



Chapter 1: Introduction and Research Methods



Lecture Overview

- Introducing Psychology
- Origins of Psychology
- The Science of Psychology
- Research Methods
- Tools for Student Success



Introducing Psychology

- What is Psychology?

The ***scientific study*** of behavior and mental processes.

- Psychology focuses on **critical thinking** and is scientific.

- **Pseudopsychologies** (e.g., *psychics, mediums*) are *nonscientific*.

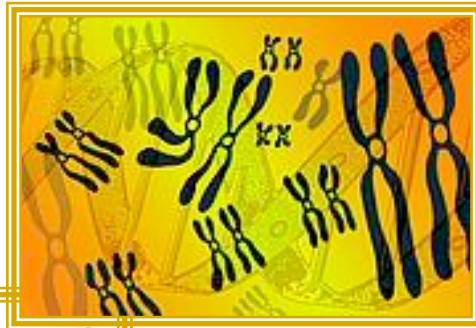


Introducing Psychology:

Psychology's Four Goals

1. **Description**: tells “what” occurred
 2. **Explanation**: tells “why” a behavior or mental process occurred
 3. **Prediction**: identifies conditions “under which a future behavior or mental process is likely to occur”
 4. **Change**: applies psychological knowledge to prevent unwanted behavior or to bring about desired goals
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Introducing Psychology: Applying Psychology to Work (Sample Specialties)



- Biopsychology/
neuroscience



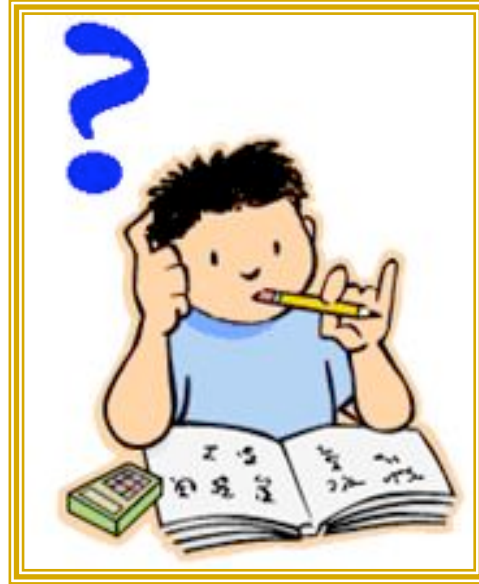
- Clinical and
Counseling
psychology



- Cognitive
psychology

Introducing Psychology: Applying Psychology to Work (Sample Specialties)

- Developmental psychology
- Educational and School psychology
- Experimental psychology

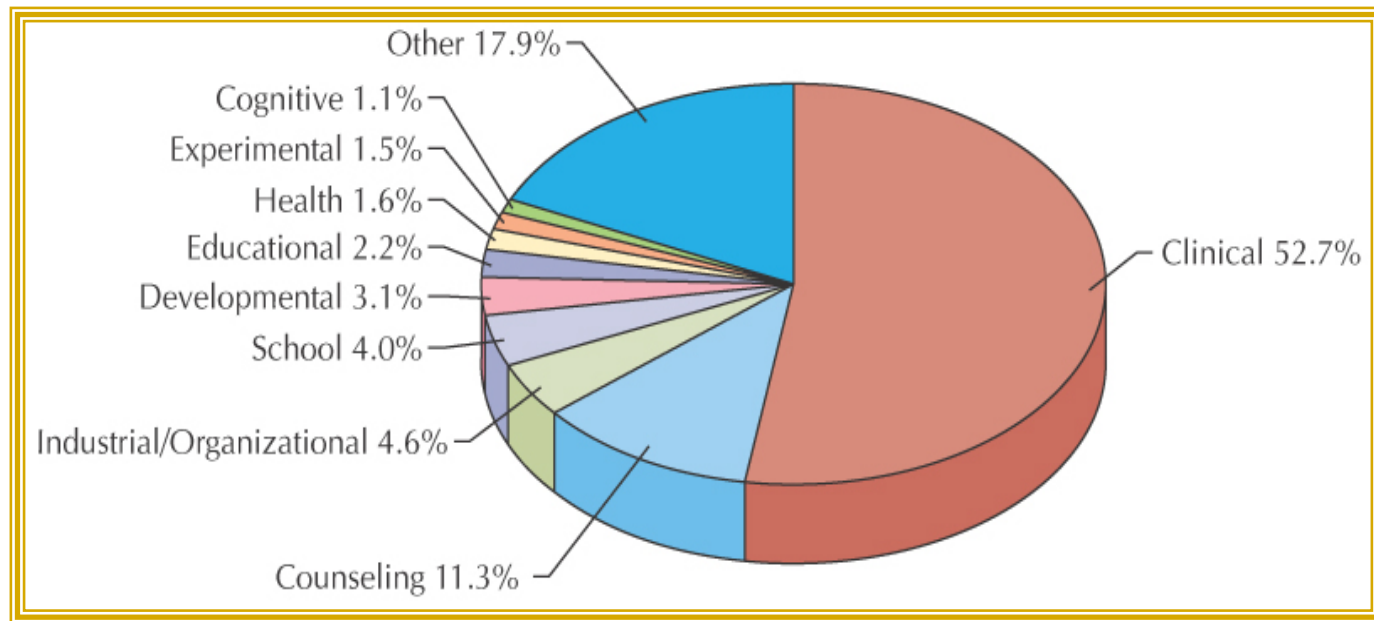


Applying Psychology to Work (Sample Specialties Continued)

