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Chapter

Chapter 1

What is Psychology?

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What Is Psychology? An Overview

- Defining psychology
- What do psychologists do?
- Where psychology comes from
- How today's psychologists view behavior
- Gender and ethnicity in psychology
- Critical thinking in psychology
- How psychologists study behavior and mental processes
- Ethical issues in psychological research and practice

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Defining Psychology

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- Psychology is defined as the scientific study of behavior and mental processes.

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Controversy in Psychology

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- What do psychologists mean by “controlling” behavior and mental processes?
 - Not like “controlling” puppets on a string
 - The focus is on trying to understand the factors that influence behavior and use that knowledge for public good.

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Psychology as a Science

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- Theories:
 - Formulations of apparent relationships among observed events
 - Allow for explanation and prediction

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What Psychologists Do

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- Pure research
 - No immediate application; research for its own sake
- Applied research
 - Designed to find solutions to specific personal or social problems
- Practice psychology
 - Applying psychological knowledge to help individuals change their behavior
- Teaching
 - Share psychological knowledge

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Fields of Psychology

- **Clinical psychologists**
 - Help people with psychological disorders adjust to the demands of life
 - Largest subgroup of psychologists
 - Includes Ph.D.s and Psy.D.s
- **Counseling psychologists**
 - Similar to clinical psychologists, but clients typically have adjustment problems and not serious psychological disorders
- More than half of all doctoral students are in clinical or counseling psychology programs.

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Table 1.1

TABLE 1.1 ■ New Doctorates in Psychology (Median Age = 32)

Demographic Factors	
Women	78.1%
Men	21.7%
Asian American/Pacific Islander	4.8%
African American	5.6%
Latin American	6.3%
Native American	<1.0%
European American	76.4%
Type of Degree	
Ph.D.	52.9%
Psy.D.	47.1%
Work Setting	
Academia	20.2%
Hospitals	19.6%
Other Human Service	16.0%
Independent Practice	13.7%
Business/Government	13.5%
Schools/Educational	7.8%
Managed Care	7.3%
Other	1.9%
Primary Work Activity	
Health Service	69.5%
Education	13.7%
Research	10.2%
Administration	4.1%
Other	3.5%
Selected Subfields	
Clinical Psychology	62.0%
Counseling Psychology	11.1%
School Psychology	9.5%
Clinical Child Psychology	6.4%
Other	10.7%



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Fields of Psychology

- School psychologists
 - Employed by school systems to assist students with problems that interfere with learning
 - One aspect of this field is placement of students in special classes
- Educational psychologists
 - Like school psychologists, but facilitate learning through focus on course planning and instructional methods for school system rather than on individual children
- Developmental psychologists
 - Study the changes--physical, cognitive, social and personality--that occur throughout the lifespan

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Fields of Psychology

- **Personality psychologists**
 - Focus on identifying and measuring human traits; determining influences on human thought processes, feelings, and behavior; and explaining psychological disorders
- **Social psychologists**
 - Primarily concerned with individual's thoughts, feelings, and behavior in social situations
- **Environmental psychologists**
 - Study the ways in which people and the environment influence one another

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Fields of Psychology

- Experimental psychologists
 - Conduct experiments
 - Specialize in basic processes, such as the nervous system; sensation and perception; learning and memory; thought; motivation; and emotion

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Fields of Psychology

- **Industrial psychologists**
 - Focus on the relationship between people and work
- **Organizational psychologists**
 - Study the behavior of people in organizations such as businesses
- **Human factors psychologists**
 - Provide suggestions and create technical systems such as dashboards, computer keyboards, etc. to be more user friendly

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Fields of Psychology

- **Consumer psychologists**
 - Study shopping behavior to predict and influence such behavior
- **Health psychologists**
 - Study the effect of stress on health problems, and guide clients toward healthier behaviors
- **Forensic psychologists**
 - Apply psychological principles to legal issues
- **Sport psychologists**
 - Help people improve sports performance

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Where Psychology Comes From

- Philosophical contributions
- 19th Century contributions
- Structuralism
- Functionalism
- Behaviorism
- Gestalt psychology
- Psychoanalysis

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Philosophical Contributions

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- Aristotle: (384-322 BCE)
 - Wrote “About the Psyche,” which covered topics such as personality, sensation, perception, thought, intelligence, needs, motives, feelings, emotions and memory
 - Was a proponent of empiricism
 - Outlined the laws of associationism
- Democritus (around 400 BCE)
 - Suggested that we could think of behavior in terms of a body and mind (interaction of biological and mental processes)
 - First to suggest Free will vs. Determinism

