

Chapter 1: What Is Psychology?

Case Study: A Social Science vs. a False Science

Section 1: Why Study Psychology?

Section 2: What Psychologists Do

Section 3: A History of Psychology

Section 4: Contemporary Perspectives

Lab: Applying What You've Learned

Case Study: A Social Science vs. a False Science

Psychology is a social science based on verifiable evidence and theories that are tested according to the scientific method. False sciences, on the other hand, do not rely on verifiable evidence. ▼

False Science

- Astrology is a false science
- Based on idea that the moon, stars, and planets can affect human personality and destiny
- Not grounded in facts ▼

Social Science

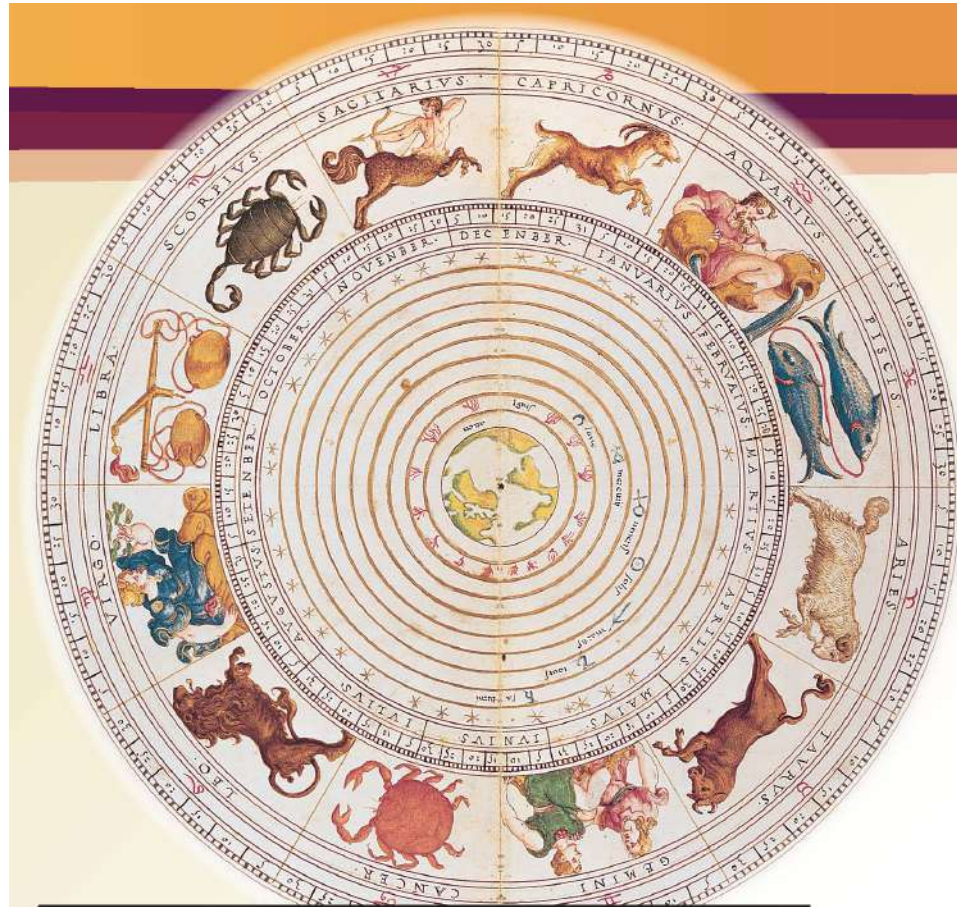
- Psychology is a social science
- Based on findings that are subjected to careful scrutiny
- Grounded in facts

The Barnum Effect

The tendency to believe general personality reports such as horoscopes. Named after P.T. Barnum, who once said a good circus should “have something for everyone.” Horoscopes work the same way.

What do you think?

- What is the basic way in which psychology differs from false sciences?
- Why do you think false sciences are so widespread?



The false science of astrology uses the 12 signs of the zodiac to try to explain the past and predict the future.



Psychologists carry out true scientific research and processes. Here, a psychologist uses a video of a healthy arm to help alleviate the "phantom pain" of a patient's amputated arm.

Section 1 at a Glance

Why Study Psychology?

- Psychology is the scientific study of human behavior and mental processes.
- Psychologists seek to observe, describe, explain, predict, and modify behavior and mental processes.
- Psychologists rely on research to learn whether certain methods will work before they use them to help people.

Why Study Psychology?

Main Idea

Psychology is a science. Like other scientists, psychologists seek to explain and control behavior and mental processes and test their ideas through research methods.

Reading Focus

- How are behavior and mental processes different?
- What are some basic goals of psychology?
- How is psychology a science?

SEARCHING the SELF-HELP AISLE



"I do want to solve all my problems, but I'll wait till it comes out in soft cover."

Are self-help books
psychologically
sound?

Behavior and Mental Processes

- **Psychology** is the scientific study of behavior and mental processes.
- **Behavior** is any action that people can observe or measure, such as walking, talking, sleeping, and eating.
- **Cognitive activities** are mental processes. They include dreams, perceptions, thoughts, and memories.
- Emotions can affect both behavior and mental processes.
- To study emotions, psychologists might use **psychological constructs** to help them study what we cannot see, touch, or measure directly.

Reading Check


Summarize

What do psychologists study?

Answer: *behavior and mental processes*

The Goals of Psychology

Explaining Behavior

- Psychologists observe and describe behavior and mental processes to better understand them.
- Example: Sports psychologists can help athletes improve performance by measuring athletes' heart rates and other body processes and by interviewing athletes.
- Psychologists explain behavior that might hinder an athlete's performance. 

