### **GENERAL PSYCHOLOGY**

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## Introduction

• What is psychology?

• Why are you taking this course?

• What do you expect to learn?

## What to expect

- PowerPoint
- Lecture
- Small group
- Large group discussion
- In class activities
- Out of class activities
- Research paper
- Exams

### Chapter 1

The Science of Psychology

## What is Psychology?

- The scientific study of behavior and mental processes.
  - Physical state
  - Mental state
  - Environment
- Behavior = outward or avert actions and reactions
  - Talking, facial expressions and movement
- Mental Process = internal, covert activity
  - Thinking, feeling and remembering

# Psychology's Goals

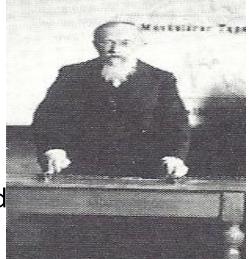
- Description What is happening?
   Student who's grades are slipping
- Explanation Why is it happening?
  - Theory
  - Testing dyslexia
- Prediction When will it happen again?
   Probably throughout academic experience
- Control How can it be changed?
  - Intervene
  - Learning strategies

# The History of Psychology

- Wilhelm Wundt (1832-1920) Germany
  - Father of Psychology
  - 1<sup>st</sup> in movement to make psychology a science
  - 1<sup>st</sup> true experimental lab in psychology

Structuralist - structure or basic elements of the mind

**Objective introspection** 

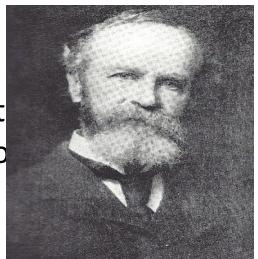


- Examining and measuring one's own thoughts and mental activities
  - Trained volunteers to observe, analyze and describe their own sensations, mental images and emotional reactions.
  - Train 10,00 observations; 20 mins to report 1.5 second experiment
  - Goal to break down behavior in to basic elements...H<sub>2</sub>0

#### - Eventually rejected as too subjective

# The history of Psychology

- <u>Structuralism</u> (USA)
  - E.B. Titchener (1867 1927)
  - Student of Wilhelm Wundt
  - <u>Analyze</u> sensations, images and feelings into basic elements
    - Eventually Discarded
- Functionalism
  - William James (1842 1910)
  - <u>Function or purpose</u> of behavior
    - not analysis or description
  - How do specific behaviors & ment processes help ADAPT to enviro
    - No longer a major perspective



## The history of Psychology

- Gestalt Psychology
  - "The whole is greater than the sum of the parts"
  - Max Wertheimer
  - Gestalt = "an organized whole" or "configuration"
  - People seek our patterns to make sense of things
- Gestalt Psychology
  - Focus on perceptions and sensations
    - particularly the perception of patterns and whole figures

## The History of Psychology

- <u>Psychoanalysis</u>
  - Sigmund Freud (1856-1939)
  - Neurologist

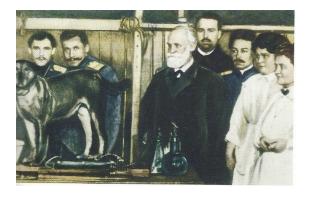
<u>Theory of personality</u> - a type of psychotherapy that emphasizes unconscious or repressed motives and conflicts.

- Depression, anxiety & obsession had mental not physical causes
- This distress due to conflict and emotional traumas in childhood
- Conscious awareness "tip of the mental iceberg"
- "interpretation of dreams"
- Well known.....profound influence ....
  - His theory used in modified form



# History of Psychology

- Dawn of Behaviorism
- Ivan Pavlov
  - Conditioning



- John B. Watson
  - Father of Behaviorism
  - The science of behavior that focuses on observable behavior only
  - Behavior = stimulus response relationship
  - Little Albert



## History of Psychology

- Mary Clover Jones
  - Classic study on Counter Conditioning
  - "Little Peter"
    - Same as "Little Albert"
    - Associate food (pleasure) with feared object (rabbit) = no fear of rabbit



### Quiz

- 1. In the definition of psychology, behavior means:
  - a) Internal, covert processes
  - b) Mental processes
  - c) Outward or overt actions and reactions
- 2. Experimental psychologists, whose design experiments to determine the causes of behavior, would be most interested in the goal of:
  - a) Descriptions
  - b) Explanation
  - c) Prediction
  - d) Control
- 3. Dr. Watson designs a special behavior program for helping children who are bullies learn how to be less aggressive an more successful in social relationships. Dr. Watson is most interested in the goal of:
  - a) Descriptions
  - b) Explanation
  - c) Prediction
  - d) Control