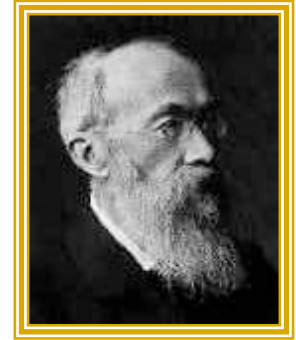
- Forensic psychology
- Gender/Cultural psychology
- Health psychology
- Industrial/Organizational psychology
- Social Psychology



Introducing Psychology: Percentage of Psychology Degrees by Specialty



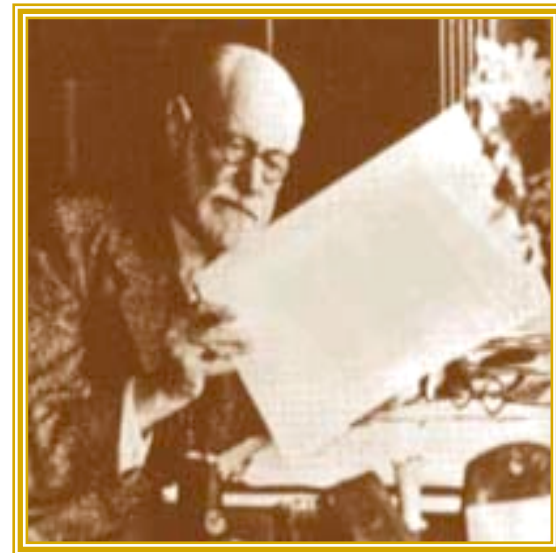
Origins of Psychology



- **Wilhelm Wundt:** “father of psychology”
 - 1879 University of Leipzig (1st Research Lab)
- **Structuralism:** sought to identify the basic building blocks, or *structures*, of the mind through introspection
(Wundt and Titchener key leaders)
- **Functionalism:** studied how the mind *functions* to adapt organisms to their environment (James key leader)

Origins of Psychology (Continued)

- **Psychoanalytic/psychodynamic perspective:**
unconscious processes and unresolved past conflicts (**Freud** was the founder)



Origins of Psychology (Continued)

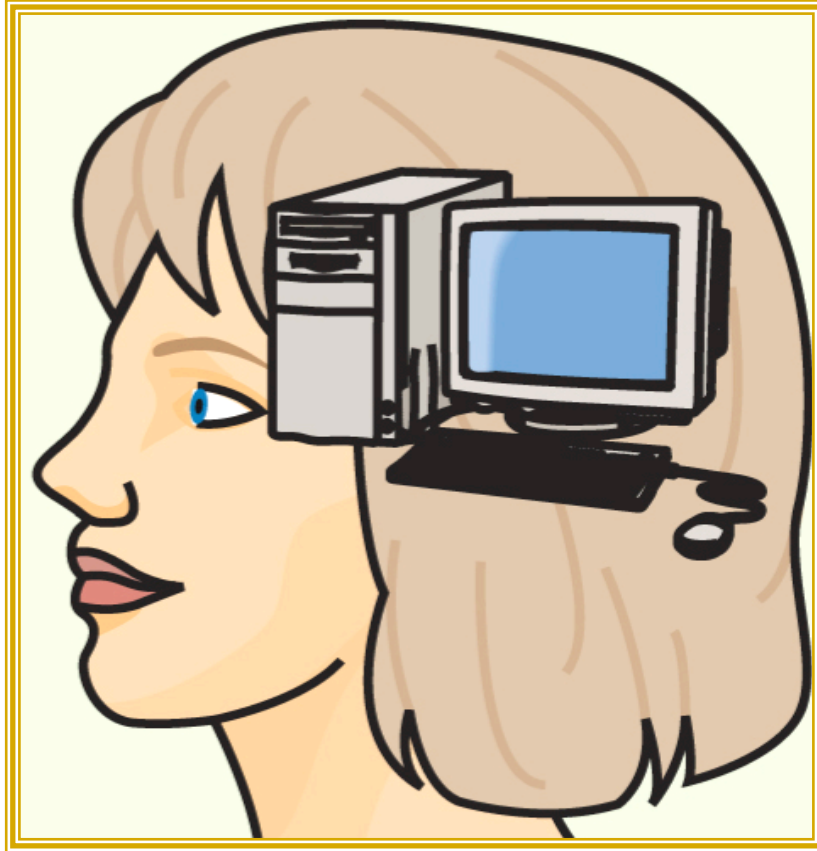


- **Behavior perspective:**
objective, observable
environmental
influences on overt
behavior (Watson,
Pavlov, and Skinner
were leaders)

