

# Prologue and Chapter 1 Test Review

Study the following terms/concepts  
for the multiple choice test.

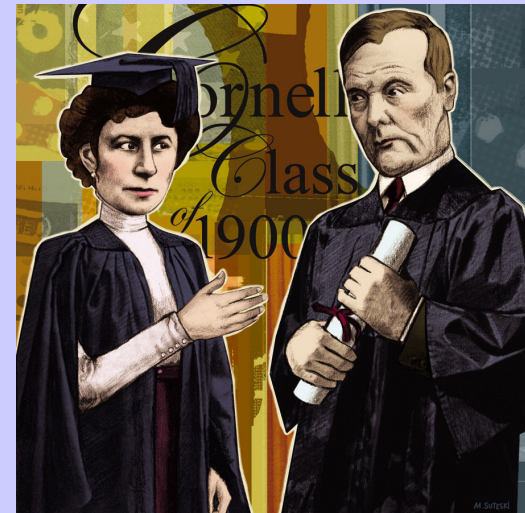
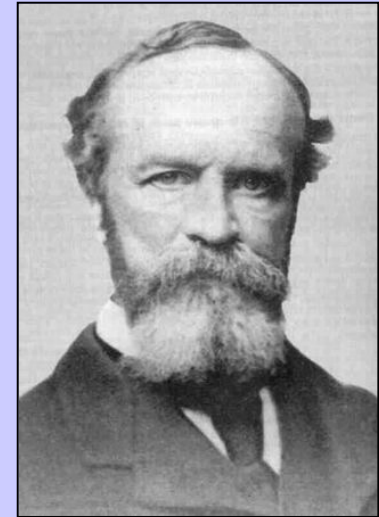
# Wilhelm Wundt and Structuralism

- Wundt: the first experimental psychologist
- The early school he founded was known by a method called *introspection*
- First psych lab, 1879



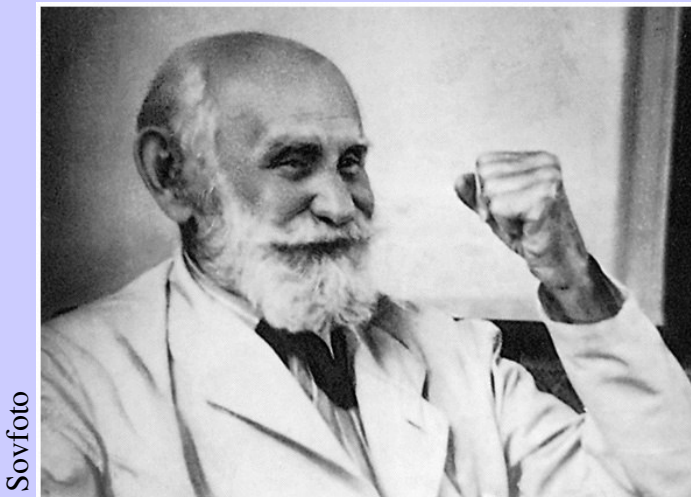
# William James

- Wrote most famous psych text: Principles of Psychology, 1890
- His field of psych was called *functionalism*
- One of his students, Mary Calkins, became the first female president of the American Psychological Association



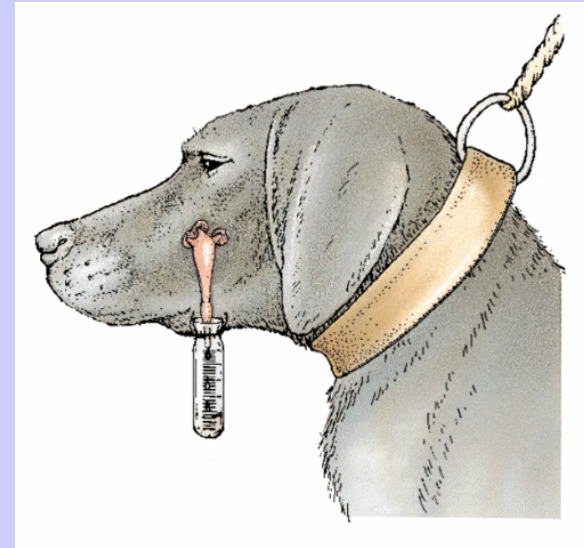
# Pavlov, a dog, and learning

Russian physiologist **Ivan Pavlov** who elucidated a type of learning called classical conditioning. His work provided a basis for later behaviorists like **John Watson** and **B. F. Skinner**.