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Philosophical Contributions

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- Socrates
 - Suggested we rely on rational thought and introspection
 - (Introspection involves careful examination of one's own thoughts and emotions. These processes would lead to self-knowledge.)
 - Understood people as social creatures who influence one another

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The Birth of Psychology

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- **Gustav Theodore Fechner (1801-1887)**
 - Published his landmark book titled *Elements of Psychophysics* in 1860
 - Showed how physical events (light and sounds) are related to psychological sensations and perceptions
 - Some consider this to be the beginning of psychology
- **Wilhelm Wundt (1832-1920)**
 - Gets the credit for being the founder of psychology
 - In 1879 he established the first psychological laboratory in Leipzig, Germany

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Structuralism

- Attempts to break conscious experience down into:
 - objective sensations (ex. sight or taste)
 - the subjective feelings (emotional responses)
- Maintains that the mind functions by combining objective and subjective elements of experience
- Wundt was considered a structuralist

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Functionalism

- William James (1842-1919)
 - Considered a major figure in the development of psychology in the United States
 - Founder of functionalism
- Functionalism
 - Psychology should focus on the individual's behavior, the mind, and consciousness
 - Look at how experience helps us function more adaptively in our environments
- James was clearly influenced by Darwin's work

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Behaviorism

- John Broadus Watson (1878-1958)
 - Considered to be the founder of American behaviorism
 - Psychology should limit itself to observable, measurable events and behavior
- B.F. Skinner (1904-1990)
 - Believed organisms learn to behave in certain ways because of reinforcement
 - Behavior that has a positive outcome will be repeated
 - Trained numerous laboratory animals in a variety of behaviors through strategic reinforcement

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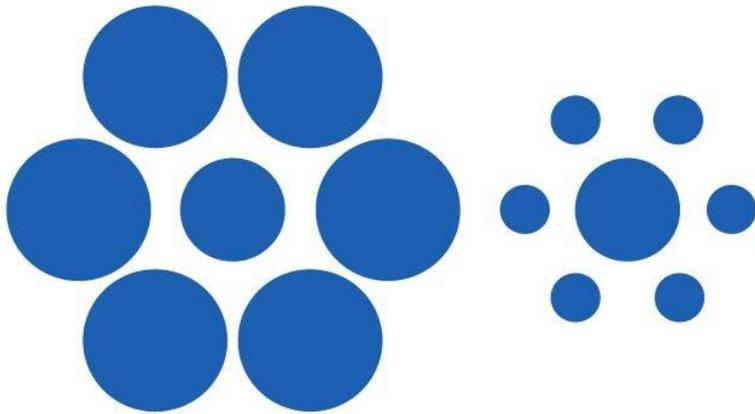
Gestalt Psychology

- Founders included:
 - Wertheimer (1880-1943)
 - Koffka (1886-1941)
 - Kohler (1887-1967)
- Gestalt translates to “pattern” or “organized whole”

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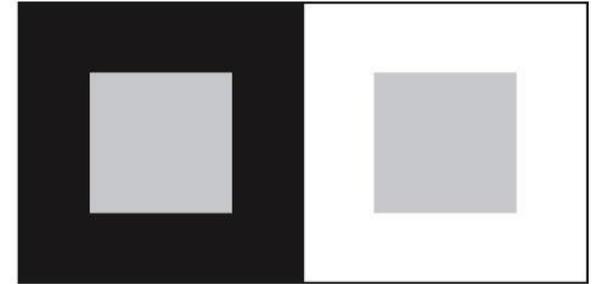
Figure 1.1