Predicting and Controlling

- Psychologists predict that athletes perform best when anxiety is moderate.
- Psychologists help athletes control their behavior and mental processes by teaching them how to control anxiety.
- Positive visualization is one method sports psychologists use to help athletes perform better.
- Psychologists focus on helping people reach their own goals.

Reading Check

Find the Main Idea

How do psychologists help change behavior?

Answer: *by understanding factors that influence human behavior, teaching people how to filter out distractions and keep their anxiety at tolerable levels*

Can You Change Your Behavior?

One reason to study psychology is to better understand why you act as you do. As a result, you might be able to figure out how to change the aspects of your behavior with which you are unhappy.

PROCEDURE

- 1 Identify an activity that you enjoy doing. You might name a school activity, a hobby, or a sport you play.
- 2 On a piece of notebook paper, write two reasons explaining why you enjoy the activity.
 - a. _____
 - b. _____
- 3 Write two aspects of your performance that you would like to change.
 - a. _____
 - b. _____

ANALYSIS

1. Get together with a partner and share your notes.
2. Take turns explaining the behavior that you would like to change.
 - a. _____
 - b. _____
3. Take turns describing how you feel when the behavior occurs.
4. List the suggestions that you and your partner come up with to change or control your behavior.
 - a. _____
 - b. _____

Psychology as a Science

- Psychology is a social science rooted in the natural sciences.
- Social sciences include history, anthropology, economics, political science, and sociology. Natural sciences include biology, chemistry, and physics.
- Some areas of psychology are closely related to the natural sciences. Both natural scientists and psychologists do scientific research to do their work. ▼

Psychological Research

- Two widely used research methods are surveys and experimentation.
- Surveys collect data through questions asked of a particular group.
- Experimentation usually involves people or animals. Some psychologists believe animal research can be applied to humans. ▼

Psychological Theories

- Psychologists organize research findings into theories.
- A **theory** is a statement that attempts to explain why things are the way they are and why they happen as they do.
- Theories help psychologists form principles. A **principle** is a basic truth or law.

Reading Check

Compare

In what ways is psychology similar to other sciences?

Answer: *Like the other sciences, psychology seeks to answer questions by following the steps involved in scientific research.*

Current Research in Psychology

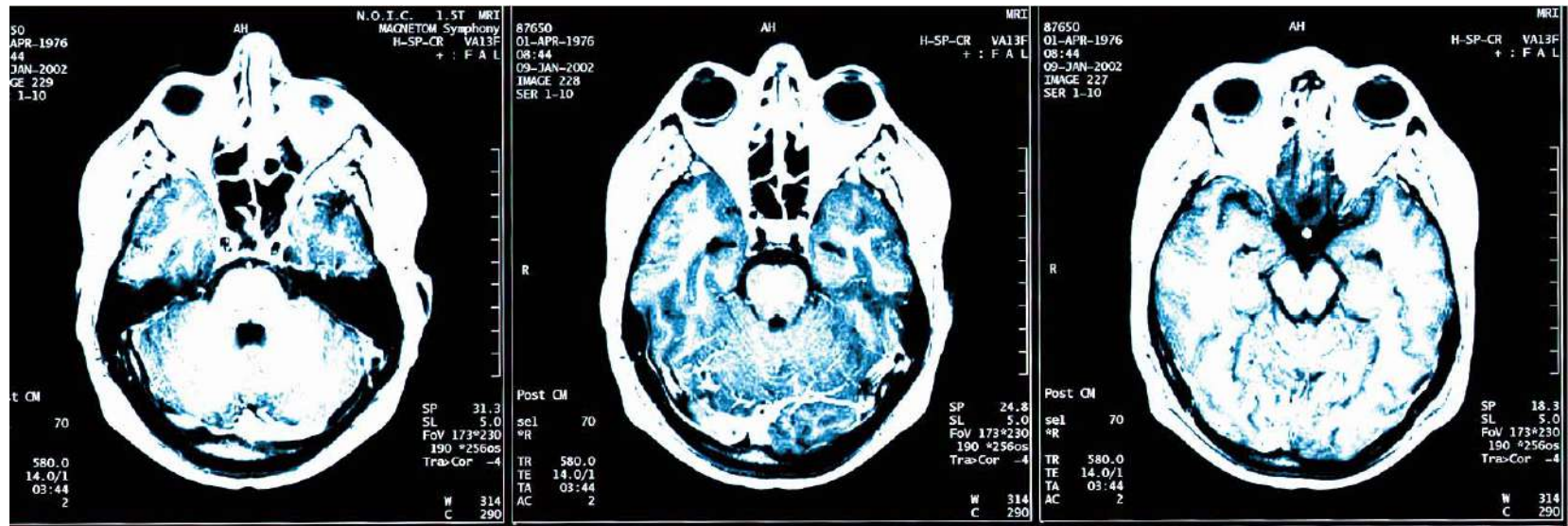
Neuroimaging and Cognitive Research

Neuroimaging allows scientists to study a human brain as it functions. Positron emission topography (PET) and magnetic resonance imaging (MRI) are two technologies that create images of the brain as it processes mental functions.

- Neuroimaging has been useful in cognitive research.
- Cognitive research is the study of mental processes and mental disorders.
- Neuroimaging may help psychologists diagnose and cure mental disorders.
- Neuroimaging has been used to study Alzheimer's disease.
- Some psychologists are skeptical about the value of neuroimaging.
- They claim that neuroimaging shows how the brain behaves but tells little about how the mind, or conscious thought, works.