### Quiz

- 4. Name which of the following early psychologists would have been most likely to agree with the statement, "The study of the mind should focus on how it allows us to adapt to our surroundings."
  - a) Wilhelm Wundt
  - b) William James
  - c) John Watson
  - d) Sigmund Freud
- 5. Which early perspective would have been LEAST likely to agree with the structuralists?
  - a) Introspectionism
  - b) Functionalism
  - c) Psychoanalysis
  - d) Gestalt
- 6. In the experiment with "Little Peter," what did Mary Cover Jones use as a stimulus to counter Little Peter's fear of the Rabbit?
  - a) A white rat
  - b) Food
  - c) A loud noise
  - d) Relaxation

### Psychology Now: Modern Perspectives

- <u>Psychodynamic Perspective</u> Modern version, focused on the development of a sense of self and the discovery of other motivations behind a person's behavior than sexual motivations
- <u>Behavioral Perspective</u>
  - B. F Skinner
  - Followed Watson
  - Operant Conditioning
    - Reinforcement and Punishment
- <u>Humanistic Perspective</u>
  - "3<sup>rd</sup> Force"
  - after psychodynamic and behaviorism
  - People's ability to direct their own lives
- <u>Cognitive Perspective</u> focuses on memory, intelligence, perception, problem solving and learning
  - <u>Cognitive neuroscience</u> study of the physical changes in the brain and nervous system during thinking



### **Modern Perspectives**

- <u>Sociocultural Perspective</u> Perspective that focuses on the relationship between social behavior and culture (Social and Cultural Psychology)
- <u>Biopsychological Perspective</u> Attributes human and animal behavior to biological events occurring in the body, such as genetic influences, hormones and the activity of the nervous system.
- <u>Evolutionary Perspective</u> perspective that focuses on the biological bases of universal mental characteristics that all humans share.

### Quiz

- 1. Which of the following pairs represents the two psychological perspectives that were part of the historical beginning of psychology?
  - a) Humanism and behaviorism
  - b) Behaviorism and psychodynamics
  - c) Psychodynamics and humanism
  - d) Cognitive psychology and psychodynamics
- 2. Which perspective is known at the "third force" is psychology?
  - a) Psychoanalysis
  - b) Behaviorism
  - c) Cognitive psychology
  - d) Humanism
- 3. Elsie suffered a stroke and had to be hospitalized. She then began to talk funny, garbled words and seemed to think she was being held against her will. Which of the following perspective BEST explains Elsie's odd behavior?
  - a) Psychodynamics
  - b) Cognitive psychology
  - c) Behaviorism
  - d) biopsychology

### Quick Quiz

- Anxiety is a common problem. Which possible explanation of anxiety fits these perspectives?
- 1) Anxious people often think about the future in distorted ways
- 2) Anxiety is due to forbidden unconscious desires
- 3) Anxiety symptoms often bring hidden rewards, such as being excused from exams
- 4) Excessive anxiety can be caused by a chemical imbalance
- 5) A national emphasis on competition and success promotes anxiety about failure.

#### A.Learning

- B. Psychodynamic
- C. Social-cultural

- D. Biological
- E. Cognitive

## **Psychological Professionals**

Psychiatrist – medical doctor; prescribe medications; not always up on psych

<u>Psychoanalyst</u> – practices psychoanalysis specialized training (M.D., Ph.D., Psy. D., Ed.)

Psychologist – no medical training but doctorate (Ph. D. or Psy. D.)

<u>Psychiatric social worker</u> - LCSW – Licensed Clinical Social Worker MSW - Master of Social Work

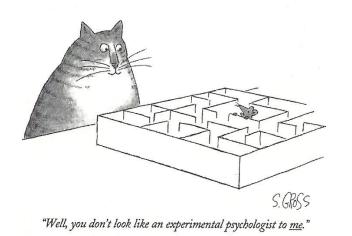
**LCPC** – Licensed Clinical Professional Counselor

MFCC – Licensed Marriage, Family and Child Counselor



### What do psychologists do?

- <u>Provide health or mental health services "psychological practice"</u>
  - **<u>Counseling psychologist</u>** help people deal with everyday life
  - <u>School psychologist</u> school performance; student, parent & teacher
  - <u>Clinical psychologist</u> diagnose, treat & study mental / emotional problems; has Ph.D., an Ed.D, or a Psy.D.
- Teach and do research in colleges and universities
  - <u>Basic psychology</u> "pure" research; knowledge for sake of knowledge
  - **<u>Applied psychology</u>** direct practical significance; application of findings



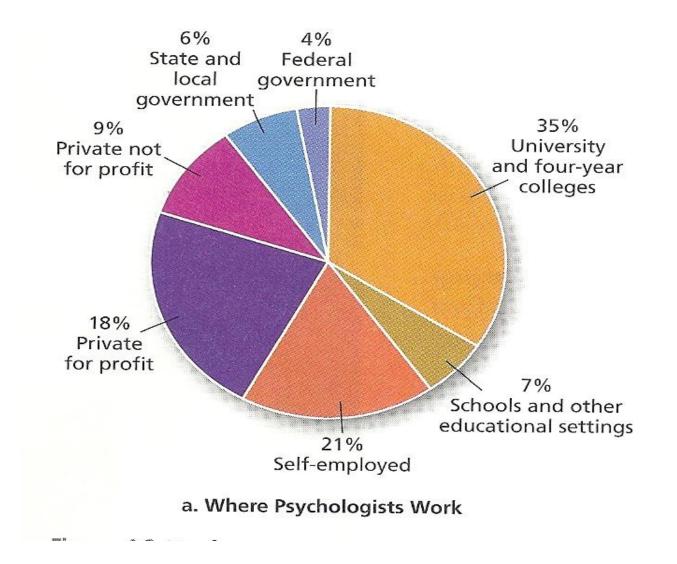
## What do Psychologist do?