A. Are the dots in the center of the configurations the same size? Why not take a ruler and measure them?

A B C D
12 13 14 15

B. Is the second symbol in each line the letter B or the number 13?



C. Which one of the gray squares is brighter?

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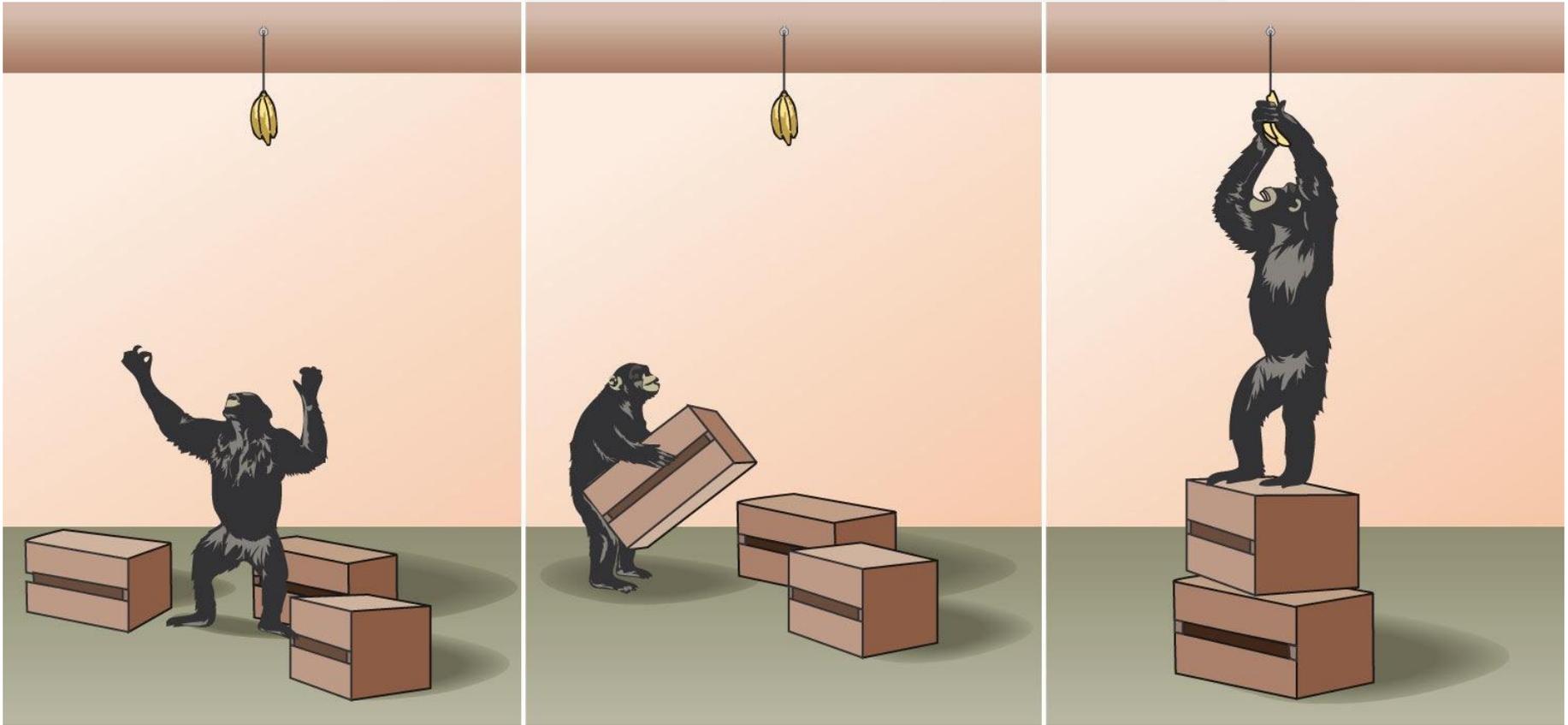
Gestalt Psychology

- Focused on how perceptions of a situation influence thinking and problem solving
- Learning is accomplished by insight, not by mechanical repetition

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Figure 1.2



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Psychoanalysis

- Focus on the unconscious where conflicting impulses, urges and wishes exist
 - Founded by Sigmund Freud
 - As a therapy, psychoanalysis attempts to help clients gain insight into unconscious conflicts and find socially acceptable ways to express these wishes and gratify these needs.

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Today's Psychologists

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- Evolutionary and biological perspectives
- Cognitive perspective
- Humanistic-Existential perspective
- Psychodynamic perspective
- Perspectives on learning
- Sociocultural perspective

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The Evolutionary Perspective

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- Focus on the evolution of behavior and mental processes
- Evolutionary psychologists suggest human social behavior (aggression and mate selection) has a hereditary basis.
- When these behaviors are adaptive, they are passed on across generations through natural selection.

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The Biological Perspective

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- The biological perspective seeks the links between the electrical and chemical activity of the brain.
- Examples include:
 - The examination of brain activity using CAT scans and fMRIs
 - Understanding the influence of hormones by examining endocrine glands

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The Cognitive Perspective

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- Investigates how humans perceive and mentally represent the world
- Also studies how humans learn, remember the past, plan future events, solve problems, and use language
- Cognitive psychologists study those things referred to as the mind
- Rapidly growing area of research

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Humanistic-Existential Perspective

- Humanism
 - Stresses the human capacity for self-fulfillment
- Existentialism
 - Views people as free to choose and be responsible for choosing ethical conduct
- Humanistic-existential psychologists stress the importance of subjective experience
 - Abraham Maslow and Carl Rogers are two prominent psychologists in this area.

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Psychodynamic Perspective

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- Freud's influence continues to be felt through contemporary psychodynamic theorists (who would likely call themselves neoanalysts).
- Famous neoanalysts include:
 - Karen Horney (1885-1952)
 - Erik Erikson (1902-1994)
 - Former APA president Dorothy Cantor
- Neoanalysts tend to focus more on conscious choice and self-direction than unconscious processes.

