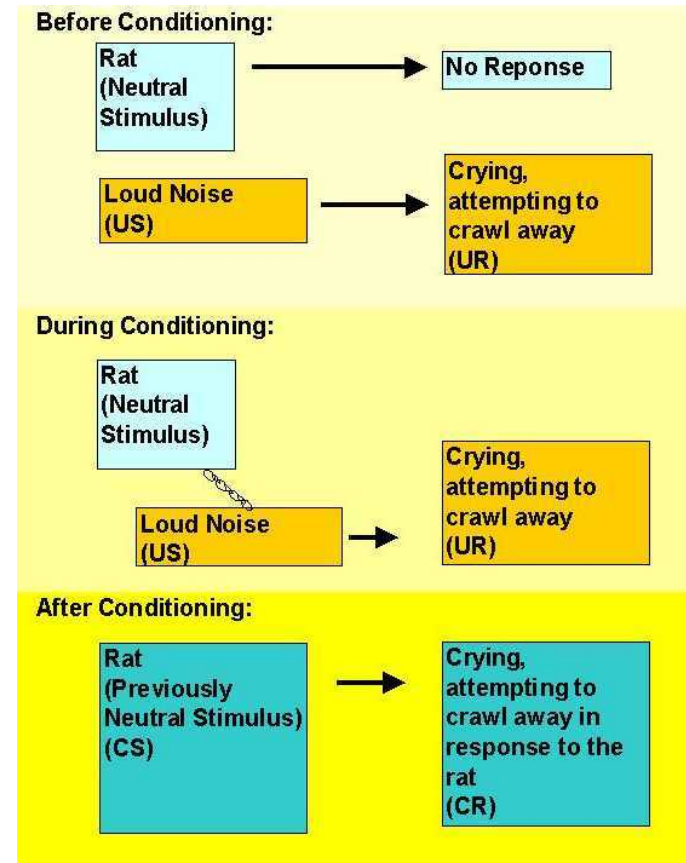  - Response that is learned
  - Occurs following presentation of the CS