Sovfoto

Ivan Pavlov (1849-1936)



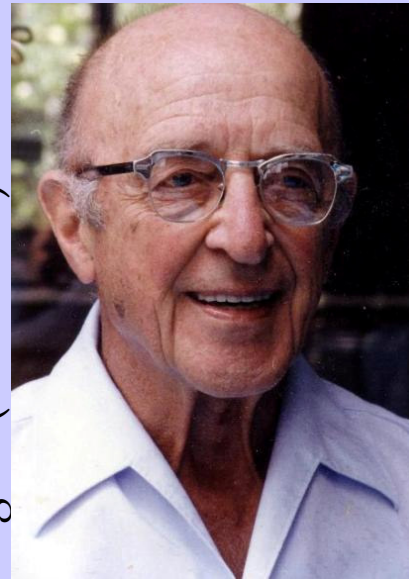
# Humanistic Psychology leaders

Maslow (1908-1970)



<http://facultyweb.cortland.edu>

Rogers (1902-1987)



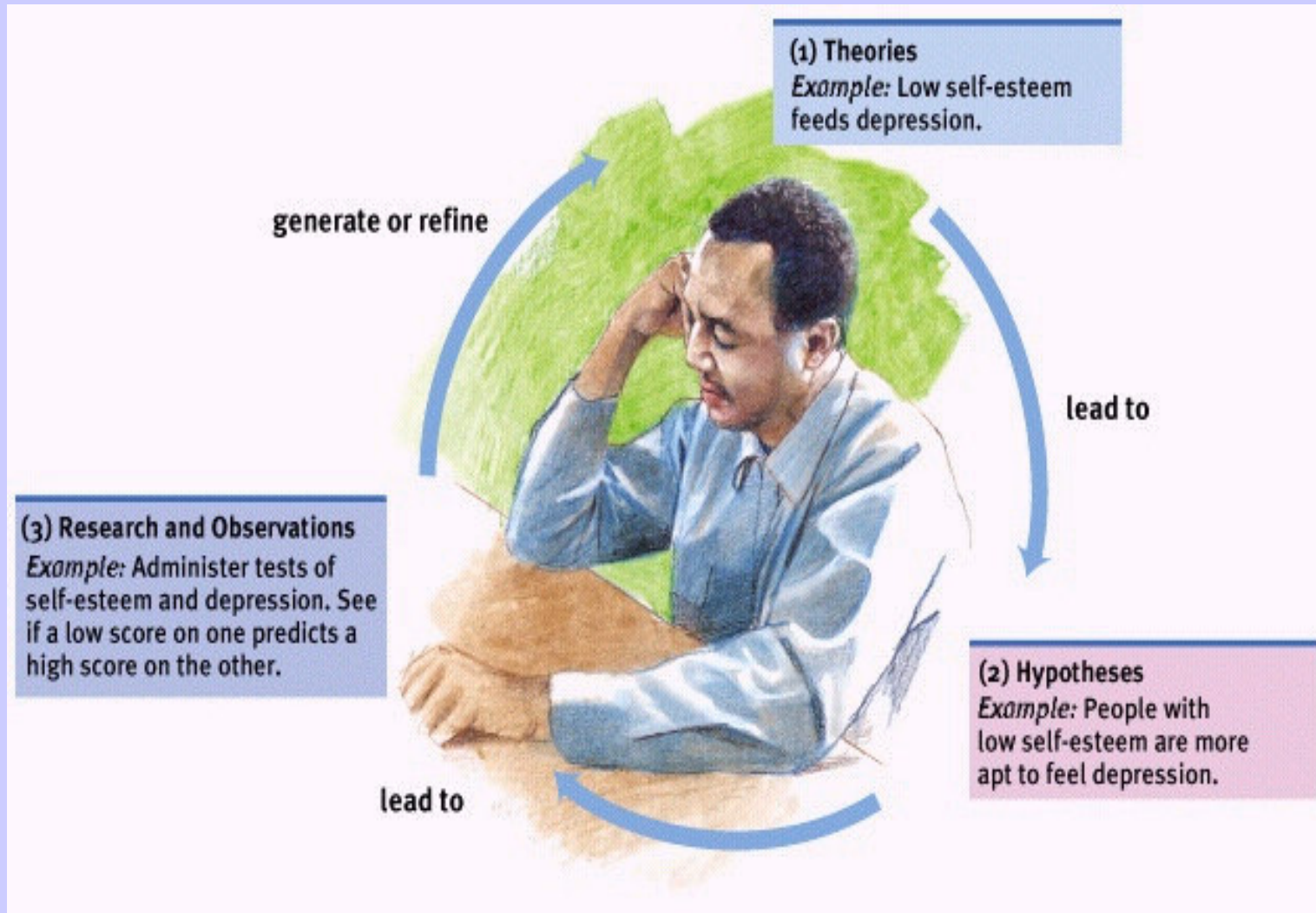
<http://www.carlrogers.dk>

Abraham Maslow and Carl Rogers emphasized current environmental influences on our growth potential and our need for love and acceptance.

# The Scientific Method

- Theory
  - an explanation using an integrated set of principles that organizes and predicts observations
- Hypothesis
  - a testable prediction
  - often implied by a theory

# The Scientific Method



# Research Strategies

- Operational Definition
  - a statement of procedures (operations) used to define research variables
  - Example-
    - intelligence may be operationally defined as what an intelligence test measures

# Research Strategies

- Replication

- repeating the essence of a research study to see whether the basic finding generalizes to other subjects and circumstances