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Perspectives on Learning

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- Behaviorism
 - Learning through repetition and reinforcement
- Social-cognitive theorists
 - Formerly termed social learning theorists
 - Suggest that people can modify or even create their environments
 - Intentional learning by observing others

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The Sociocultural Perspective

- Addresses the many ways in which people differ from one another
- Study influences of ethnicity, gender, culture, and socioeconomic status on behavior and mental processes
 - Ethnicity
 - Ethnic groups are united by cultural heritage, race, language, and common history.
 - Study cultural heritages and ethnic differences in vulnerability to problems
 - Gender
 - Refers to culturally defined concepts of masculinity and femininity
 - Involves cultural expectations and social roles

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Gender and Psychology

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- From the 1800s to the 1900s, most psychologists were European and European American males
- Women now receive most undergraduate and Ph.D. degrees in psychology
- Women pioneers include:
 - Mary Whiton Calkins (1863-1930)
 - Christine Ladd-Franklin (1847-1930)
 - Margaret Floy Washburn (1871-1939)
 - Helen Bradford Thompson (1874-1947)
 - Mary Salter Ainsworth (1913-1999)
 - Elizabeth Loftus
 - Susan Nolan-Hoeksema

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Ethnicity and Psychology

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- **Gilbert Haven Jones**
 - First African American to receive Ph.D. (1901)
 - Degree awarded in Germany
- **J. Henry Alston**
 - First African American to be published in major psychology journal
- **Kenneth and Mamie Phipps Clark**
 - Important in the desegregation and education of African American children
- **Claude Steele**
 - Stereotype threat

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Ethnicity and Psychology

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- **Jorge Sanchez**
 - Among first to show cultural bias in intelligence testing
- **Lillian Comas-Diaz**
 - Edits journal of multicultural mental health
- **Martha E. Bernal**
 - Studied development of ethnic identity in Mexican American children
- **Stanley Sue**
 - Directed National Research Center on Asian American Health
- **Richard Suinn**
 - Studies mental health and identity development among Asian Americans

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Principles of Critical Thinking

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- Be skeptical
- Examine definitions of terms
- Examine the assumptions or premises of arguments
- Be cautious in drawing conclusions from evidence
- Consider alternative interpretations of research evidence
- Do not oversimplify
- Do not overgeneralize
- Apply critical thinking to all areas of life

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Critical Thinking and Internet Advice

- Psychological advice is freely available on the internet, but not all sites are reliable.
- Strategies to protect yourself from poor advice include:
 - Judge the book by its cover: Does the website seem organized and do links work?
 - Ignore extravagant claims
 - Check credentials and author affiliations
 - Check the evidence reported on the website
 - Check for reference citations for the evidence
 - Ask your instructor for advice or talk to someone in the university counseling center

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Psychology as Empirical Science

- We observe and measure behavior
- Assumptions must be supported by evidence
- The scientific method is the core of empirical science

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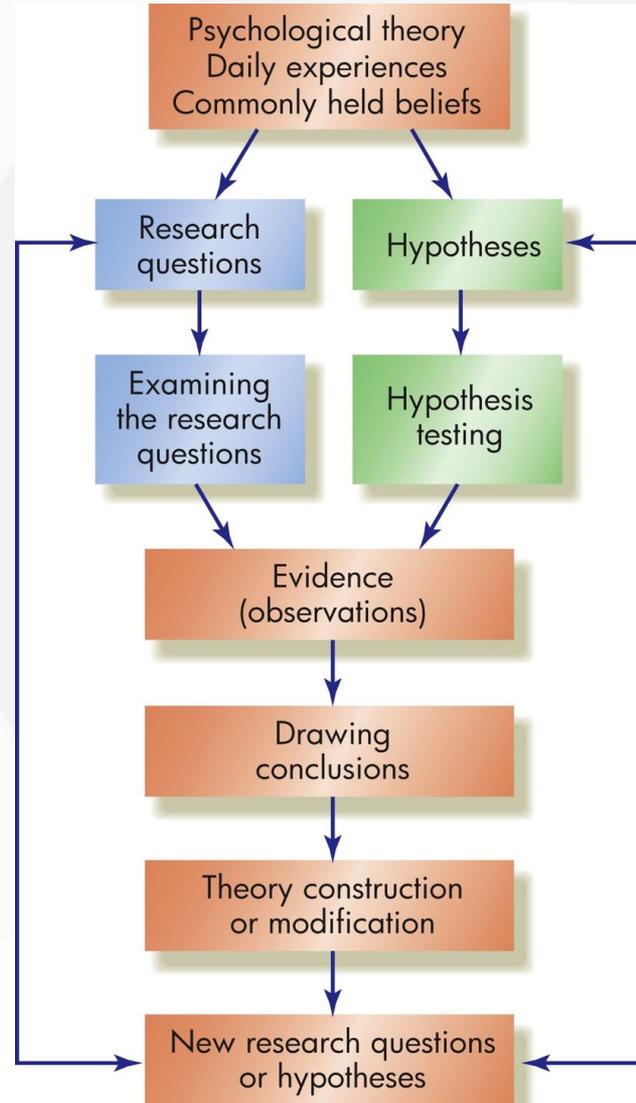
The Scientific Method