A patient undergoes 3D MRI brain scanning, which allows the examiner to view the brain from every angle.



These three panels of an MRI brain scan show evidence of an abnormality.

Thinking Critically

- Why might neuroimaging be an important aid in the treatment of mental disorders?
- Do you think neuroimaging has much practical application in psychology? Why or why not?

Section 2 at a Glance

What Psychologists Do

- Major fields in psychology include clinical, developmental, and experimental psychology.
- Psychologists also work in applied or specialized fields, such as community, forensic, and health psychology.

What Psychologists Do

Main Idea

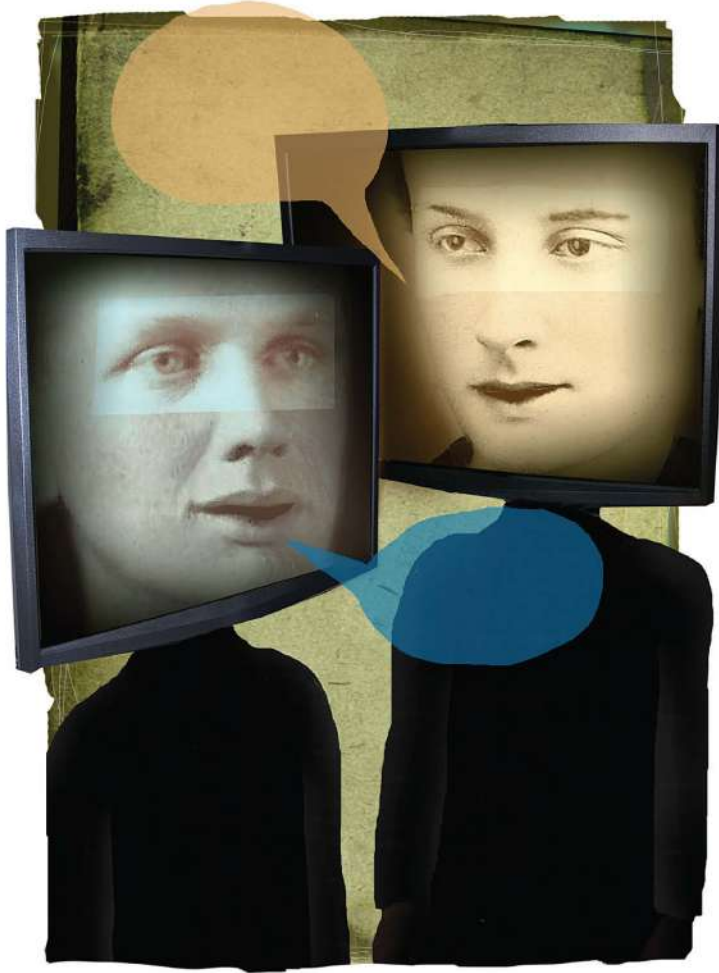
Psychologists work in many different fields but they all focus on studying and explaining behavior and mental processes.

Reading Focus

- What are some of the major fields in psychology?
- How do specialists in some applied fields of psychology serve people's needs?

Up Close

and Personal



You mean I'm
supposed to *talk* to
them?

Major Fields in Psychology

Clinical Psychology

- Most psychologists are clinical psychologists.
- Clinical psychology includes child mental health, adult mental health, learning disabilities, geriatrics, and general health.
- Clinical psychologists treat people with psychological problems such as anxiety or depression or severe psychological disorders.
- Psychologists are not psychiatrists. A **psychiatrist** is a medical doctor who specializes in psychological programs and who can prescribe medication for clients. Psychologists may not prescribe medication.

Counseling Psychology

- Counseling psychologists typically treat people who have adjustment problems.
- They often work in businesses or higher educational institutions.

School Psychology

- School psychologists identify and help students who have problems that interfere with learning.
- School psychologists use interviews, tests, and observation to help students.

Educational Psychology

- Educational psychologists focus on course planning and instructional methods for an entire school system rather than for an individual student.
- They focus on how learning is affected by psychological factors, cultural factors, economic factors, and instructional methods.
- Some educational psychologists help prepare standardized tests.
- They also study various tests to determine college success.

Developmental Psychology

- Developmental psychologists study changes that occur throughout a person's lifespan.
- These changes can be physical, emotional, cognitive, or social.
- Some development psychologists are especially interested in the challenges of adolescence.

Personality Psychology

- Personality psychologists identify and study human characteristics, or traits.
- They are interested in the origins of psychological problems and disorders.
- Also they are concerned with issues such as anxiety, aggression, and gender roles.

Social Psychology

- Social psychologists are concerned with people's social behavior.
- They focus on external rather than internal influences.

Experimental Psychology

- Psychologists in all specialties may conduct experimental research, but experimental psychologists conduct research into basic processes such as functions of the nervous system, sensation and perception, learning and memory, and thinking and motivation.
- Experimental psychologists study the biological and psychological reasons for cognitive behavior. Biological psychologists study the relationship between biological changes and psychological events.
- Experimental psychologists are more likely than other psychologists to do basic research. **Basic research** is research that has no immediate application and is done for its own sake.

Reading Check

Infer

Which types of psychologists might treat patients with eating disorders?

Answer: *clinical and developmental psychologists*

Click on the image to play the Interactive.

INTERACTIVE 

Statistically Speaking...