- usually with different subjects in different situations

# Research Strategies

- Naturalistic Observation
  - observing and recording behavior in naturally occurring situations without trying to manipulate and control the situation

# Research strategy

- Case Study
  - an observation technique in which one person is studied in depth in the hope of revealing universal principles

# Research Strategies: survey

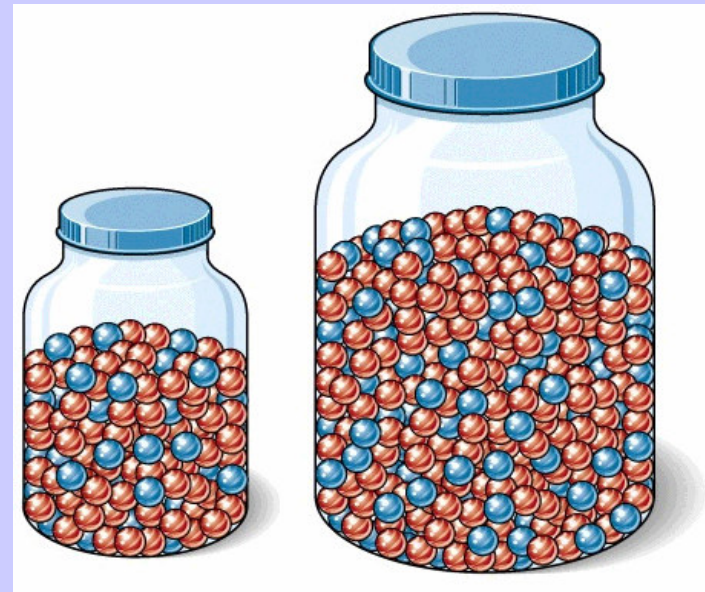
- technique for ascertaining the self-reported attitudes or behaviors of people
- usually by questioning a representative, *random sample* of them to ensure that those questioned represent the larger population

# Sampling the Population, 28

- Population
  - all the cases in a group, from which samples may be drawn for a study
- Random Sample
  - a sample that fairly represents a population because each member has an equal chance of inclusion