# The Apparatus
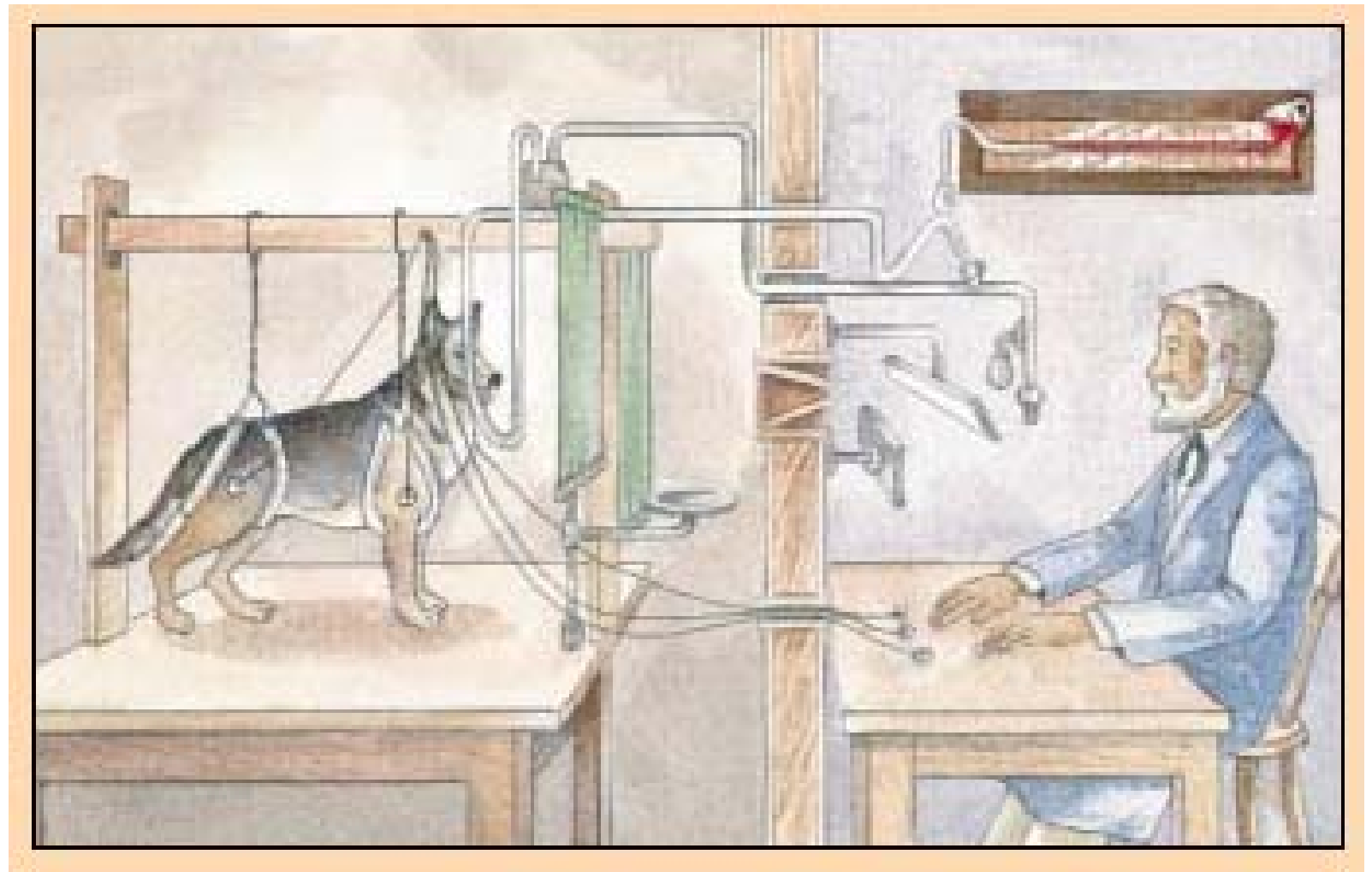
# Why should we be interested in dog spit?

- First example of a scientific study of behavior
- Application to _____
  - Watson
  - _____ therapy
  - Cancer patient
    - NS = _____
    - UCS = _____
    - NS + UCS → _____ (UR)
    - NS becomes _____
    - CS → _____
  - Advertising

**Before Conditioning:**

Rat (Neutral Stimulus) → No Reponse

Loud Noise (US) → Crying, attempting to crawl away (UR)

**During Conditioning:**

Rat (Neutral Stimulus)

Loud Noise (US) → Crying, attempting to crawl away (UR)

**After Conditioning:**

Rat (Previously Neutral Stimulus) (CS) → Crying, attempting to crawl away in response to the rat (CR)