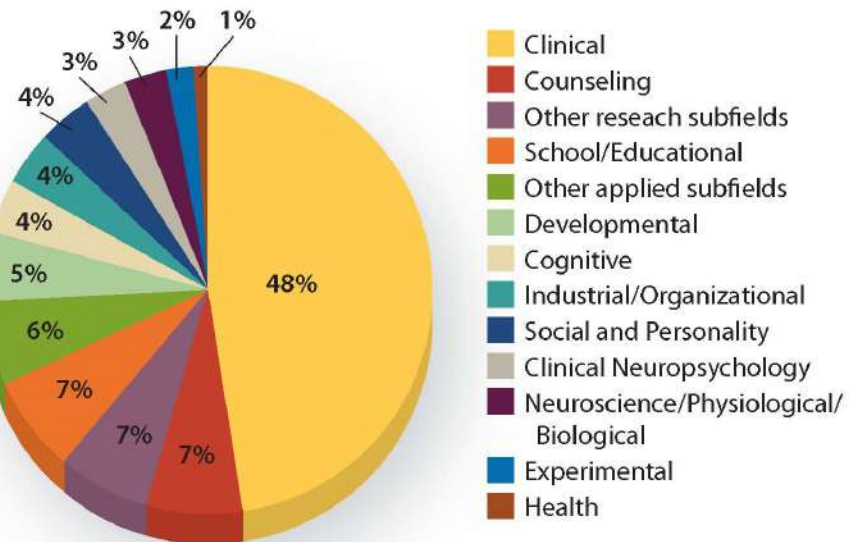
Graduate Programs in Psychology

Universities typically offer graduate programs in many fields of psychology. As you can see from the pie graph, however, nearly half of all new doctoral graduates in psychology emerge from the clinical program.

Skills Focus **INTERPRETING GRAPHS** Which field is the second most popular? Which field is least popular?

Source: 2005 *Graduate Study in Psychology*.
Compiled by the APA Research Office.

DOCTORATES IN FIELDS OF PSYCHOLOGY: 2003–2004



Interactive Feature



thinkcentral.com

Careers in Psychology

Specialized Fields

- Environmental Psychology: How people influence and are influenced by their physical environment
- Comparative Psychology: The study of animal behavior across different species
- Consumer Psychology: The study of the behavior of shoppers

Environmental psychologists study how light affects mood in patients with Seasonal Affective Disorder, also known as winter depression.



Applied Fields in Psychology


Industrial and Organizational Psychology

- Industrial psychology: The study of people and work
- Organizational psychology: The study of how people behave in organizations, such as business firms
- Psychologists in this field are often trained in both areas.
- Employed by corporations to improve working conditions and increase output. ▼

Human Factors Psychology

- Human factors psychologists try to find the best ways to design products for people to use.
- They consider how the product will be used, how the product affects people, how the product looks and feels, and how the product will be engineered so it is safe, durable, and comfortable to use.

Community Psychology

- Community psychologists study and help create social systems that promote and foster individual well-being.
 - Social systems might include mental health centers, hospital programs, and school-based programs.
 - They focus on: promoting change in the social environment, helping relatively powerless people, preventing threats to mental health in the social environment
- 

Forensic Psychology

- Forensic psychologists work in the criminal justice system.
- They determine the psychological competence of defendants.
- They explain how psychological problems lead to criminal behavior.
- They work with police departments to help select police officers, help officers cope with job stress, train officers in the handling of dangerous situations, such as hostage crises, family violence, and suicide threats.

Health Psychology

- The study of how behavior and mental processes relate to physical health
- Health psychologists study how stress affects health problems.
- They also focus on disease prevention.

Rehabilitation Psychology

- Rehabilitation psychologists work with people challenged by a disability.
- They help their patients develop strategies to compensate for their disability and live meaningful lives.

Cross-Cultural Psychology

- Cross-cultural psychologists study behavior and mental processes under different cultural conditions.
- They have brought new insights to standard psychological theories.
- Example: They have discovered that visual perception develops differently in cultures as a result of the shapes and angles people are exposed to every day.

Reading Check

Summarize

What do forensic psychologists do?

Answer: *testify about the psychological competence of defendants, explain how certain kinds of psychological problems give rise to criminal behavior, assist in selecting officers, help police officers cope with job stress and handle dangerous situations*

Psychology in Today's World

Inside the Criminal Mind

A horrific crime is committed. A psychological profiler examines the evidence. After he inspects the body, evaluates the footprint on the dusty floor, and scrutinizes the cryptic message scrawled on the wall, the profiler declares that the suspect is a young, white male who lives with his parents and is uncomfortable around women. Is he right?

Probably not.

- Profilers often give a broad description that could fit most people.
- Lie-detector tests are meant to help see inside the criminal mind, but they are often unreliable.
- There are no definite methods for detecting when a person lies.

Thinking Critically

- Why do people want to believe that a reliable lie-detector test can be developed?
- Do you think a reasonable profile of a suspect can ever be deduced from crime scene evidence? Why or why not?



For years, science has tried to probe the workings of the mind.



A polygraph measures such processes as blood pressure, respiration, and heart rate, but does it show when someone is lying?

Section 3 at a Glance

A History of Psychology

- Psychology is as old as human history, with its roots going back to ancient Egypt and Greece.
- The scientific approach, which began in the 1500s, led to the birth of modern psychology in the 1800s.
- Modern psychologists continually propose new theories focused on behavioral and cognitive research.