## Random Sampling, 28

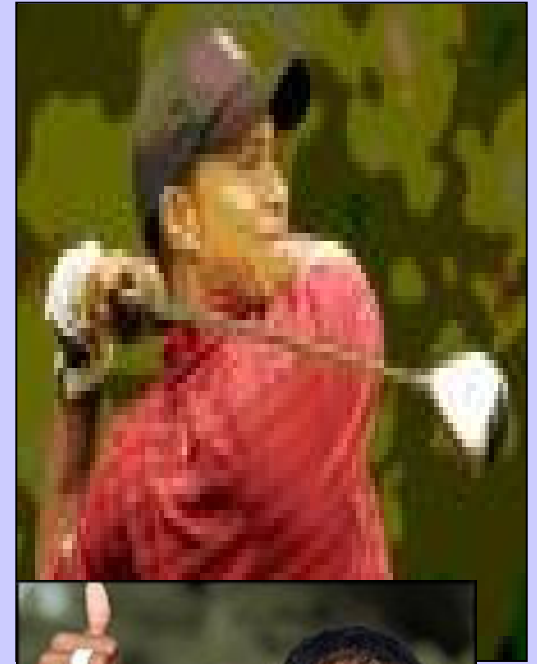
If each member of a population has an equal chance of inclusion into a sample, it is called a random sample (unbiased). If the survey sample is biased, its results are not valid.



The fastest way to know about the marble color ratio is to blindly transfer a few into a smaller jar and count them.

# Sample size

- Imagine you're a golfer of above average ability and have the opportunity to play Tiger Woods. If you want to maximize your chance of winning how many holes should you play?
- A. 1   b. 18   c. 36   d. 72
- The more holes you play the more likely Tiger's better ability will be revealed. (so A is correct ans.)