- Scientific method is an organized way of using experience and testing ideas in order to expand and refine knowledge.
 - Hypothesis: a specific statement about behavior or mental processes testable through research
 - Test hypotheses through controlled methods such as the experiment
 - Draw careful conclusions based on the results of observation
 - Replication: repeating a study to see if the findings hold up over time with different subjects

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Figure 1.3



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Samples and Populations

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- Sample:
 - Individuals selected for study from the population
- Population:
 - Group targeted for study
- Sampling techniques:
 - Random: each member of the population has an equal chance of being selected to participate
 - Stratified sample: identified subgroups in the population are represented proportionately in the sample
- Volunteer bias:
 - Volunteers may differ systematically from people who do not volunteer.

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Observational Methods

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- The Case Study:
 - Information collected about individuals and small groups
 - Compelling portraits, but may have factual inaccuracies
- The Survey:
 - Used to study individuals who cannot be observed in the natural setting or studied scientifically
 - Employs questionnaires, interviews, internet surveys, or public records
 - May have some sources of inaccuracy
 - The quality of the sample determines the veracity of the results

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Observational Methods

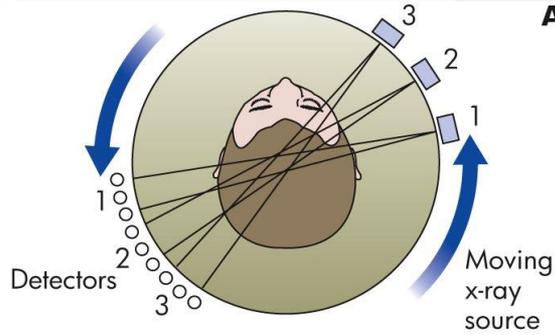
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- Naturalistic Observation:
 - Observes people in their natural habitats using unobtrusive measures, either through personal observation or video techniques
- Imaging the Brain
 - New technology allows us to see the brain in action
 - Examples include:
 - PET Scan
 - CAT Scan
 - fMRI

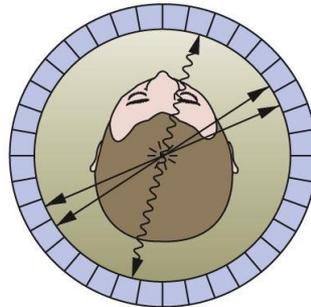
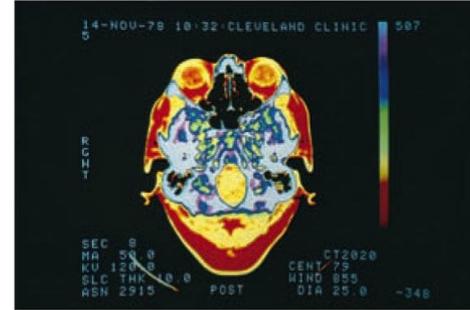
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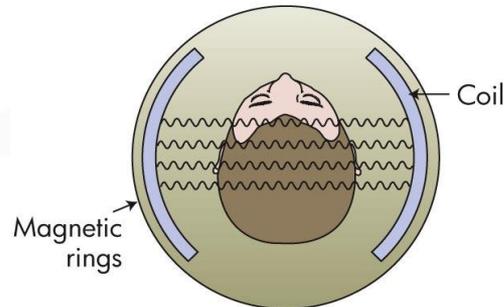
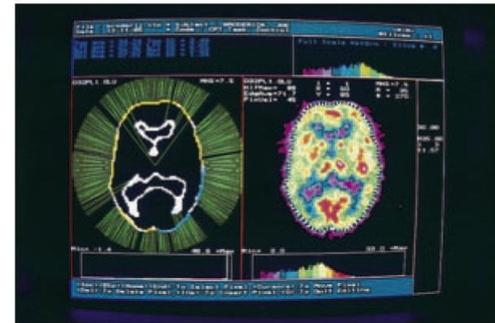
Figure 1.5