Origins of Psychology (Continued)

- **Humanist perspective:**
free will, self-actualization, and a positive,
growth-seeking human nature
(Rogers and Maslow were key figures)
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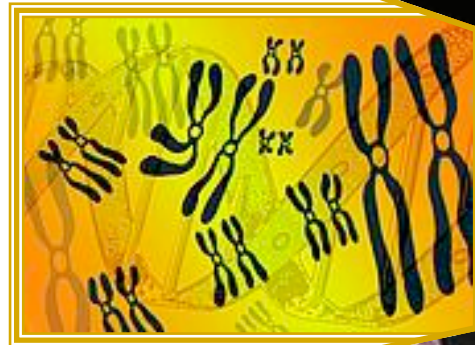
Origins of Psychology (Continued)



- **Cognitive perspective:**
thought,
perception,
and information
processing

Origins of Psychology (Continued)

- **Neuroscience/
Biopsychology
perspective:**
genetics and other
biological
processes in the
brain and other
parts of the
nervous system



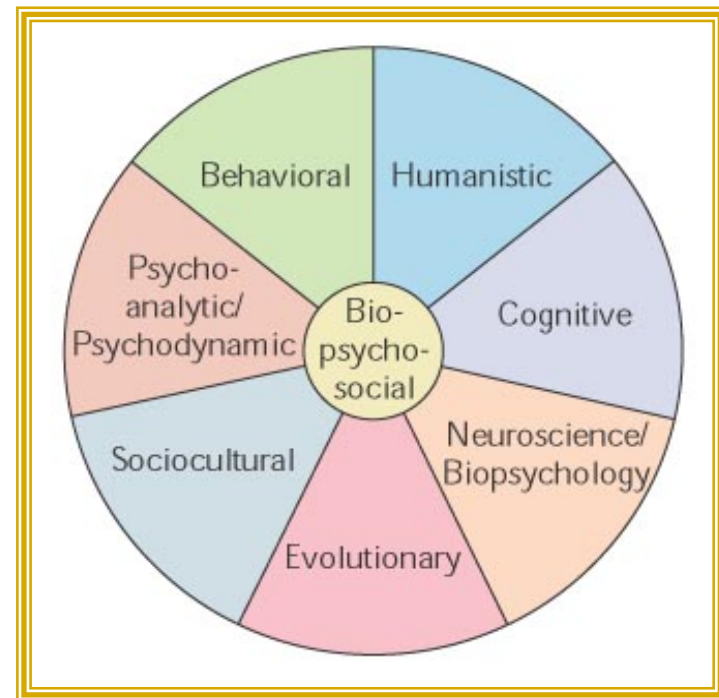
Origins of Psychology (Continued)

- **Evolutionary:**
natural selection,
adaptation, and
evolution
- **Sociocultural:**
social interaction
and cultural
determinants



Origins of Psychology: One Unifying Theme of Modern Psychology

- **Biopsychosocial Model:** an integrative model combining the seven major perspectives



Why Do Psychologists and Other Scientists Need Multiple Perspectives?

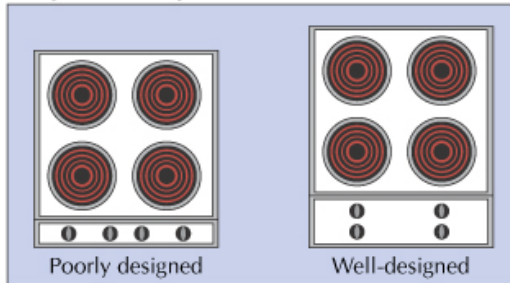
Do You See a Vase
or Two Faces?



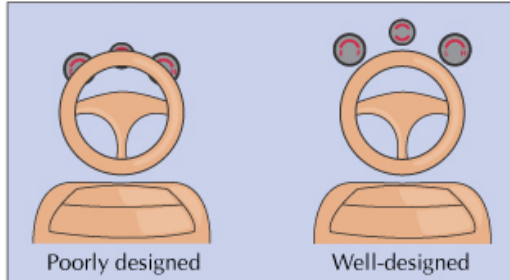
The Science of Psychology

- Psychological research can be either:
 - **Basic**: conducted to advance scientific knowledge
 - or
 - **Applied**: designed to solve practical problems
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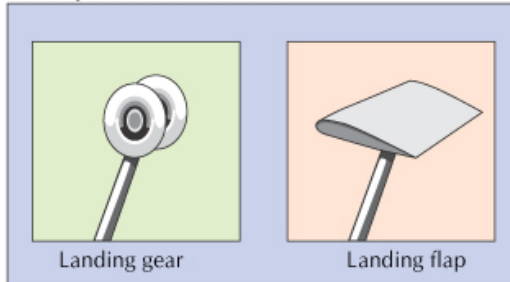
(a) Spatial Correspondence