# John Watson (1878-1958)

- 'Psychology as a Behaviorist View It' (1913)
- Brilliant and unconventional man
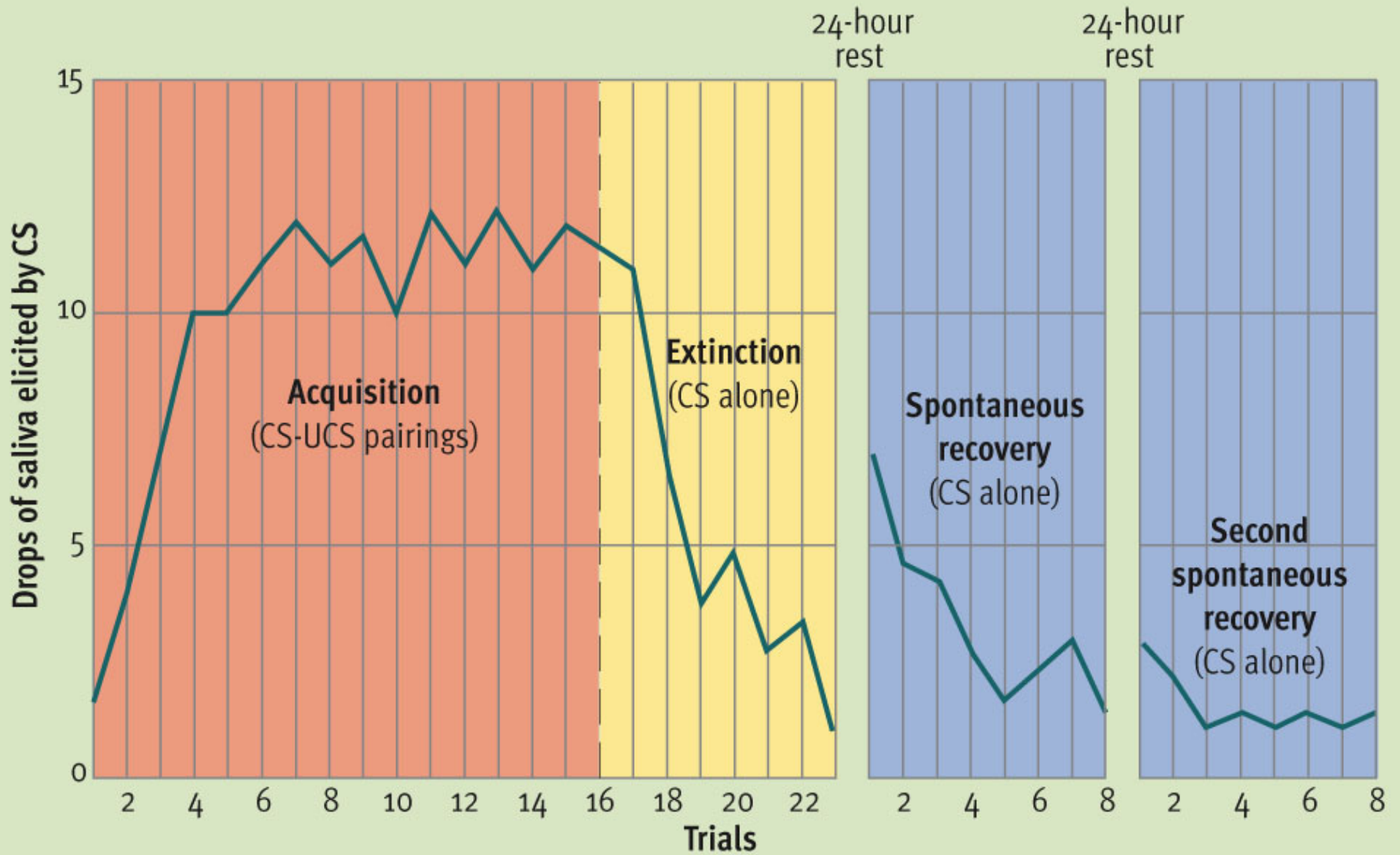- Psychology should only concern itself with _____.



Fig. 6.12. John Watson in 1912, when voted by students the most handsome professor at the Johns Hopkins University and just before giving his lecture series at Columbia

# John Watson

- First psychologist to carry out experiments on

**Figure 6.6  Acquisition, extinction, and spontaneous recovery**

Learning
Objective 3

# More terms…

- _____*
  - Spread of effect of _____to other, perhaps _____, _____stimuli
  - The more _____the stimulus context, the greater the probability of _____
- _____*
  - The CR is made only to one specific CS (opposite of _____)
  - Can be accomplished experimentally by providing stimuli similar to the _____without the _____.