- <u>Teach and do research in colleges and universities</u>
  - <u>Basic psychology</u> "pure" research; knowledge for sake of knowledge
    - "How does peer pressure influence attitudes and behavior"
  - <u>Applied psychology</u> direct practical significance; application of findings
    - "How can knowledge of peer pressure reduce underage drinking?"
- Types of nonclinical specialties
  - **Experimental psychologist** laboratory studies; learning, motivation & cognition
  - <u>Educational psycho</u>logist learning and improvement of school systems
  - **Developmental psychologist** change and growth over time
  - Industrial/organizational psychologist behavior in workplace
  - **<u>Psychometric psychologist</u>** design and evaluate tests

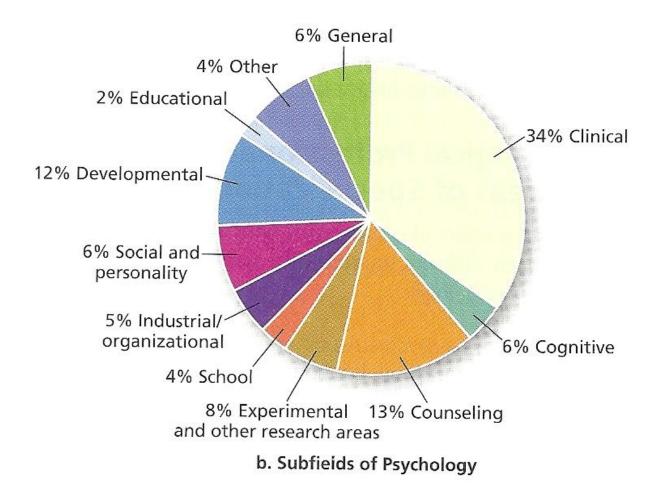
# What do psychologist do?

- <u>Psychology in the community</u>
  - Conducting research or applying its findings in nonacademic settings (business, sports, government, law, and military).
  - American Psychological Association (APA)
    - 53 divisions
  - Psychology of men
  - Psychology of women
  - Sports psychology
  - Gay and lesbian issues
  - Psychology and the law
  - Advertising

### Work Settings



## Subfields



### Careers as a Psychologist

3 Main Types of Psychologist

- -Clinical Psychologists
- -Research Psychologists
- -Community
  - •Law
  - •Sports
  - Advertising

### **Career Requirements**

- Completion of a doctoral program.
- Licensure is required when working independently.
- A one year internship for clinical.
- Effective psychologists match career choice with personal temperament and aptitude.

# **Clinical Psychologists**

- Clinical psychologists are the largest subfield.
- Clinical psychologists help those who have difficulty functioning due to a crisis.
- Clients often have the goal to return to a previous level of functioning prior to the trauma event.
- Psychologists complete this work in community mental health centers, private practices, hospitals and clinics. Clinical psychologists provide treatment in individual, group, couples or family modalities.
- Clinical psychologists are also part of interdisciplinary teams that collaborate with physicians, nutritionists, physiotherapists, and social workers to implement treatment and intervention programs.\*

## **Research Psychologists**

- Research or experimental psychologists study the behaviors of humans and animals. \*
- Research psychologists formulate hypotheses and collect data to test their validity.
- Experimental research is conducted on topics that include motivation, learning, memory, sensory and perceptual processes, effects of substance abuse, as well as genetic and neurological factors affecting behavior.\*\*
- This research can be completed in a laboratory setting where the variables of the study can be controlled, while other research can be completed in vivo where behavior is studied as it occurs naturally.
- Researchers also work collaboratively on multidisciplinary teams.

\* American Psychological Association, 2009\*\*United States Department of Labor, 2009

## Job Trends

• Jobs for psychologist are expected to grow faster than average.

• The median salaries for these careers were reported between \$59,000 and \$86,000.

• The salaries for research psychologists were higher than those for clinical psychologists.

United States Department of Labor, 2009

## Salary for Clinical Psychologist

- The median annual salary for clinical psychologists in May 2006 was \$59,440.
- The middle 50 percent earned between \$45,300 and \$77,750.
- The lowest 10 percent earned less than \$35,280.
- The highest 10 percent earned more than \$102,730.