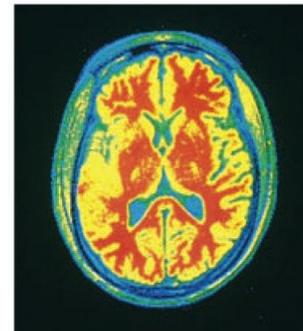
A. CAT scan



B. PET scan



C. fMRI



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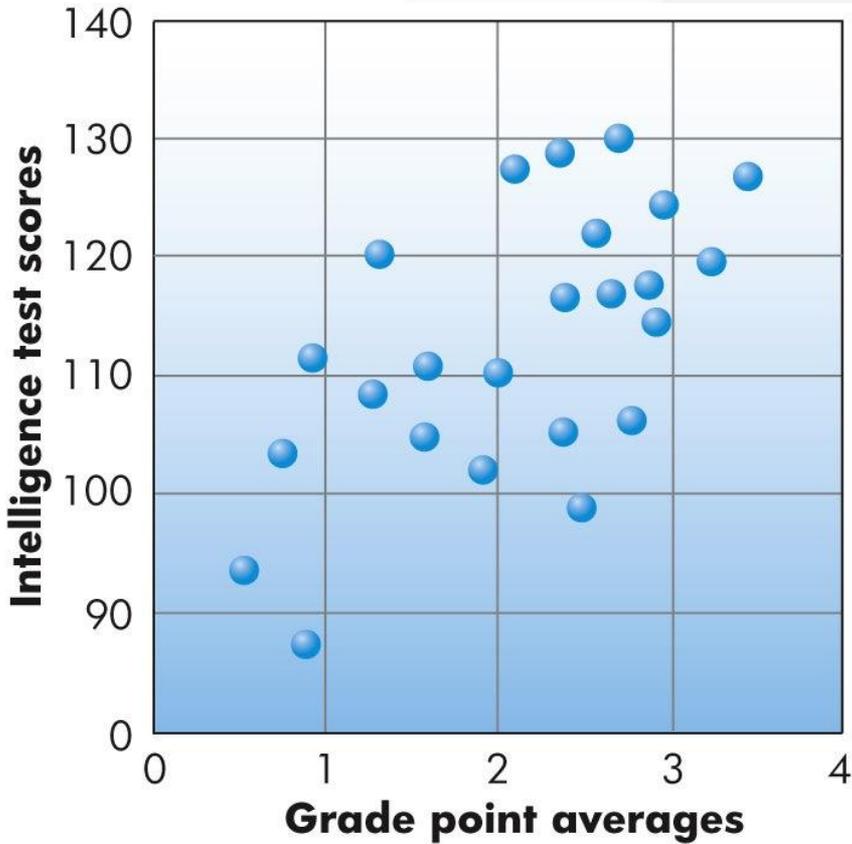
Correlation

- Investigates whether one behavior or trait relates to (correlates with) another
- Mathematically expressed as a correlation coefficient ranging from +1.00 to -1.00
 - Positive correlation:
 - As variable 1 increases, so does variable 2, or
 - As variable 1 decreases, so does variable 2,
 - Ex: IQ scores and grades
 - Negative correlation:
 - As variable 1 increases, variable 2 decreases
 - Ex: Stress level and immune system functioning