# Generalization
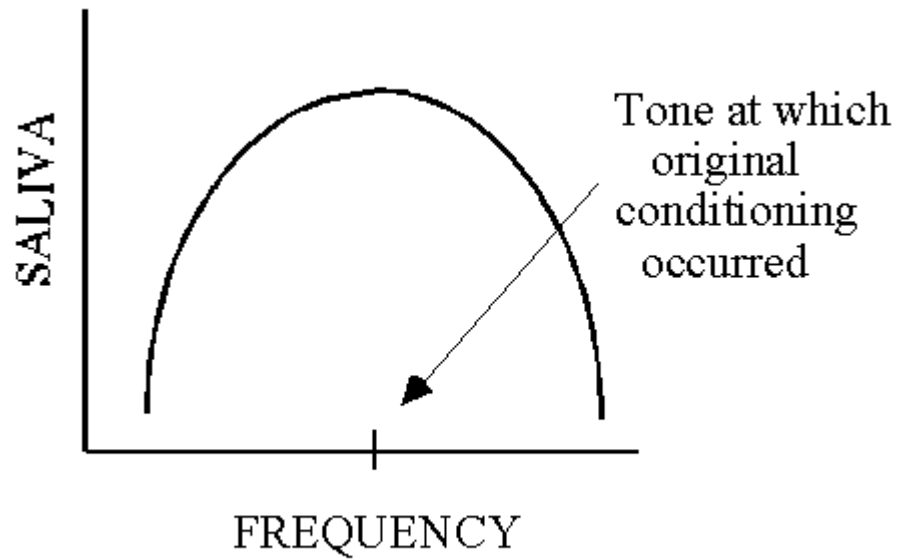
# Real-world examples of respondent conditioning

- _____& can openers
- Heart rate & _____
- _____ & certain songs
- _____& girlfriend's perfume
  - Or, _____& EX-girlfriend's perfume
- Heart rate & _____
- Conditioned _____