(b) Visibility

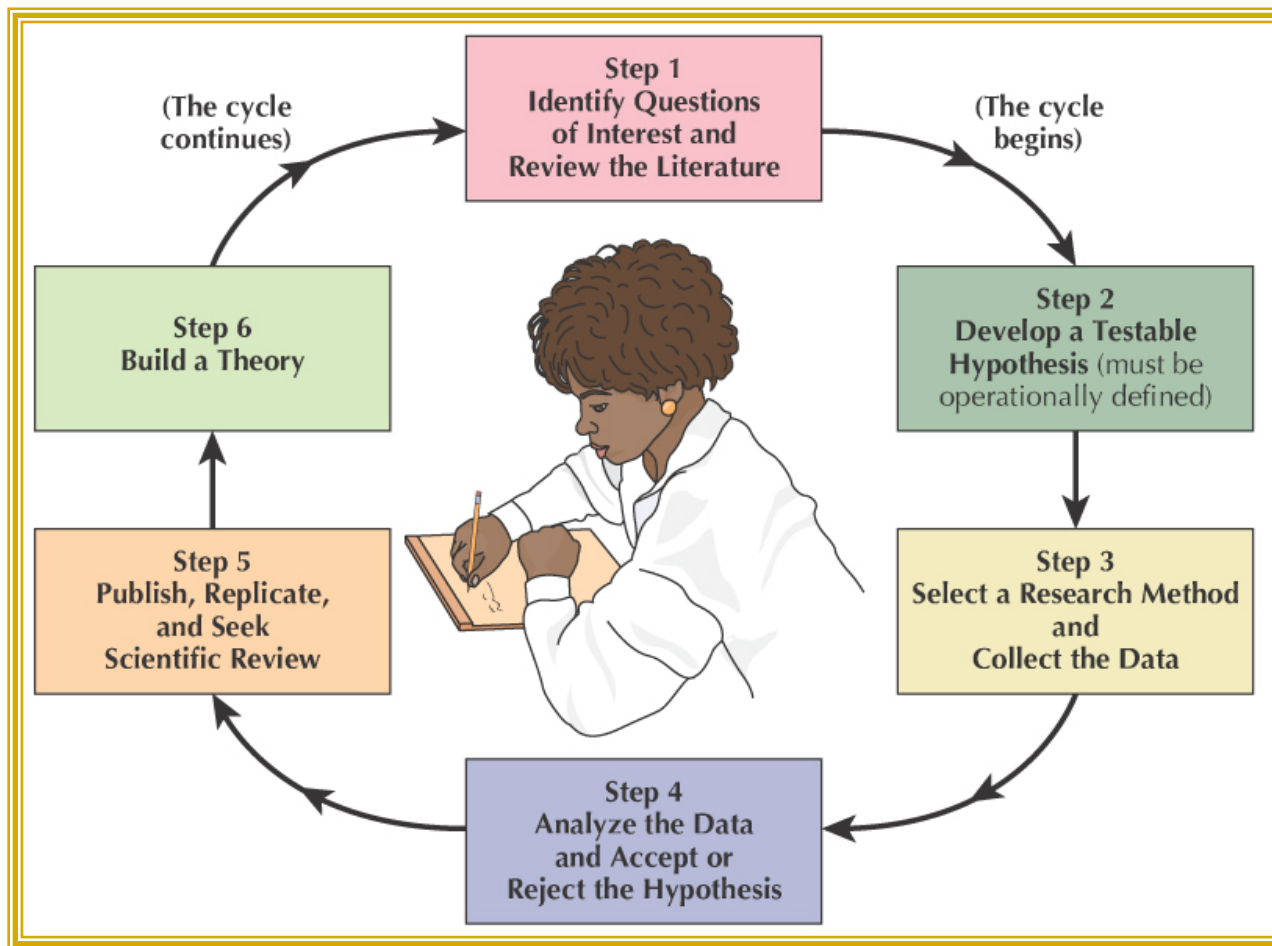


(c) Shape Indicates Function



(d)

Is This
Basic
or
Applied
Research?



The Science of Psychology: The Scientific Method

The Science of Psychology: Ethical Guidelines

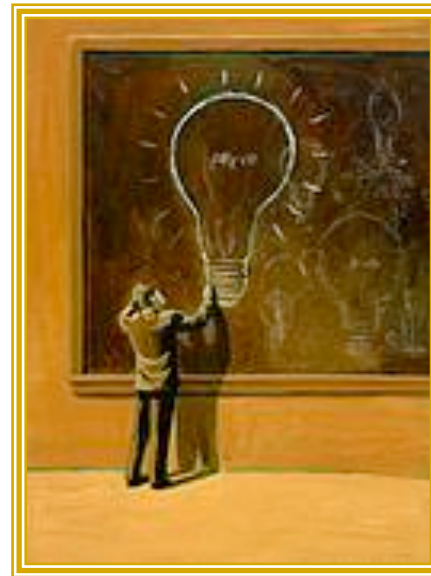
- **Key Issues** for Human Research Participants:
 - Informed consent
 - Voluntary participation
 - Restricted use of deception
 - Debriefing
 - Confidentiality
 - Alternative activities