A History of Psychology

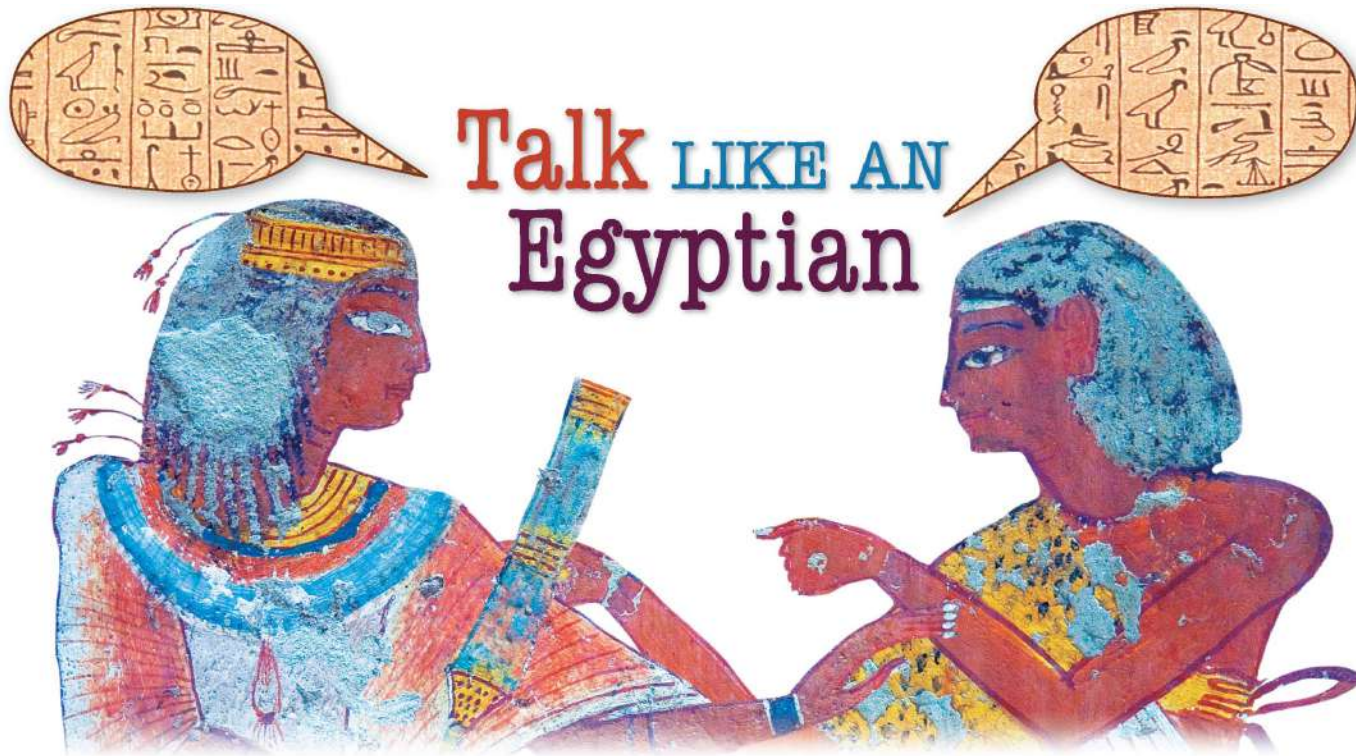
Main Idea

Since ancient times, philosophers and scientists have studied behavior and mental processes. Psychologists throughout history have continued to refine and develop these studies.

Reading Focus

- What were some early views and beliefs about human behavior?
- Who were some of the pioneers of psychology?
- What modern developments in psychology have dominated much of the 20th century?

What was the first
psychological study?



Early Views and Beliefs

- Psychology is as old as human history.
- Written account of the interest in people's actions, motives, and thoughts can be traced to ancient times.

Ancient Greece

- Socrates developed a method of learning called **introspection**, which means to carefully examine our own thoughts and feelings.
- Aristotle outlined **associationism**, the theory that association with past experiences is a basic principle of mental activity.

The Middle Ages

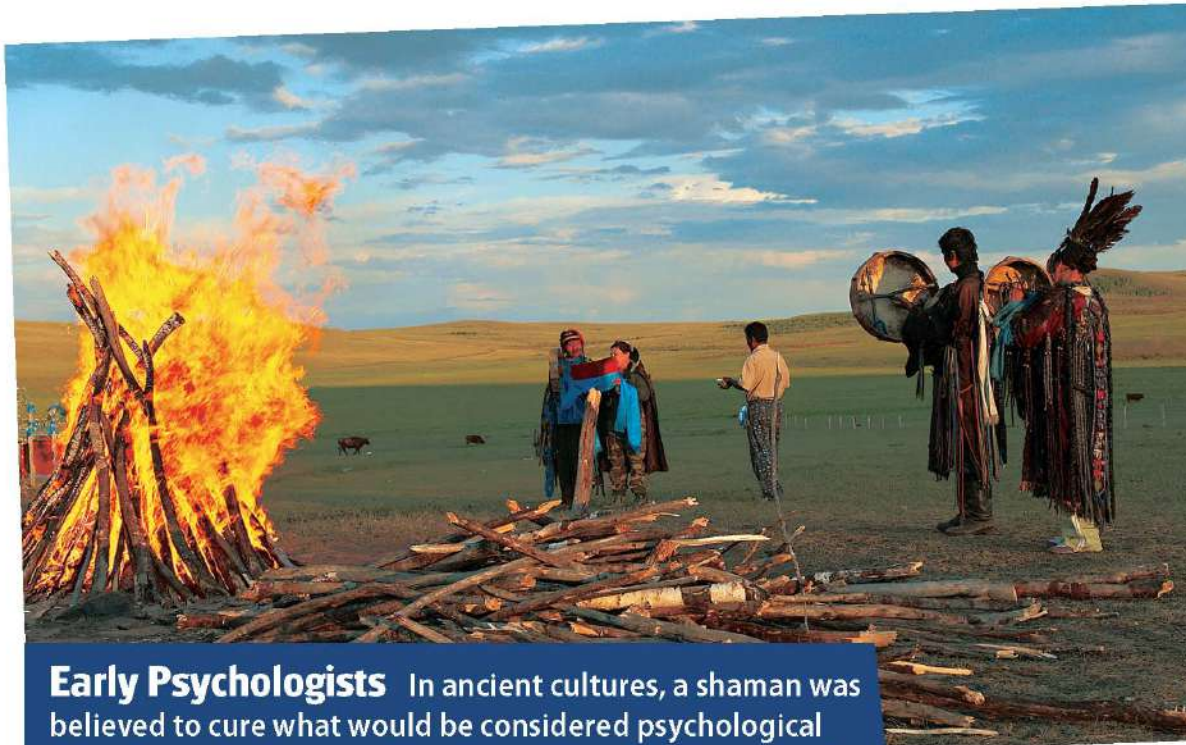
- Most Europeans of this period believed that psychological problems were caused by possession by demons
- They used certain tests to determine whether a person was possessed.