# Applications of _____conditioning
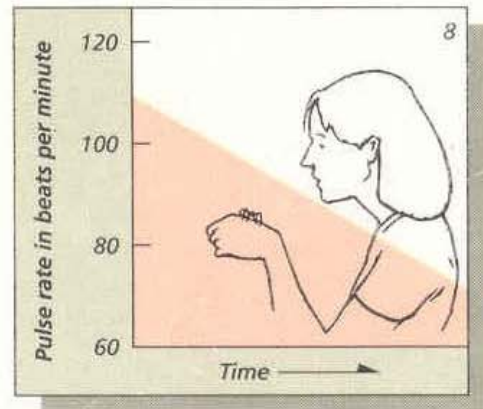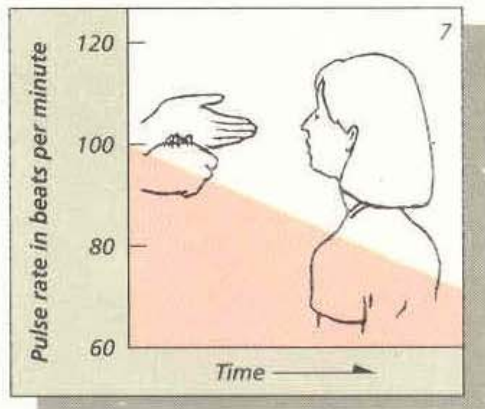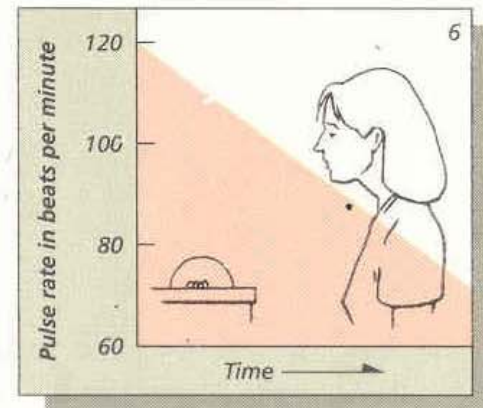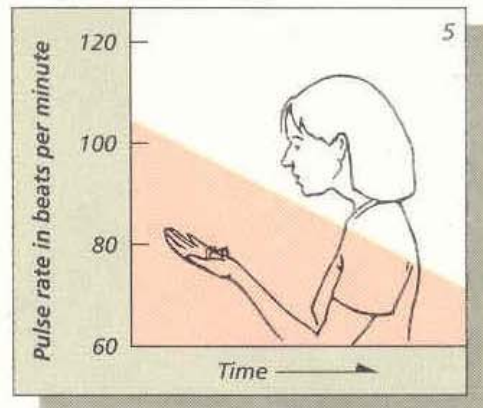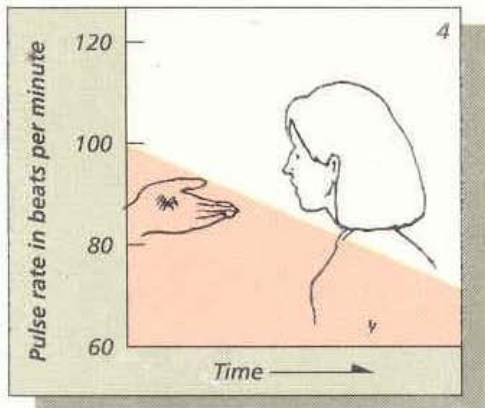
- _____
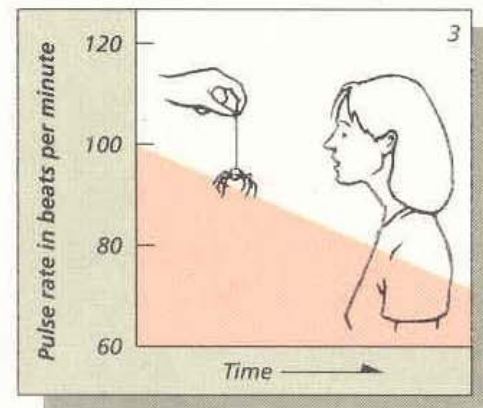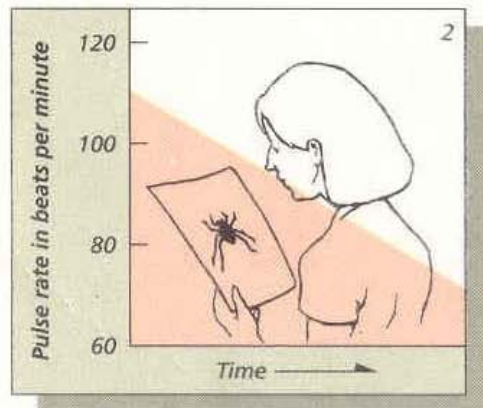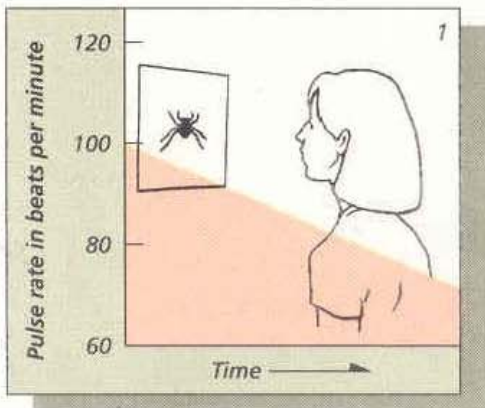  - Repeated pairing of an _____while simultaneously having the participant engage in a _____
    - Teach _____
    - Have participant engage in relaxation response while presenting _____of the CS
    - Gradually increase the _____of the CS as the CR begins to decrease
  - Commonly used for _____
  - Consideration: VERY important that the CS & UCS _____during this process
  - Contact with CS can be _____or _____