United States Department of Labor, 2009

## Salary for Research Psychologist

- The median annual salary for research psychologists in May 2006 was \$86,420.
- The middle 50 percent earned between \$66,310 and \$115,000.
- The lowest 10 percent earned less than \$48,380.
- The highest 10 percent earned more than \$139,620.

United States Department of Labor, 2009

## What would you do and why?

- Research
- Clinical Practice
- Community; non clinical

## Quick Quiz

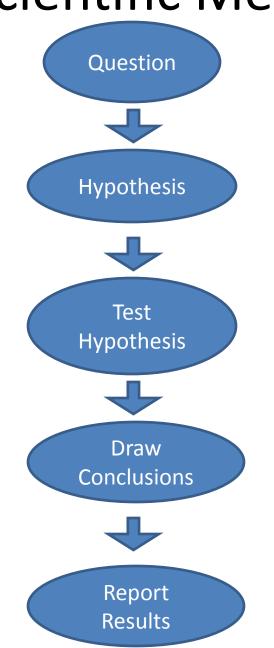
- 1. Psychiatrist
- 2. Clinical psychologist
- 3. Research psychologist
- 4. Psychoanalyst
- A. Trained in a therapeutic approach started by Freud
- B. Has a Ph.D., Psy.D. Ed.D. and does research on or psychotherapy for mental health problems
- C. May have any credentials or none.
- D. Has an advanced degree (usually a Ph.D.) & does applied or basic research.
- E. Has an M.D.; tends to take a medical approach to mental health problems.

### Psychology: The Science

• Why Psychologists use the scientific method.

<u>Scientific Method</u> – a system of gathering data so that bias and error in measurement are reduced.

### Scientific Method



### Scientific Method

#### 1. Perceiving the Question

- You notice something interesting happening and would like an explanation.
  - You wonder if violent cartoons create aggressive behavior in children.

#### 2. Form a Hypothesis

- A tentative explanation of a phenomenon based on observations.
- "Children who watch violent cartoon will become aggressive"

#### 3. Test Hypothesis

- Choose a method to gather information
- Look for information that proves or disproves your hypothesis

#### 4. Draw Conclusions

- Will show if hypothesis is supported or unsupported (both are important)
- Statistical operations on raw data to determine if results by chance.

#### 5. Report Your Results

- Write exactly what you did so study can be replicated.

## Quick Quiz

Which rule of science was violated in each of these cases?

- 1) For years, writer Norman Cousins told how he had cured himself of a rare, life threatening disease through a combination of humor and vitamins. In a best selling book, he recommended the same approach to others.
- 2) Benjamin Rush, an 18<sup>th</sup> century physician, believed that yellow fever should be treated by bloodletting. Many of his patients died, but Rush did not lose faith in his approach; he attributed each recover to the treatment and each death to the severity of the disease.

# **Types of Studies**

- A. <u>Descriptive</u>
  - 1. Observation
    - Naturalistic
    - Laboratory
  - 2. Case studies
  - 3. Surveys
- B. <u>Relationship</u>
  - 1. Correlation
- C. <u>Causal</u>
  - 1. Experiments

### Descriptive

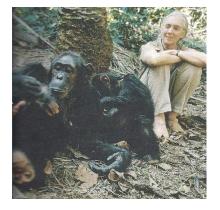
- Gathering the facts
  - <u>Descriptive method</u> describe / predict behavior not explain
  - <u>Representative sample</u> group that matches larger
     population wanting to study
  - Small # representative better than large # not representative
  - Must have at least 20

### **Descriptive Studies**

<u>Observational</u> – observe, measure & record behavior careful not to intrude

"first step"

Naturalistic – people or animals in natural environment schools, on the street, offices Jane Goodall; Diane Fosse



- <u>Observer Effect</u> tendency for people and animals to act differently from normal when they are now they are being observed.
- <u>Observation Bias</u> tendency of observers to see what they expect to see.
- <u>Blind observer</u> observer not know the research question.
- <u>Participant Observations</u> when observer becomes a participant.
- Laboratory more control sophisticated equipment sleep studies one way mirror

## Naturalistic Observation

#### Advantage

- Allows description of behavior as it occurs in real life.
- Useful in 1<sup>st</sup> stage of exp.

#### Disadvantage

- Little or no control
- Observation may be bias
- Weak cause and effect

# Laboratory Observation

#### Advantage

- More control than natural
- Sophisticated equipment

#### Disadvantage

- Limited control
- Observation may be bias
- Weak cause and effect
- Behavior may differ

## **Descriptive Studies**

<u>Case studies</u> - detailed description of one person

- Careful observation or formal tests by clinicians /researchers
- "Are first yrs important for learning speech"
  - Case study on Genie
- Don't over simplify

"autism from cold mothers"

### **Case Studies**

#### Advantages

- Good source of hypothesis
- In-depth information
- Study unusual cases that would be unethical or impractical to study any other way.