Reading Check

Summarize

What basic foundations of psychology did the ancient Greeks set forth?

Answer: *examining thoughts and feelings; studying human behavior; linking thoughts, feelings, and behaviors to biological factors*



Early Psychologists In ancient cultures, a shaman was believed to cure what would be considered psychological disorders today by consulting the spirit world. Here, people honor a contemporary shaman in a traditional ceremony in Mongolia. *Why might people have looked to shamans and the spirit world for answers to their disorders?*

Pioneers in Psychology

- Most historians of psychology point to the year 1879 as the beginning of psychology as a modern laboratory science. In that year, German psychologist Wilhelm Wundt established his laboratory in the city of Leipzig.

Wilhelm Wundt and Structuralism

- Wundt founded a field of psychology known as **structuralism**.
- Structuralism focused on the basic elements of consciousness.
- Wundt broke down consciousness into objective sensations and subjective feelings.
- Structuralists believed that the human mind functioned by combining objective sensations and subjective feelings.

William James and Functionalism

- Experience is a continuous “stream of consciousness.”
- James was one of the founders of **functionalism**.
- Functionalism is the study of how mental processes help organisms adapt to their environment.

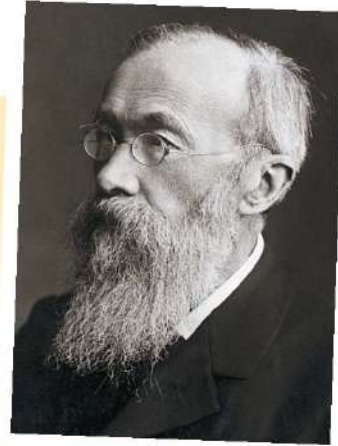
Sigmund Freud and Psychoanalysis

- Freud was the most famous of the early psychologists.
- He developed **psychoanalysis**, which emphasizes unconscious motives and internal conflicts in human behavior.
- He developed **psychodynamic thinking**, which assumes that most of what exists in an individual's mind is unconscious and consists of conflicting impulses, urges, and wishes.
- He theorized that the key to human behavior is satisfying desires.

Structuralism

Wilhelm Wundt

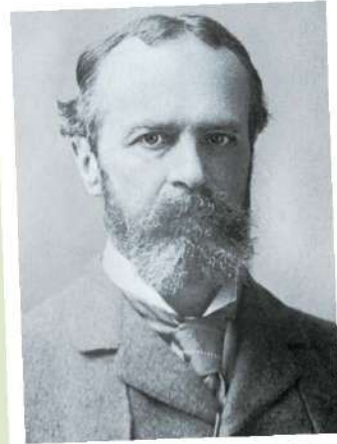
- Because Wundt established psychology as a field of study separate from philosophy and the natural sciences, Wundt is considered one of the founders of modern psychology.
- The lab Wundt set up in 1879 is still in operation today.
- He viewed mental processes as activities and classified feelings as pleasant or unpleasant, tense or relaxed, and excited or depressed.



Functionalism

William James

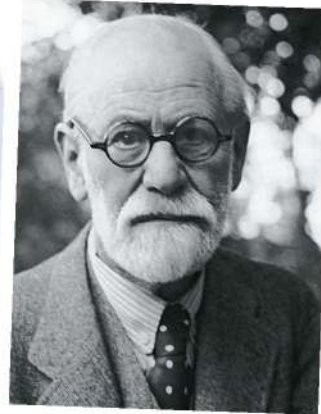
- In addition to being the father of American psychology, James is considered one of America's greatest philosophers.
- Trained in medicine, James commented that the first lecture on psychology he ever heard was the first one he presented as a new instructor at Harvard.
- He believed that since the truth of an idea can never be proved, we should focus instead on how practical or productive an idea is—its “cash value,” as he called it.



Psychoanalysis

Sigmund Freud

- Freud's declaration that people essentially have little free will and are subject to the workings of the unconscious mind was highly revolutionary.
- He psychoanalyzed himself and extensively studied his own dreams, memories, and personality and concluded that he had many mental disorders and fears.
- Many psychologists were initially scandalized by Freud's emphasis on the sexual origins of psychological disorders.



Behaviorism

John B. Watson

- Watson's most famous experiment involved conditioning a small child to fear a white rat by associating the rat with a loud, frightening sound.
- He believed that people have three basic emotional reactions: fear, rage, and love.