**1**
Pulse rate in beats per minute
120 100 80 60
Time

**2**
Pulse rate in beats per minute
120 100 80 60
Time

**3**
Pulse rate in beats per minute
120 100 80 60
Time

**4**
Pulse rate in beats per minute
120 100 80 60
Time

**5**
Pulse rate in beats per minute
120 100 80 60
Time

**6**
Pulse rate in beats per minute
120 100 80 60
Time

**7**
Pulse rate in beats per minute
120 100 80 60
Time

**8**
Pulse rate in beats per minute
120 100 80 60
Time

# Applications of respondent conditioning

- _____
  - Used primarily for phobias
  - Expose client to feared stimulus for extended periods of time
  - Uses _____
  - Can have some very undesirable _____
- _____conditioning (_____therapy)
  - Involves pairing an _____stimulus with a previously enjoyed stimulus
  - Commonly used for different forms of _____
  - Example: _____
    - UCS (_____) + NS (_____) → UCR (_____)
    - CS (_____) → CR (_____)
  - Loopholes
    - _____
    - History with "_____" stimulus
    - _____of "treatment alcohol" versus "bar alcohol"
  - Example: _____ (treatment center in central FL)



Transparency 134
Figure 16-2, page 489
Aversion therapy for alcoholics

Myers: Psychology, Third Edition
Copyright © 1992 by Worth Publishers, Inc.

UCS
(Drug in alcohol) → UCR
(Nausea)

CS
(Alcohol) → CR
(Nausea)
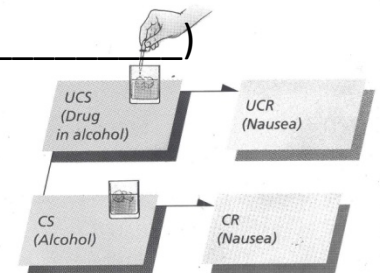
# _____ Conditioning

- _____ behavior
  - Behavior _____ by the organism (not _____)
  - Affected by _____
- Origins
  - Thorndike
  - Watson
  - Skinner

## _____

- Any consequence of behavior that _____the future probability of that behavior
- Can be _____or _____
  - _____reinforcement:
    - Presentation of a stimulus following a response that _____the future probability of that response
      - If the probability increases, the stimulus can be called a "reinforcer"
    - Examples?
  - _____reinforcement:
    - _____of an _____stimulus following a response that _____the future probability of that response
    - Examples?

## _____

- Any consequence of behavior that _____the future probability of that behavior
- Can be _____or _____
  - _____punishment:
    - _____of an aversive stimulus following a response that _____the future probability of that response
      - If the probability of the response decreases, the stimulus can be called a "punisher"
    - Examples?
  - _____punishment:
    - _____of a stimulus following a response that _____the future probability of that response
    - Examples?

# Operant Conditioning
## Reinforcement & Punishment

| | | |
|---|---|---|
| | | |
| | | |
| | | |

Note: These are defined <u>functionally</u>, *not* <u>structurally</u>!
(It's not a reinforcer unless it increases behavior.)

# Primary & Secondary

- _____reinforcers/punishers
  - Affect behavior without _____with other stimuli
  - Examples

- _____reinforcers
  - Must be _____with other stimuli to have reinforcing/punishing effects
    - This is a _____process!
  - Examples

# Increasing behavior: Reinforcement

- Reinforcers can be delivered following behavior on certain "_____"
- Schedules can be _____or _____
- Schedules can be based on the _____ or the _____
  - _____schedule
  - _____schedule
- Examples?

# Schedules of Reinforcement

- Simple reinforcement schedules produce characteristic response _____.

- _____ lines mean _____ response rates.

- _____ schedules produce more responses than do _____ schedules.