#### Disadvantage

- Vital information missing
- Hard to interpret
- Memories may be selective or inaccurate.
- Individual may not be representative or typical

### **Descriptive of Studies**

<u>Surveys</u> – questionnaires and interviews that gather information based on asking people about experiences, attitudes or opinions

- Gallup poll national opinion poll
- Call in radio show surveys

<u>Representative sample</u> – randomly selected sample of subjects from a larger population of subjects.

<u>Population</u> – the entire group of people or animal in which the researcher is interested.

- Certain shows have specialized audience
- "Should weed be legalized?"

»Wayne's World vs. Meet the Press

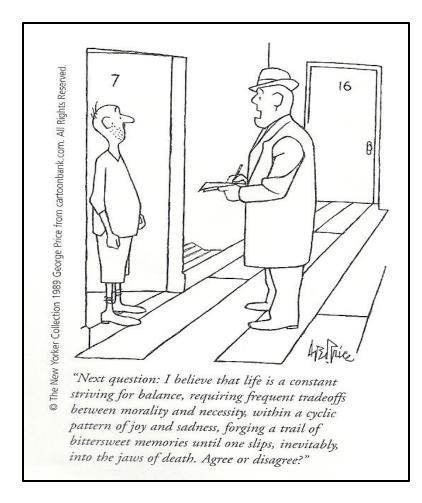
Volunteer Bias - Feel strongly enough to call; differ from those who don't

People lie

Question construction – bias or slant

"how many times have you..." vs "have you ever..."





## Surveys

#### Advantage

 Large amount of information on large numbers of people

#### Disadvantage

- No identification of cause and effect.
- Not a representative sample.

### Quiz

- 1. In the scientific method, the first step is
  - a) Reporting your results
  - b) Perceiving a question
  - c) Drawing conclusions
  - d) Testing the hypothesis
- 2. In a naturalistic observation, the phenomenon where the behavior of the subjects being observed changes due to being watched is called
  - a) Observer bias
  - b) Participation observation
  - c) Observer effect
  - d) Representative sampling
- 3. The use of \_\_\_\_\_\_ helps to control for the effect of observer bias.
  - a) Blind observations
  - b) A single trained observer
  - c) Randomly selected observers
  - d) None of these

# Quiz

4. The main disadvantage of a case study is that it is NOT

- a. Easily done due to the large number of subjects
- b. Detailed enough for most research questions
- c. Generalizable to other similar condition
- d. Biased
- 5. Which of the following is the BEST example of a representative sample?
  - a. You ask your fellow students to be participants in a study of adult memory.
  - b. You ask people from your church to participate in a study of family values.
  - c. You choose people shopping in an expensive store in the mall to respond to your survey.
  - d. You choose people randomly from the telephone book to respond to your survey.

### **Relational Studies**

**4.** <u>Correlational</u> – look for a consistent relationship between two variables.

<u>Correlation Coefficient-</u> a number to measure strength and direction of the relationship between the 2 variables

<u>Variables</u> – Characteristic of behavior or experience that can be measures or described by a number:

- Height
- Weight
- IQ
- Income

# **Correlation (continued)**

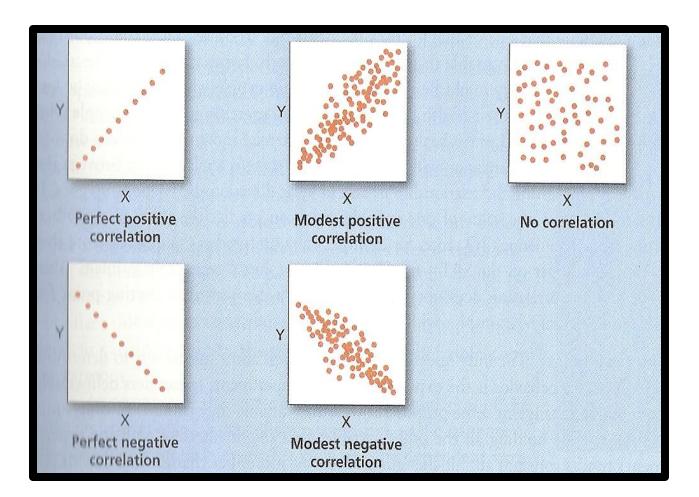
Positive Correlation – higher X = higher Y (IQ to grades)

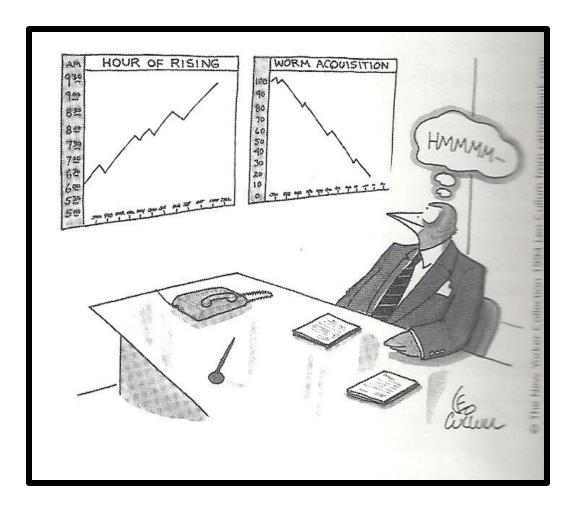
lower X = lower Y

• Negative Correlation – higher X = Lower Y (TV to grades)