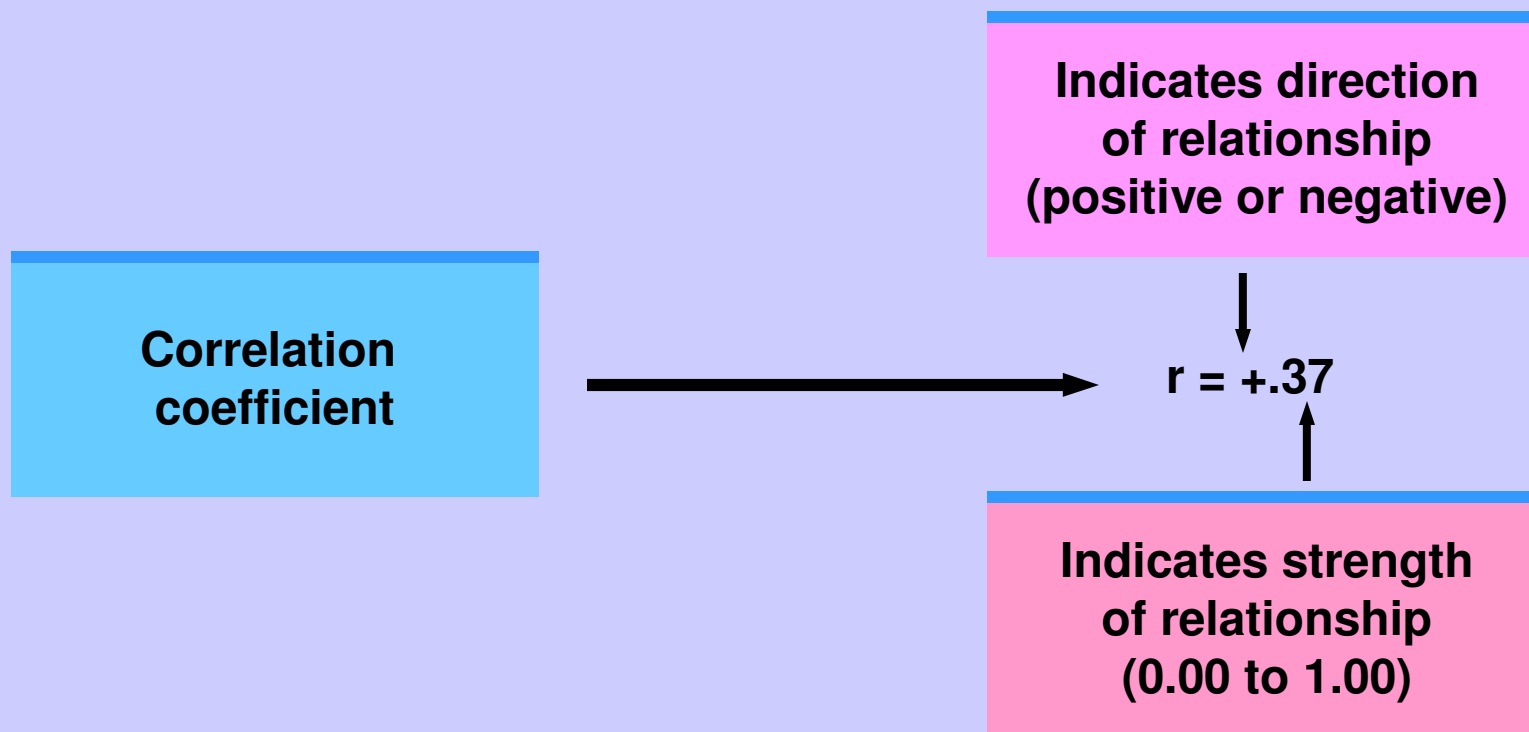
# Correlation, 30

When one trait or behavior accompanies another, we say the two correlate.

# Research Strategies, see page 30

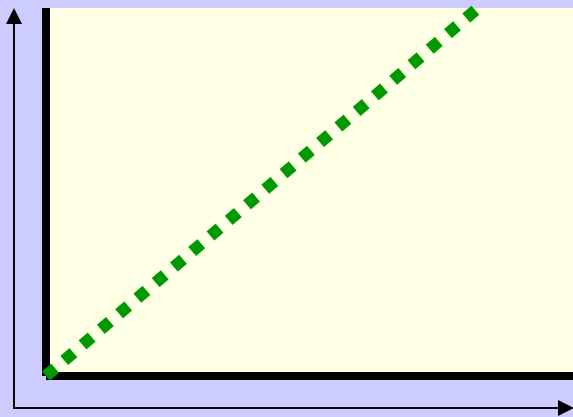
- **Correlation Coefficient**

- a statistical measure of the extent to which two factors vary together and thus how well either factor predicts the other

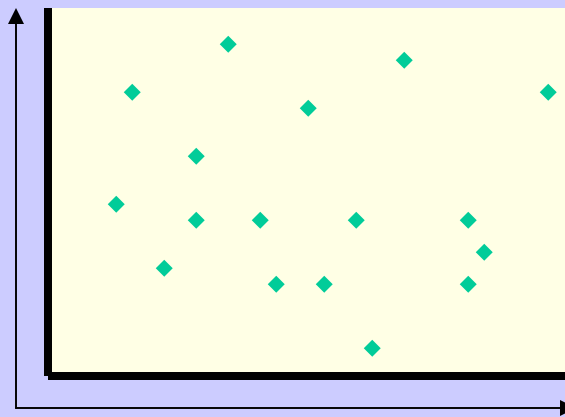


# Research Strategies

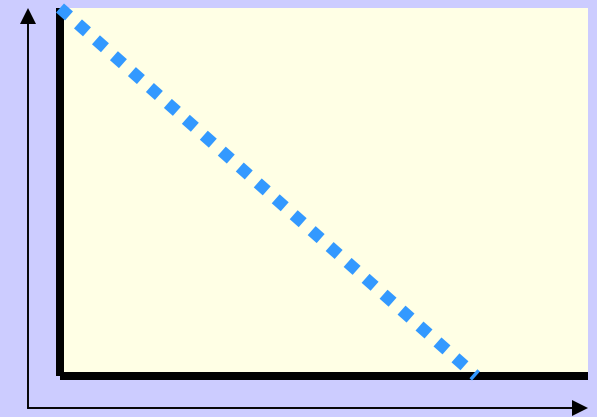
Note: the closer the value is to 1 OR -1 the stronger is the relationship.