The Science of Psychology: Research Methods

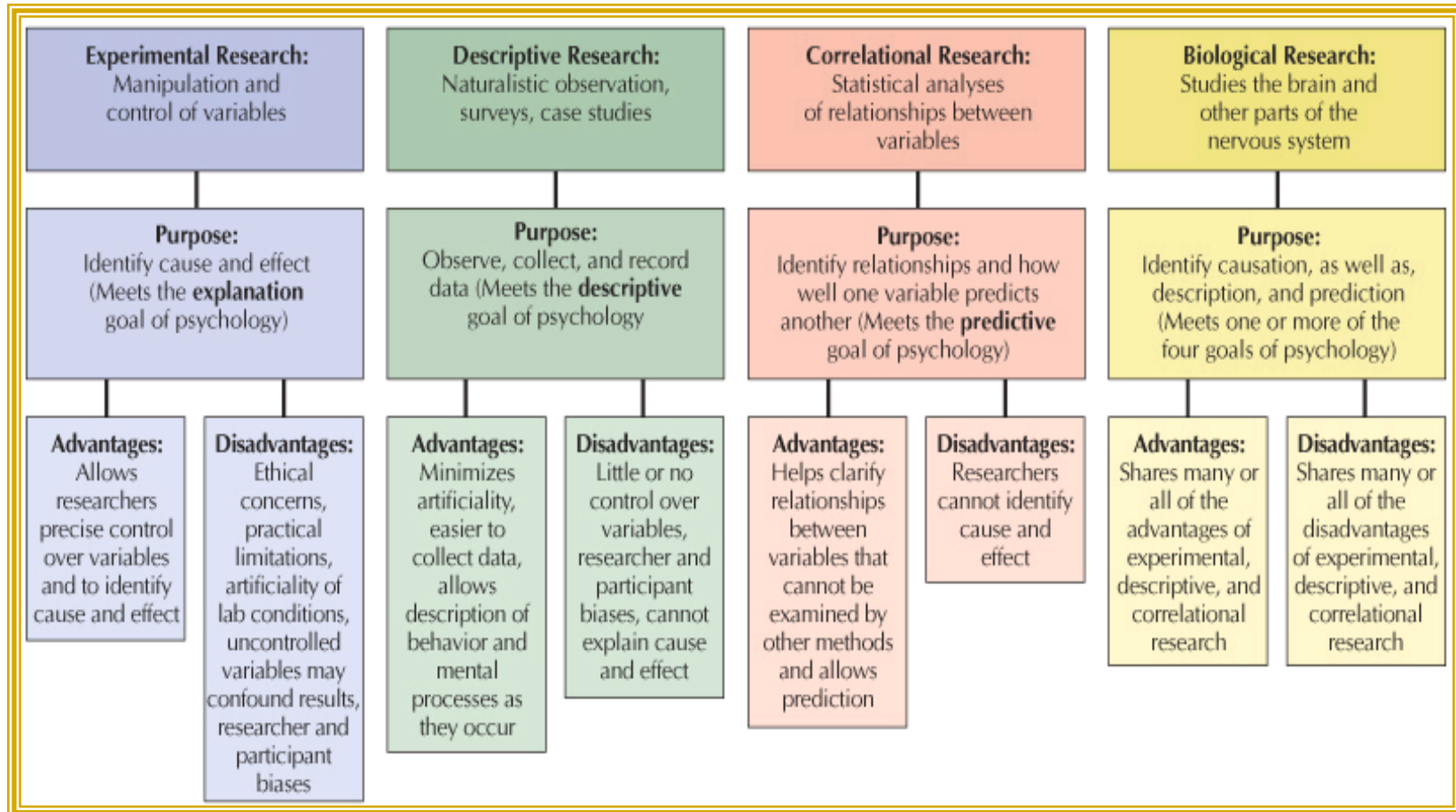
- Three Major Research Methods:

1. Experimental
2. Descriptive
3. Correlational



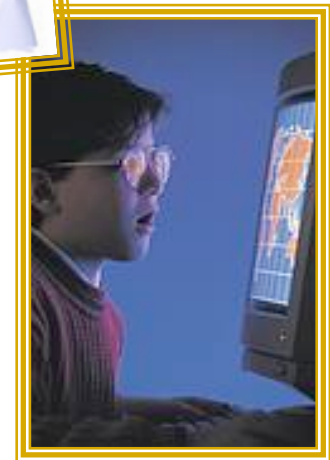
The Science of Psychology:

Four Major Research Methods (Continued)



The Science of Psychology: Four Major Research Methods (Continued)

1. **Experimental Research:**
carefully controlled scientific
procedure that manipulates
variables to determine
cause and effect