Variable X Variable X Variable Y Variable X Variable X Variable X Variable X Variable X Variable X Variable Y Variable Y Variable Y Variable Y Variable Y lower Y = Higher X

Uncorrelated - no correlation (tall and aggression)





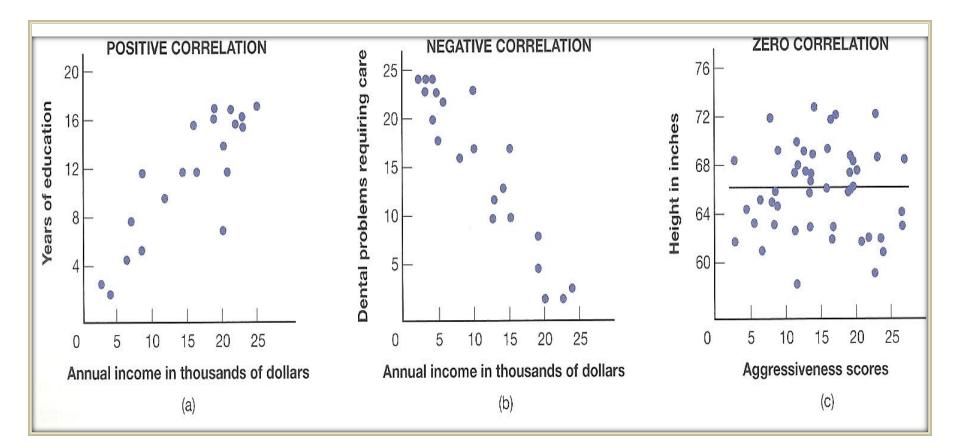
### Correlation

- Coefficient of correlation range in value from -1.00 to +1.00
  - Use height and weight as variables
  - List tallest to shortest and list heaviest to lightest
    - If list the same then +1.00 correlation
    - +.80 = strong
    - -.80 = strong but negative correlation
    - If no correlation = zero or close to it
  - Correlation 
     Causation

#### So.....

- Annual income and
  - years of education
  - dental problems
  - height
- How do they relate?

### Correlations



### **Correlation Studies**

#### Advantage

- Shows whether 2 or more variable are related
- Allows general predictions

#### Disadvantage

• No cause and effect

### Quick Quiz

A) Identify each of the following as a positive or negative correlation.

- 1) The higher a male monkey's level of the hormone testosterone, the more aggressive he is likely to be.
- 2) The older people are the less frequently the tend to have sexual intercourse
- 3) The hotter the weather, the more crimes against persons tend to occur.

### Activity

# What Type of Study Would You Use?

• Does climate affect mating habits of whales?

Do abused children have difficultly with relationships?

• IQ and Grades?

### Causal Studies Experiment variables

- 1. <u>Experiments</u> a deliberate manipulation of a variable to see if corresponding changes in behavior result, allowing the determination of cause-and-effect
- <u>Operational definition</u> define a variable so it can be measured
- Independent Variable Manipulated by researcher nicotine
- <u>Dependent Variable</u> Measurable response or behavior in the experiment collisions
- The dependent variable <u>depends</u> on the independent variable

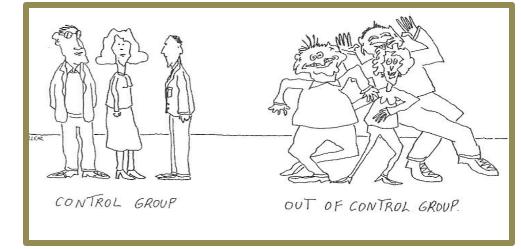
## Causal studies: experiment groups

#### Groups

<u>Experimental group</u> – Subjects in an experiment who are subjected to the independent variable.

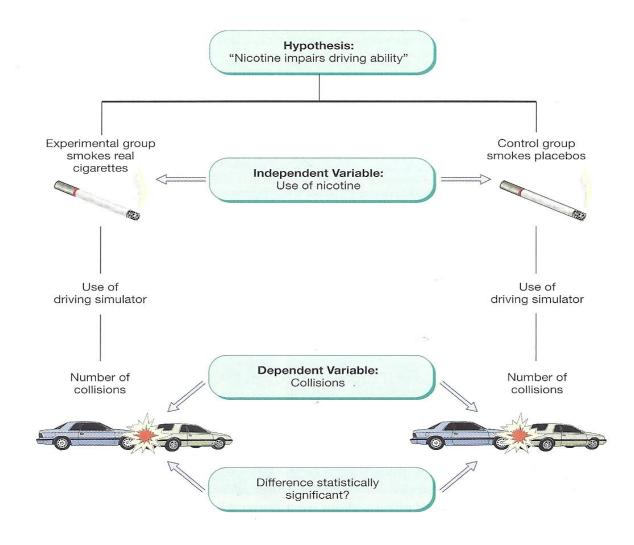
<u>Control Group</u> – Subjects in an experiment who are not subjected to the independent variable **and** who may receive a placebo.