**Perfect positive  
correlation (+1.00)**



**No relationship (0.00)**



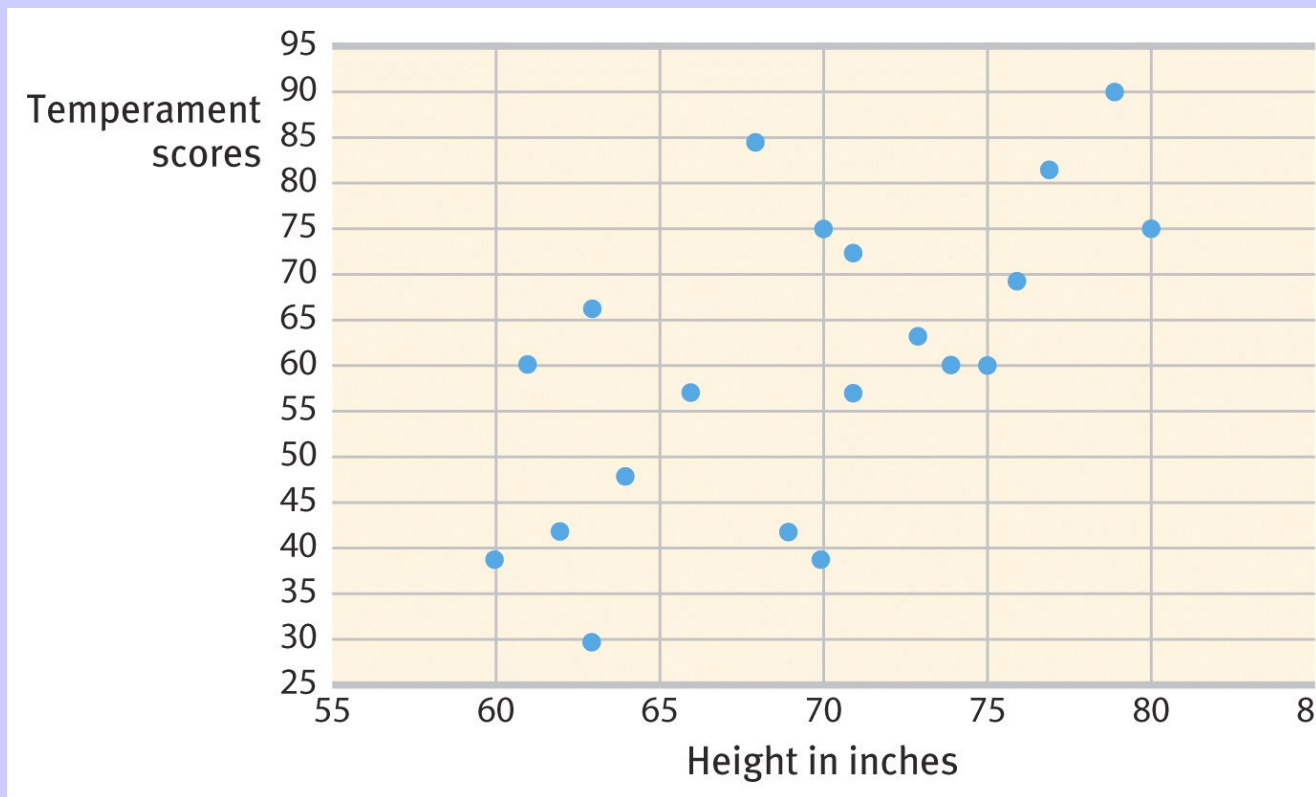
**Perfect negative  
correlation (-1.00)**

# Research Strategies

- Scatterplot
  - a graphed cluster of dots, each of which represents the values of two variables
  - the slope of the points suggests the direction of the relationship
  - the amount of scatter suggests the strength of the correlation
    - **little scatter indicates high correlation**
  - also called a scattergram or scatter diagram


# Scatterplot, 31

The Scatterplot below shows the relationship between height and temperament in people. There is a moderate positive correlation of +0.63.