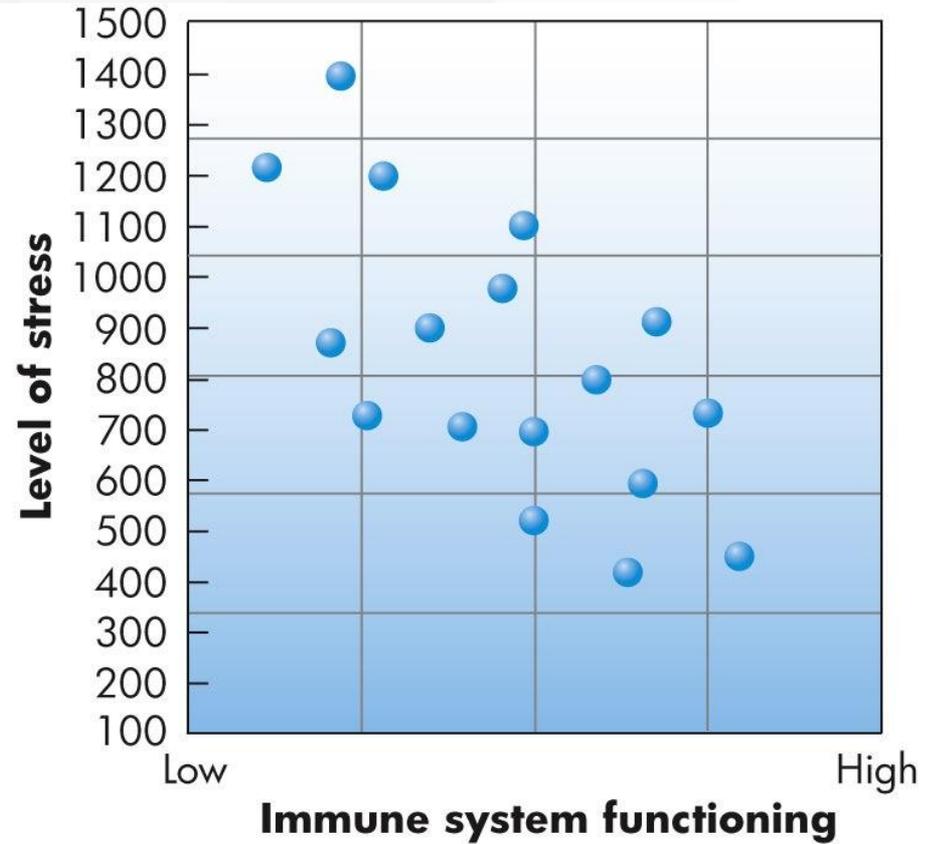
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Figure 1.6



Positive correlation, as found between intelligence and academic achievement



Negative correlation, as found between stress and functioning of the immune system

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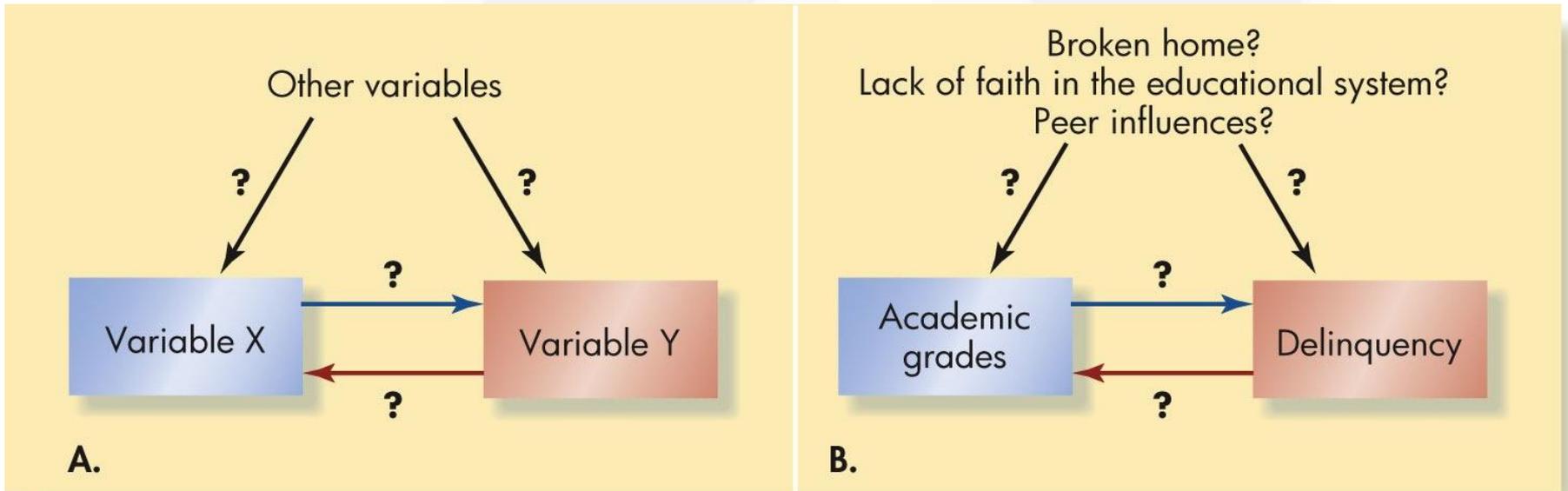
Correlations

- Correlational studies may suggest, but do not prove, cause and effect.