B. F. Skinner

- In contrast with Watson, Skinner believed that behavior depended on what happened after a stimulus—an event or sensation—and not before. He called this “operant behavior.”



Reading Check

Find the Main Idea

According to Freud, what is the key to people's behavior?

Answer: *unconscious motives and internal conflicts*

Modern Developments in Psychology

John B. Watson and Behaviorism

- Founded the school of **behaviorism**, which defined psychology as the scientific study of observable behavior
- Holds that people can be totally conditioned by external events and that belief in individual choice is just an illusion

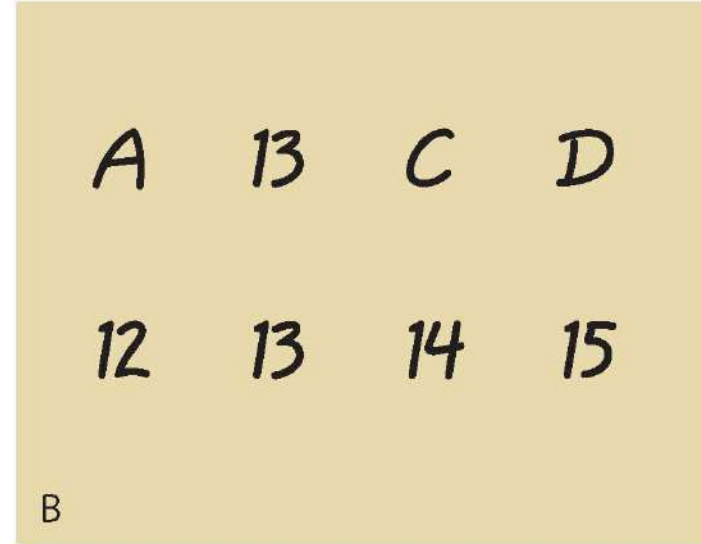
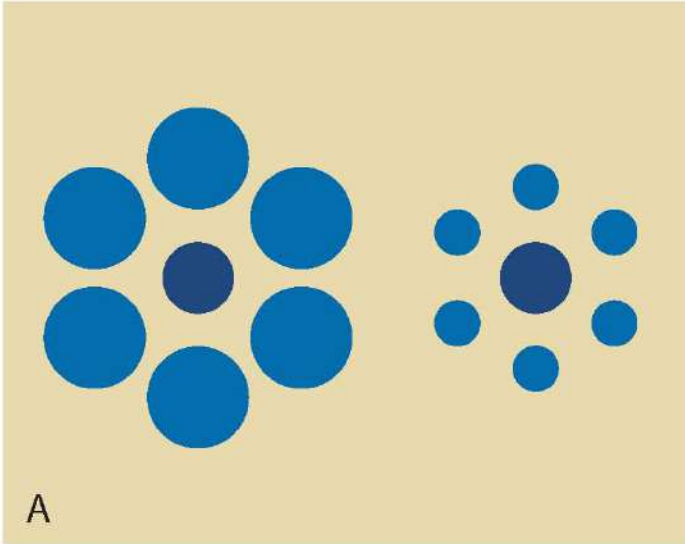
B. F. Skinner and Reinforcement

- Added to the behaviorist tradition by adding reinforcement.
- Showed that animals that are reinforced, or rewarded, for a certain action are more likely to perform that action again.
- Believed people learn in the same way animals do.

The Gestalt School

- **Gestalt psychology** is an alternative to behaviorism and structuralism.
- It was developed by German psychologists Max Wertheimer, Kurt Koffka, and Wolfgang Köhler.
- It is based on the idea that our perceptions of objects are more than the sum of their parts. They are wholes that give shape, or meaning, to the parts.
- Gestalt psychology rejects the structuralist idea that experience can be broken down into individual parts or elements.
- It also rejects the behaviorist idea that only observable behavior is important.

GESTALT DRAWINGS



These drawings demonstrate the idea that the perception of something is affected by the context in which it occurs. Two images that are identical may appear to be different if their surroundings are different.

Skills Focus INTERPRETING VISUALS

In Drawing A, are the two dark blue circles the same size? In Drawing B, what is the second symbol in each row?

Reading Check

Draw Conclusions

How do you think B. F. Skinner would view introspection?

Answer: *He would probably dismiss it as unscientific.*

Section 4 at a Glance

Contemporary Perspectives

- Some contemporary psychologists focus on the role of biology or the role of the mind in seeking to understand behavior and mental processes.
- Other psychologists study how our personal experience affects how we perceive the world.
- Still other psychologists take a more holistic approach and study the interaction of biology, psychology, and social factors and their combined impact on people.

Contemporary Perspectives

Main Idea

Contemporary psychologists have been influenced the work of earlier pioneers. They have expanded traditional research to develop new and different approaches.

Reading Focus

- What is the role of biology in behavior and survival?
- What role does the mind play in determining behavior?
- How does the role of experience affect behavior?
- What factors influence the biopsychosocial perspective?



Another Kind of
Smart

What's your EQ?

Can you tell what emotions
this woman is expressing?

The Role of Biology

The Biological Perspective

- The **biological perspective** of psychology emphasizes the influence of biology on our behavior.
- Biologically oriented psychologists focus on connections between the brain and behavior.
- They also focus on the influences of hormones and genes.

The Evolutionary Perspective

- The **evolutionary perspective** focuses on the evolution of behavior and mental processes.
- Evolutionary psychologists suggest that many kinds of behavior patterns are examples of adaptive behavior.

Reading Check

Draw Conclusions

What role does biology play in our mental processes?