# Illusory Correlation, p. 33

- **Illusory Correlation**
  - the perception of a relationship where none exists

	Conceive	Do not conceive
Adopt	 <p>confirming evidence</p>	disconfirming evidence
Do not adopt	disconfirming evidence	confirming evidence

# Research Strategies: Variables

- **Independent Variable** page 38
  - the experimental factor that is manipulated
  - the variable whose effect is being studied
- **Dependent Variable**
  - the experimental factor that may change in response to manipulations of the independent variable
  - in psychology it is usually a behavior or mental process

# Confounding variable

- The researcher doesn't control for these and they affect the results of the experiment instead of the independent variable

# Double-blind Procedure, 37

- both the subject and the research staff are ignorant (blind) about whether the subject has received the treatment or a placebo
- commonly used in drug-evaluation studies

# Research Strategies: Conditions

- **Experimental Condition** page 37
  - the condition of an experiment that exposes subjects to the treatment, that is, to one version of the independent variable
- **Control Condition**
  - the condition of an experiment that contrasts with the experimental treatment
  - serves as a comparison for evaluating the effect of the treatment

# Random Assignment, 37

- assigning subjects to experimental and control conditions by chance
- minimizes pre-existing differences between those assigned to the different groups

# Research Strategies

## Comparing Research Methods

Research Method	Basic Purpose	How Conducted	What is Manipulated
Descriptive	To observe and record behavior	Case studies, surveys, and naturalistic observations	Nothing
Correlational	To detect naturally occurring relationships; to assess how well one variable predicts	Computing statistical association, sometimes among survey responses	Nothing
Experimental	To explore cause and effect	Manipulating one or more factors and using random assignment to eliminate preexisting differences among subjects	Independent variable(s)

# Central tendencies, page 41

- **Mode**
  - the most frequently occurring score in a distribution
- **Mean**
  - the arithmetic average of a distribution
  - obtained by adding the scores and then dividing by the number of scores
- **Median**
  - the middle score in a distribution
  - half the scores are above it and half are below it

# Measures of variation, 41-42

- Range
  - the difference between the highest and lowest scores in a distribution
- Standard Deviation
  - a computed measure of how much scores vary around the mean; this tells you how consistent scores are around the mean; the smaller the deviation the closer any one score would be to the mean or average; the larger the deviation the more spread out the data is