# _____ & _____
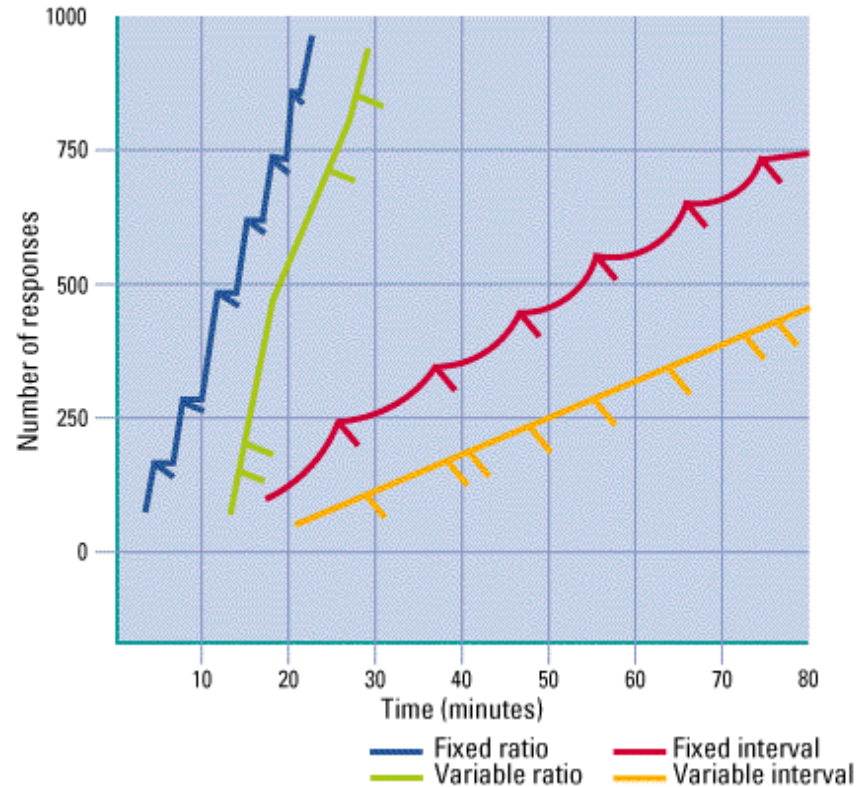
- Like _____, but don't get confused!!
- _____ [stimuli](#) occur when a behavior is _____in the presence of those stimuli & _____
  - Stimulus → Behavior → Reinforcer
    - Example: picking up a ringing telephone
    - Acting one way at a party and another with your parents
  - That behavior is more likely to occur in the presence of the _____stimulus
- _____: Behavior also occurs in the presence of other, similar _____
  - You will pick up phones with novel rings