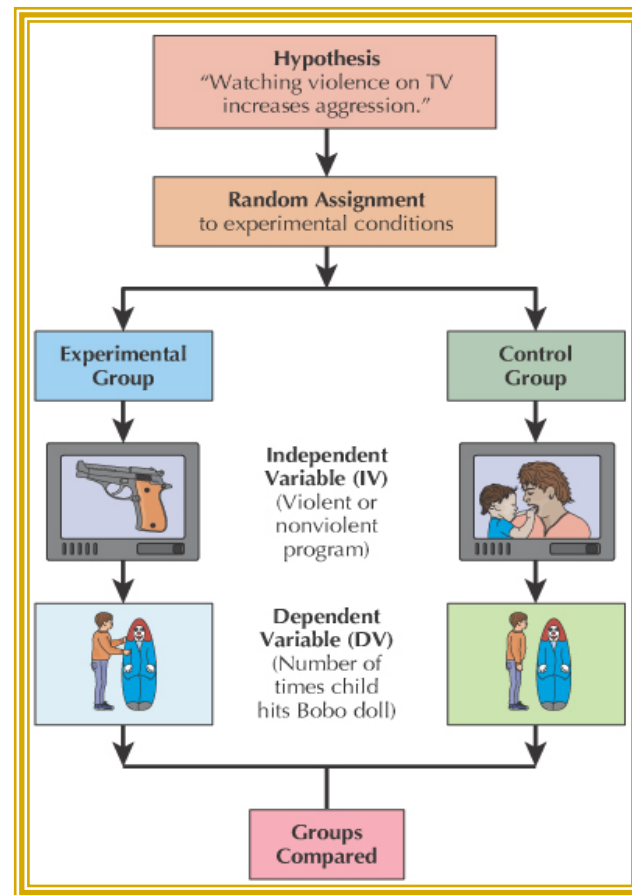


The Science of Psychology: Research Methods—Experiment (Continued)

- Key Features of an Experiment:
 - Independent variable (factor that is manipulated) versus dependent variable (factor that is measured)
 - Experimental group (receives treatment) versus control group (receives no treatment)
-

The Science of Psychology: Research Methods—Experiment (Continued)

- Does TV increase aggression? Only an *experiment* can determine **cause and effect**.



The Science of Psychology: Research Methods—Experiment (Continued)

■ Potential **Researcher** Problems:

□ **Experimenter Bias**

(researcher influences the research results in the expected direction)

□ **Ethnocentrism** (believing one's culture is typical of all cultures)



The Science of Psychology: Research Methods—Experiment (Continued)

■ Potential **Participant** Problems:

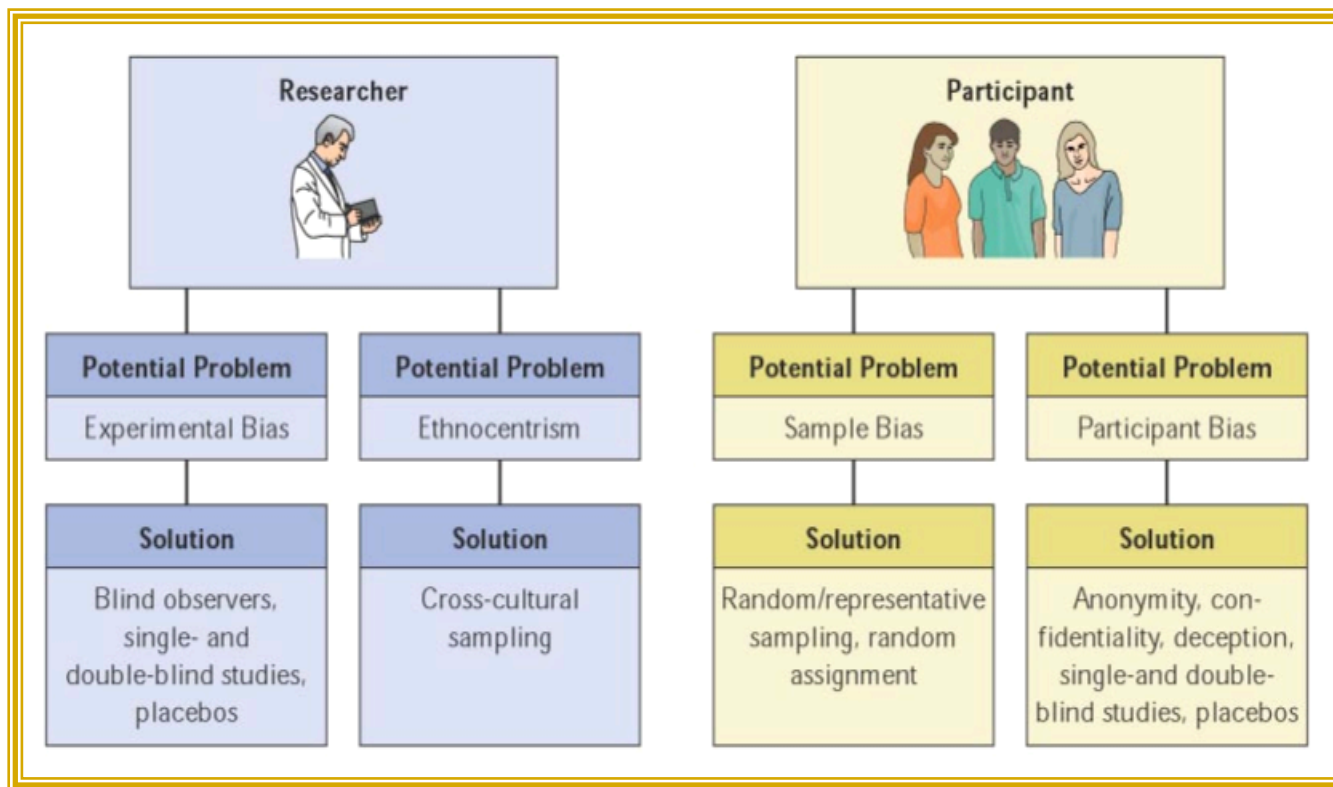
□ Sample Bias

(research participants are unrepresentative of the larger population)