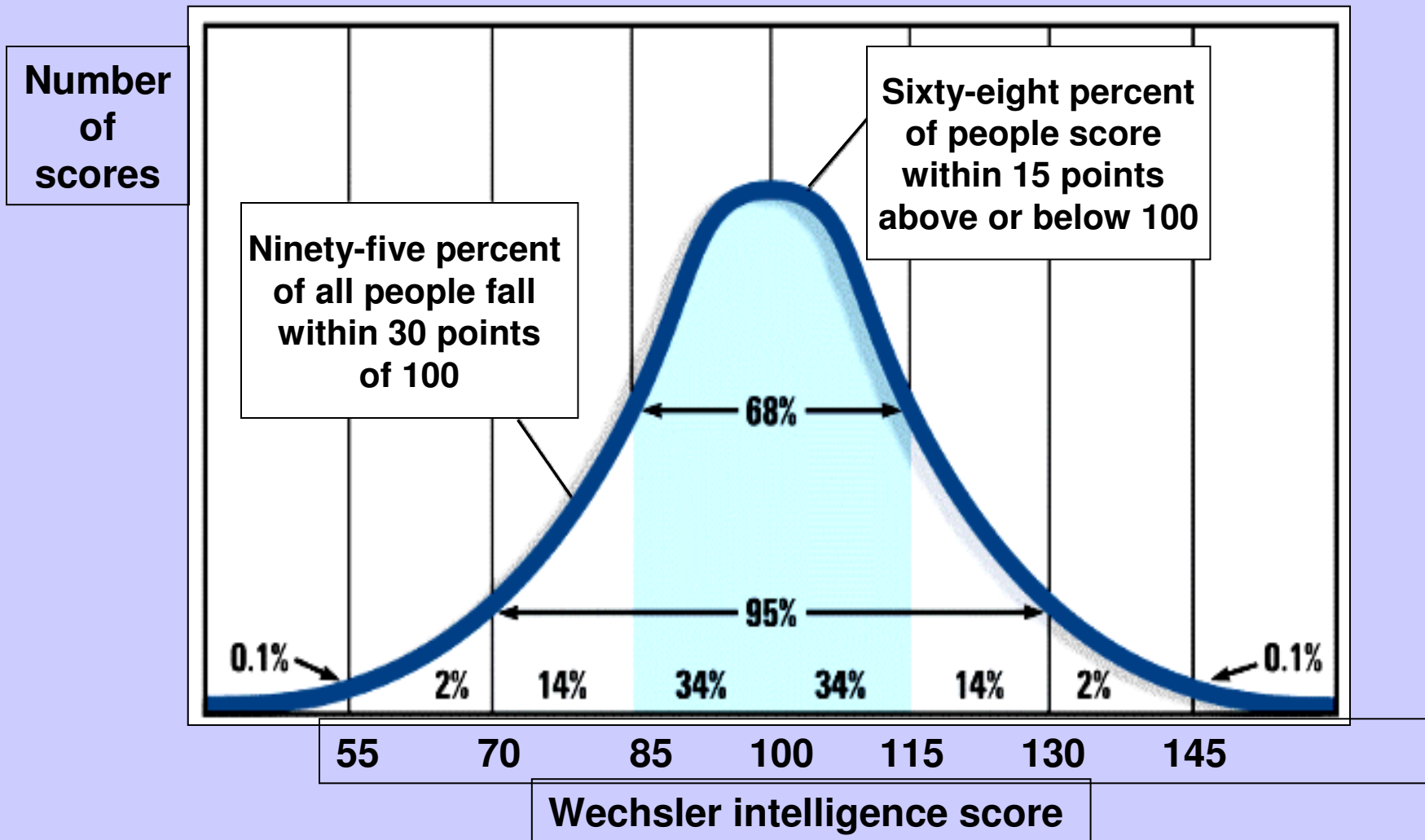
# Statistical Significance, 43

- a statistical statement of how likely it is that an obtained result occurred by chance

# Generalizing from the data

- In order to extend research experiment findings to the general public you need:
- 1. a sample in your experiment that has many cases rather than fewer
- 2. a representative sample from the population studied

# The Normal Curve



# Placebo, 37

- an inert substance or condition that may be administered instead of a presumed active agent, such as a drug, to see if it triggers the effects believed to characterize the active agent

# Ethical Guidelines (APA) for using human subjects in experiments

- 1. *Informed consent*. Participation should be voluntary and based on informed consent: subjects should know what is involved so they can make the decision to participate. Subjects may withdraw at any time.

# Ethics: Protection from harm

- 2. There should be no exposure to harmful procedures. Researchers should make every effort to ensure that subjects aren't physically or psychologically harmed by the experiment

# Debriefing

- 3. Any deception must be promptly explained during debriefing. The deception should be such that it would not have affected the subject's decision to participate.

# Experimental ethics: Privacy

- 4. The right to privacy shall be maintained. Subject's names and experiment results/data shall not be identified.

# American and British psychologists urge investigators

- Ethical principles are important because they allow the researcher to explain the research to the participants after the experiment is finished

# Animal research ethics findings

1. Studies show most animals aren't shocked harmfully
2. Not deprived of food/water
3. Not isolated to the point of insanity/despair
4. Only 7 % of studies use animals
5. APA and other groups have guidelines to protect animals
6. Only 4% of experiments use any level of shock

# Research ethics findings, 46-48

- Only small % of animal experiments use shock.
- The American and British Psychological groups have strict guidelines for care of animal and human subjects
- Charges that psychologists routinely abuse animals in their experiments have no foundation