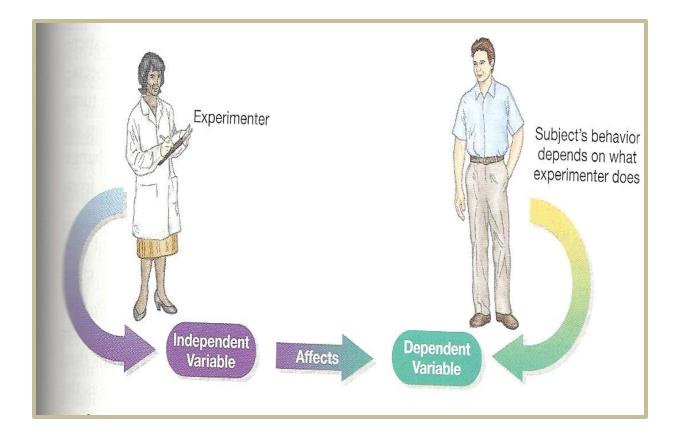
– a comparison group



<u>Placebo</u> – fake treatment inactive substance sugar pills Used as a control in an experiment

Random assignment – same probability of being assigned to either group





### Dependent vs. Independent

Question: Does eating a donut affect test scores?

Method:

Control group

Experimental group

Dependent variable

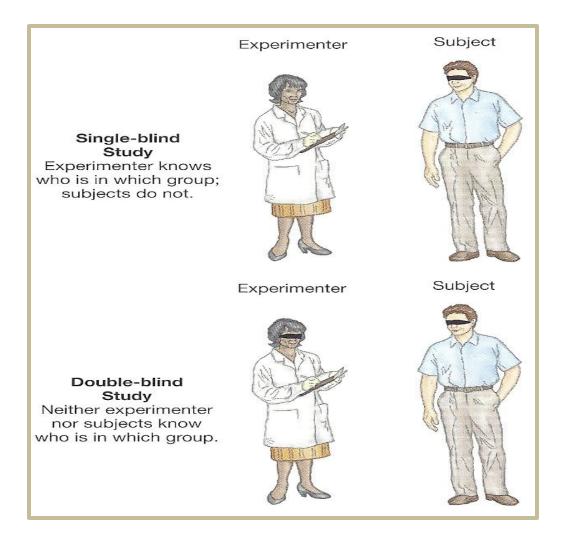
Independent variable

### **Experiments (Continued)**

- <u>Experimenter Effects</u> tendency of the experimenter's expectations for a study to unintentionally influence the results of the study.
- <u>Single Blind</u> Subjects do not know if in control or experimental group.

• <u>Double Blind</u> – Neither subject nor experimenter know which group subjects are in.

# Single Blind and Double Blind



# **Experimental Studies**

#### Advantage

- Control situation
- Can ID cause and effect
- Placebo v. treatment

#### Disadvantage

- Artificial situation
- Results may not generalize to real world
- Experimenter effects

# Quiz

- 1. It's common knowledge that the more you study, the higher you grade will be. What kind of correlation is this relationship?
  - a. Positiveb. Zeroc. Negatived. Causal
- 2. Which of the following would indicate the strongest relationship between variables.

a.+1.04	c. +0.75
b0.89	d. +0.54

- 3. In a \_\_\_\_\_\_study, neither the experimenter nor the participants know who is in the control group and who is in the experimental group.
  - a. Placebo b. Single-blind
- c. Double-blind d. Triple-blind

# Quiz

- 4. In an experiment to test the effects of alcohol on memory. The experimenter gives vodka mixed in orange juice to tone group of subjects and orange juice with no vodka to the other group. She then measures the memory skills of both groups by means of a memory test. In this study, the independent variable would be.
  - a. Scores on the memory test
  - b. The presence or absence of vodka in the orange juice
  - c. Intelligence
  - d. A placebo
- 5. In the same experiment, the control group is the one that gets
  - a. Only one drink of orange juice with vodka
  - b. A fake test of memory
  - c. Only something to eat
  - d. The orange juice without vodka

## **Ethics Working With People**



# Ethics of Psychological Research

- When working with people:
- 1. Rights and well-being of participants must be weighed against the study's value to science.
- 2. Participants must be allowed to make an informed decision about participation.
- 3. Deception must be justified.
- 4. Participants may withdraw from the study at any time.
- 5. Participants must be protected from risks or told explicitly of risks.
- 6. Investigators must debrief participants, telling the true nature of the study and expectation of results.
- 7. Data must remain confidential.