□ Participant Bias

(research participants are influenced by the researcher or experimental conditions)

The Science of Psychology: Research Methods—Experiment (Continued)



The Science of Psychology: Research Methods—Descriptive Research

2. Descriptive Research: observes and records behavior without producing causal explanations

Three Types of Descriptive Research:

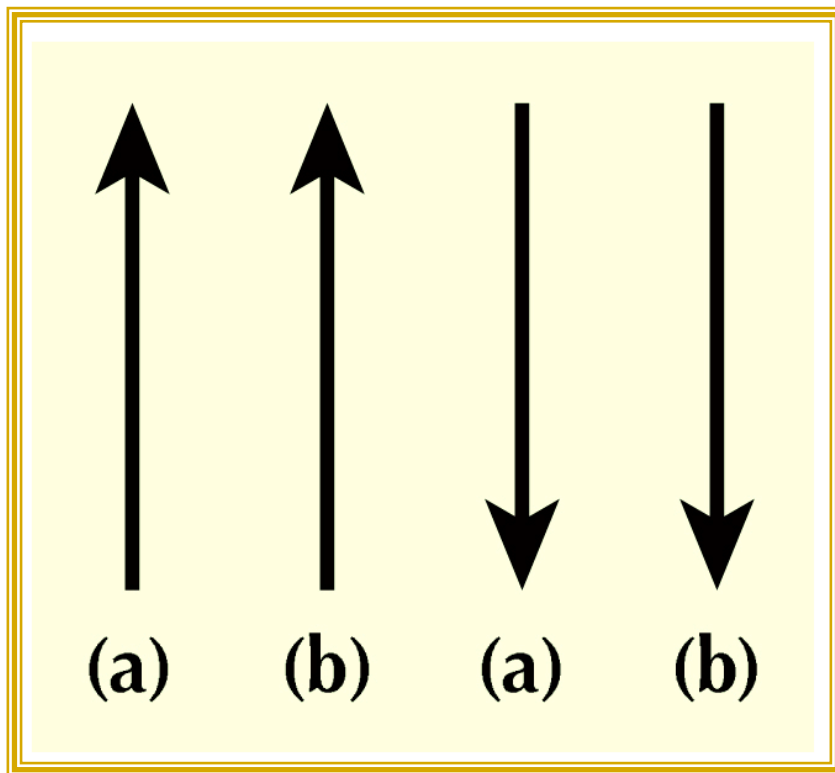
- **Naturalistic Observation**--observation and recording of behavior in natural state or habitat
 - **Survey**--assessment of a sample or population
 - **Case Study**--in-depth study of a single participant
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The Science of Psychology: Research Methods—Correlational Research

3. Correlational Research:

scientific study in which the researcher observes or measures (without directly manipulating) two or more variables to find **relationships** between them

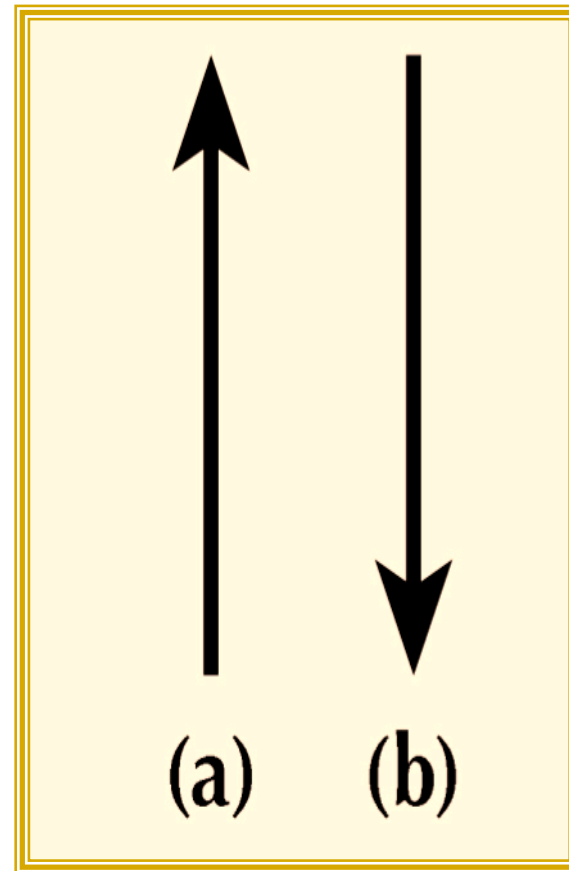
The Science of Psychology: Research Methods—Correlational Research