# Ways to increase behavior & get new behavior

- _____increases current behavior
- _____allows formation of new behavior
  - Involves reinforcement of _____ terminal response
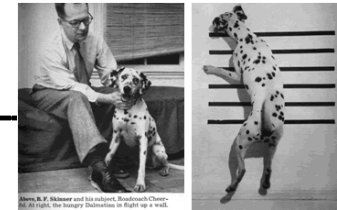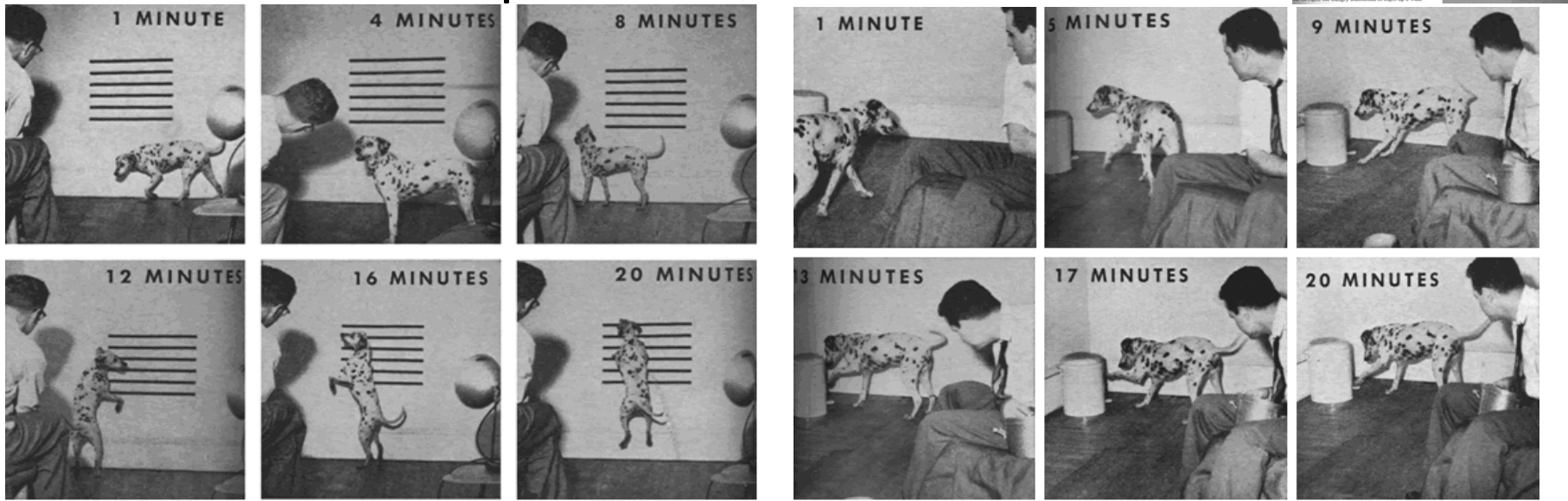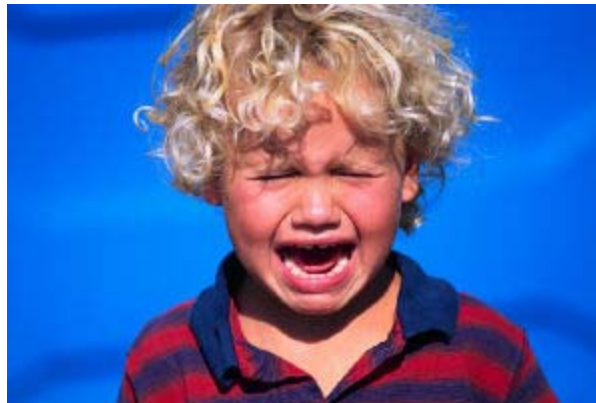
# Ways to Decrease Behavior

- _____procedures decrease behavior
  - _____
  - _____(i.e., "time out")
- _____
  - _____the maintaining reinforcer for a behavior
  - Example?
    - Elevator button pressing; vending eats your money

# Punishment v. Extinction

| Punishment | Extinction |
| --- | --- |
|  |  |
|  |  |
|  |  |

# Problems with Punishment: _____

- Person administering punishment is paired with punishment

- Leads to _____: person becomes a "_____" _____

# Potential Problems with Extinction: Ineffective



Figure 4–2 An extreme example of why attempts to apply extinction often fail. The actual reinforcer for the behavior must always be withheld.

# Potential Problems with Extinction: Impossible



"Try to ignore him. He's just attention seeking."

# Potential Problems with Extinction: Emotion & Aggression

- http://video.google.com/videoplay?docid=-8011124620592732795&q=tantrum

# Behavior Modification & Behavior Therapy

- Use the principles and techniques of behavior analysis to improve behavior
- More commonly known as "_____"
- Commonly used to:
  - Decrease _____ ("behavior therapy")
  - Increase _____/teach new skills
  - Increase _____ (teaching gun safety, implementing procedures to improve driving, improving workplace safety)
  - Help businesses come up increase sales & worker productivity
  - Explain commonly occurring behavioral phenomena (how language works, why people gamble, why people make particular choices)
  - Examine the behavioral effects of _____
  - _____

# _____Learning

**Learning that takes place when one _____the behavior of others.**

■Studies of _____

Children and others model both _____and _____behavior.

# Observational Learning
## The Process of Modeling Involves:

- _____
  - One must pay attention to a behavior and its consequences.

- _____
  - One must recall what was observed.

- _____
  - Observers must have the motor ability to reproduce the modeled behavior.

- _____
  - Observer must expect reinforcement for modeled act.