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Figure 1.7



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Experiments

- The preferred method for answering questions about cause and effect.
 - Independent variable:
 - Manipulated by the experimenters so that the effects of various levels may be determined
 - Dependent variable:
 - The measured outcome or result
 - Experimental and Control Groups
 - Experimental groups obtain the treatment
 - Control groups do not receive the treatment

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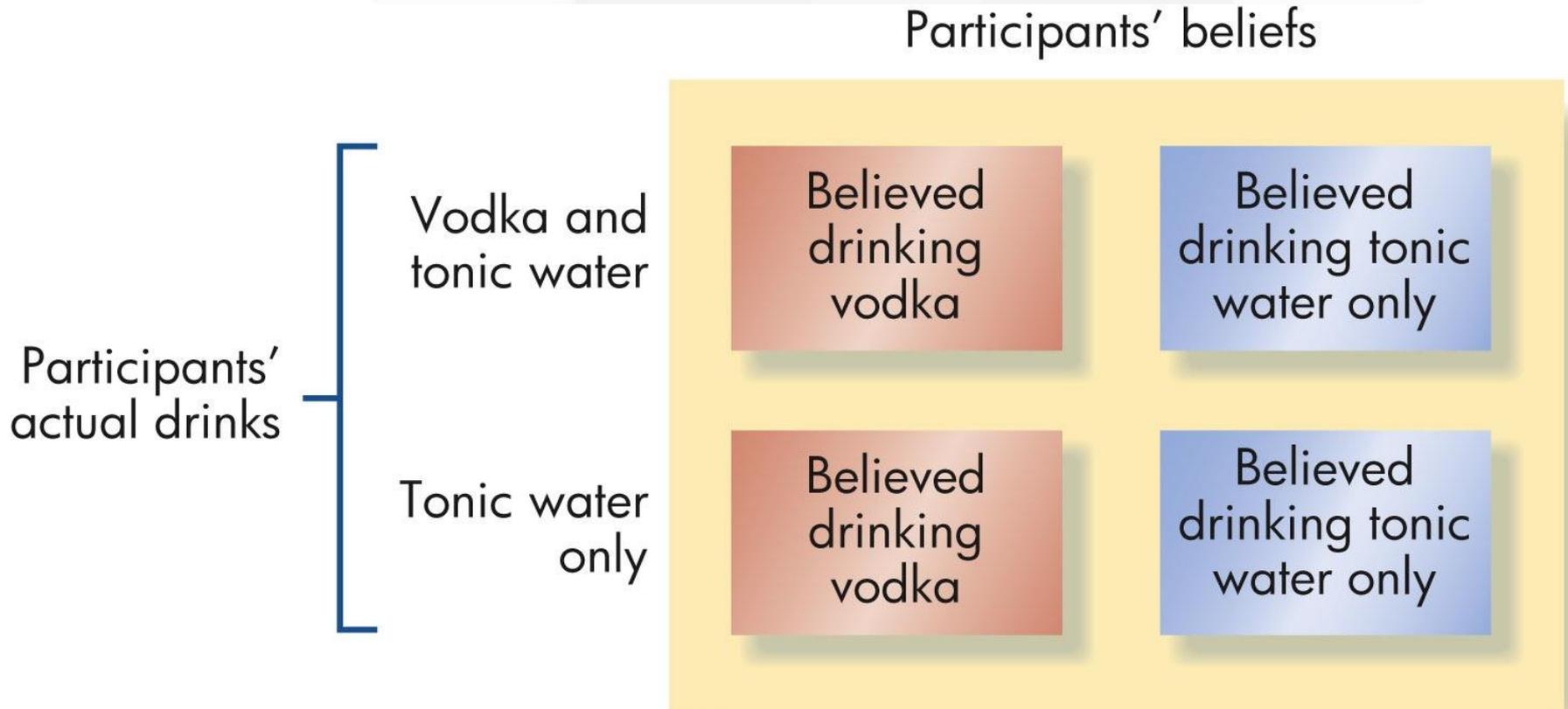
Experiments

- Blind and Double-Blind Experiments
 - Placebo or “sugar pill”
 - Blind:
 - Control for the expectations of effects by creating conditions where the subjects are unaware of the treatment
 - Double-blind:
 - Neither the subjects nor the experimenters know who has obtained the treatment

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Figure 1.8



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Ethical Issues in Psychology

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- Basic standards
 - Intended to promote individual dignity, human welfare and scientific integrity
 - Do not undertake research methods that are harmful

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Ethical Issues in Psychology

- Research with humans
 - Ethics review committees review research according to ethical guidelines
 - Informed consent: individuals give consent before they can participate in research
 - Confidentiality is kept

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Deception

- Is it ethical for psychologist to deceive participants when conducting research?
- *APA's Ethical Principles of Psychologists and Code of Conduct*
 - May deceive only when the benefits of the research outweigh the potential harm
 - The individuals would have been willing to participate if they had understood the benefits
 - Subjects are debriefed, meaning that the purposes and methods of the research are explained afterward

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Research with Animals

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- Psychologists generalize to humans the results of research conducted with animals.
- Animals may be harmed only when there is no alternative and when the researchers believe that the benefits justify the harm.