# **Ethics Working With Animals**

- Simple behaviors that are easy to identify change
- Not able to study on humans maternal deprivation
- Shorter life span so can see result over life time
- Are easier to control



"He says he wants a lawyer."

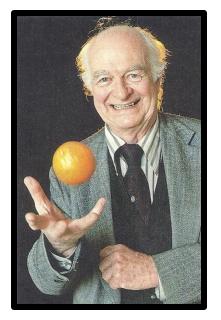
# **Critical Thinking**

 Ability and willingness to assess claims and make objective judgments on the basis of well-supported reasons and evidence rather than emotion or anecdote.

• Making reasoned judgments about claims.

# 4 criteria for Critical Thinking

- 1. There are very few "truths" that do not need to be subjected to testing.
- 2. All evidence is not equal in quality.
- 3. Just because someone is considered to be an authority or to have expertise does not make everything that person claims automatically true.
  - Linus Pauling
  - 2 time Nobel winner
  - Vitamin C prevent cold
  - No evidence to support



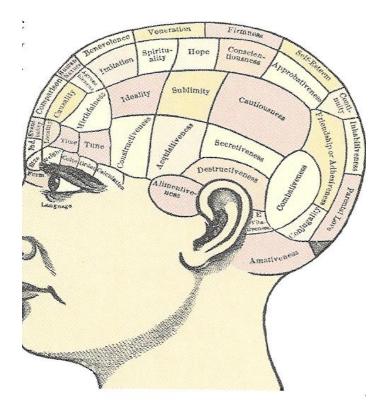
4. Critical thinking requires on open mind.

# **Psychology: The Science**

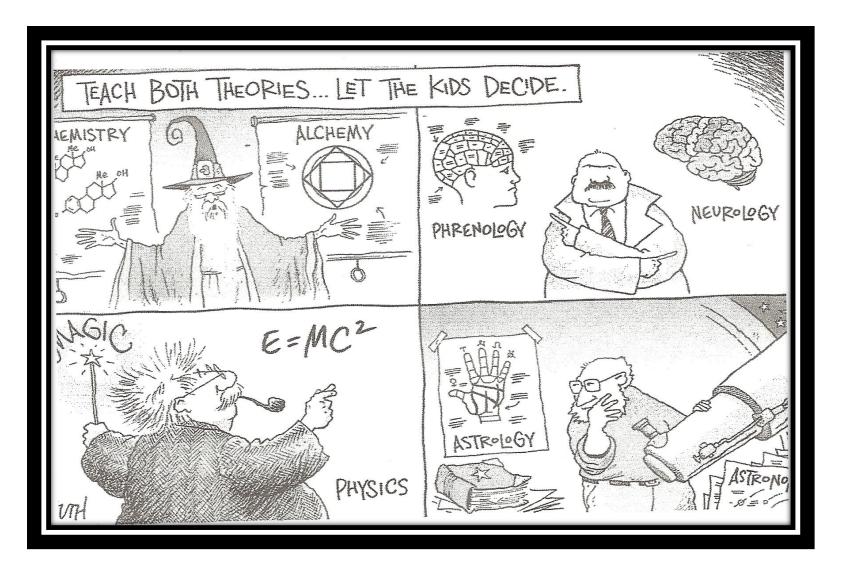
- Empirical or Pseudoscience
  - Evidence gathered by
    - observation
    - experimentation
    - measurement
      - VS
  - "Pop psychology" or quick fixes self help
    - popular opinion

# **Empirical or Pseudoscience?**

- <u>Phrenology</u> (study of mind)
  - Early 1800's
  - Joseph Gall (1758 1828)
  - Austrian physician
  - Different brain areas accounted for specific character and personality traits
  - "read" from bumps on the skull
  - Studied into the 20<sup>th</sup> century
    - A pseudoscience



## Got Critical thinking ?



### Quiz

- 1. Which of the following is NOT one of the common ethical rules?
  - a) Participants have to give informed consent
  - b) Deception cannot be used in any studies with human being
  - c) The rights and well-being of the participants must come first
  - d) Data must remain confidential
- 2. We use animals in research because

a. Animals have simple behavior that makes it easy to see changes
b. Animals don't live as long as humans and are easier to control
c. We can do things to animals that we can't do to people
d. All of the above

- 3. Critical thinking means making judgments based on
  - a. Emotional issues
  - b. Deeping a closed mind
  - c. Reason and logical evaluation
  - d. Authority and expertise

# Quiz

- 4. A famous newscaster advertises a new magnetic mattress for controlling pain. If Nathanial decides to order the mattress because he believes that such a well-known personality should know if it works or not. He has made a error in which of the following?
  - a. Few "truths" do not need to be tested.
  - b. All evidence is not equal in quality.
  - c. Authority or expertise does not make the claims of the authority or expert true.
  - d. Critical thinking requires an open mind.
- 5. Which pseudopsychology claims to understand personality through a study of the bumps on one's skull?
  - a. Phrenology
  - b. Palmistry
  - c. Graphology
  - d. Astrology