Answer: *The nervous system makes mental processes possible.*

The Role of the Mind

The Cognitive Perspective

- The **cognitive perspective** emphasizes the role that thoughts play in determining behavior.
- The cognitive tradition has roots in Socrates' maxim "Know thyself."
- Many cognitive psychologists have been influenced by information processing and computer science.

The Humanistic Perspective

- The **humanistic perspective** stresses the human capacity for self-fulfillment and the importance of consciousness, self-awareness, and the capacity to make choices.
- According to this perspective, personal experiences are the most important aspect of psychology.

The Psychoanalytic Perspective

- The **psychoanalytic perspective** stresses the influence of unconscious forces on human behavior.
- Psychologists who follow this approach focus on conscious choice.
- Psychoanalytic thought no longer dominates the field, but its influence continues to be felt.

Birth Order

According to some who follow the psychoanalytic perspective, the order in which one is born into a family can have a major impact on personality.

First-Born Children First-borns tend to be high-achievers, responsible, and conservative.

Middle Children Middle children tend to be even-tempered, loyal, and hard-working.

Last-Born Children Last-born children tend to be likeable, spontaneous, and persistent.

Only Children Only children tend to be confident, intelligent, and organized.

Reading Check

Compare and Contrast

How do humanistic and psychoanalytic psychologists differ in their views of what drives behavior?

Answer: *Humanistic psychologists believe that self-awareness, experience, and choice allow people to choose their own behavior, whereas psychoanalytic psychologists hold that unconscious forces shape human behavior.*

The Role of Experience

The Learning Perspective

- The **learning perspective** emphasizes the effects of experience on behavior.
- In contrast, **social-learning theory** suggests that people can change their environments or create new ones.
- Psychologists who take the learning perspective believe that behavior is learned either from direct experience or by observing other people.

The Sociocultural Perspective

- The **sociocultural perspective** focuses on the influences of ethnicity, gender, culture, and socio-economic status on behavior and mental processes.

Contemporary Psychological Perspectives



These eight broad perspectives are the most common ways that contemporary psychologists view behavior today.

Perspective	Subject Matter	Key Assumption	Influenced By
Biological	Nervous system, glands and hormones, genetic factors	Biological processes influence behavior and mental processes.	Associationism and neuroscience
Evolutionary	Physical traits, social behavior	Adaptive organisms survive and transmit their genes to future generations.	Charles Darwin and evolution
Cognitive	Interpretation of mental images, thinking, language	Perceptions and thoughts influence behavior.	Structuralism, functionalism, and Gestalt psychology
Humanistic	Self-concept	People make free and conscious choices based on their unique experiences.	Introspection and belief in free will
Psychoanalytic	Unconscious processes, early childhood experiences	Unconscious motives influence behavior.	Sigmund Freud
Learning	Environmental influences, learning, observational learning	Personal experiences and reinforcement guide individual development.	John B. Watson and behaviorism
Sociocultural	Ethnicity, gender, culture, religion, socio-economic status	Sociocultural, biological, and psychological factors create individual differences.	Social, environmental, and cross-cultural psychology
Biopsychosocial	Biology, psychology, social factors	Mental processes are influenced by the interaction of biological, psychological, and social factors.	Holistic health and social psychology

Reading Check

Find the Main Idea

How can ethnicity and gender affect cultural expectations and social roles?

Answer: *by emphasizing individual differences*

The Biopsychosocial Perspective

- **The biopsychosocial perspective holds that mental processes are influenced by the interaction of biological processes, psychological dispositions, and social factors.**
- **This is a holistic approach that dates back to ancient Greece.**
- **The modern model was developed by American physician George Engel.**
 - It was developed in relation to the treatment of heart disease.
 - Cultural, social, and psychological factors and genetic disposition as well as diet, exercise, stress levels, and financial status all have a bearing on heart disease, according to Engel.

Reading Check

Make Generalizations

What generalization can you make about the relation of the biopsychosocial approach to other psychological perspectives?

Answer: *includes several other psychological perspectives*

Cultural Diversity and Psychology

Bringing Diversity into Psychology

Psychology was dominated in the past by white men. Most of their research used white male participants and tended to explore issues that were relevant primarily to white men. ▼

- Many psychologists today are women and members of ethnic groups.
- Psychological research is more diverse than ever.
- The work of African American psychologist Kenneth Bancroft Clark exemplifies such research. He studied the effects of segregation on black children. ▼

Thinking Critically

- What do you think might have been the effects of segregation on white children?
- Why is it important for psychologists of different genders and cultural backgrounds to carry out research on behavior and mental processes?



Kenneth Clark has an African American child choose the "nice" doll in his landmark study on the effects of segregation.

Lab: Applying What You've Learned

Public Perceptions of Psychology

What perceptions—and misperceptions—do people have about the field of psychology?

1. Introduction


- In this lab, you will conduct a survey to find out how psychology is perceived by the general public.
- You will compare your survey answers with those of your classmates.

2. Conducting the Survey

- Develop answers for the survey questions.
- Prepare the questionnaire.
- Maintain a courteous and professional manner when administering the survey.

Lab (con't.)

3. Evaluating the Responses

- Study the survey responses and note any patterns.
 - Summarize the survey results. Write a paragraph about what the results reveal about people's perceptions of psychology.
- 

4. Discussion and Writing

- Get together with a small group of classmates.
- Compare survey answers and discuss questions.
- Write a paragraph that summarizes your own views on the discussion questions.



Successful survey takers engage their participants by asking follow-up questions that begin with “why” and “how.”