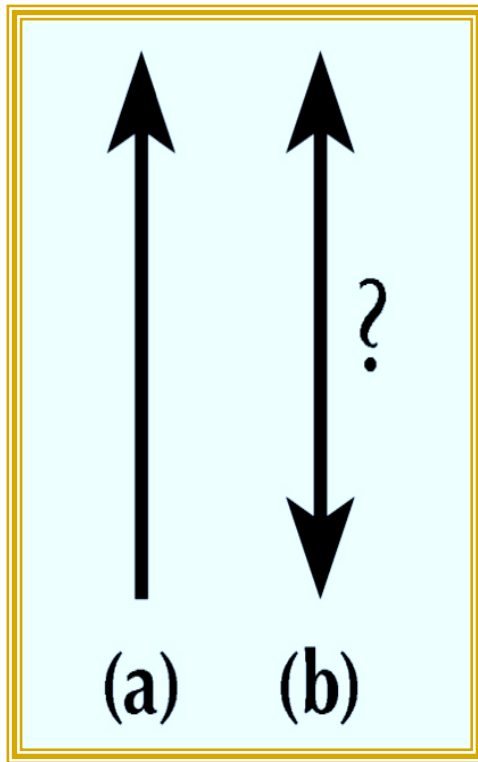
- **Positive correlation:** two variables move (or vary) in the *same* direction—either up or down

The Science of Psychology: Research Methods—Correlational Research

- **Negative Correlation:** two variables move (or vary) in the *opposite* direction—either up or down

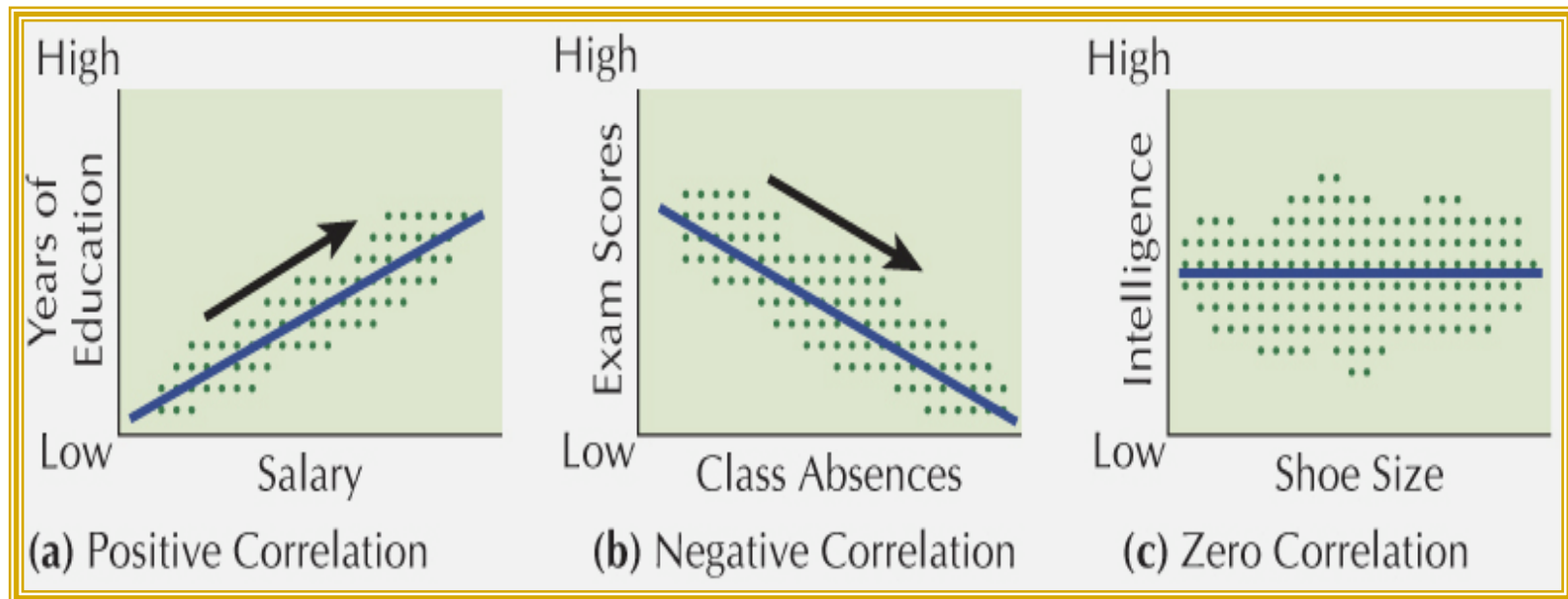


The Science of Psychology: Research Methods—Correlational Research



- **Zero correlation:** no relationship between two variables (When one variable **increases**, the other can **increase**, **decrease**, or stay the same)
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The Science of Psychology: Research Methods—Correlational Research



The Science of Psychology: Research Methods—Correlational Research

- This is why correlation can never show cause and effect.

