What Is Psychology?
What Are Psychology's Roots?
How Did the Science of Psychology Begin?
What Are Psychological Perspectives?
What Does It Mean to Be a Psychologist?

Note about the image on this slide: Taste buds contained in the papillae of the tongue are far more responsive to bitter tastes than to sweet tastes.

Psychology is the scientific study of the "mind" - behavior and mental processes such as thought and emotion.
There are other ways of trying to understand behavior and mental processes, such as philosophy and literature. These fields rely primarily on personal introspection for insight into the mind.
Psychology is different in that it uses scientific methods and objective measurements to test hypotheses about the mind and how it works.

Psychology was created by combining features from two fields of study that already existed.
For thousands of years philosophers have asked questions about the content of human nature, the relationship between the body and mind, and the roles of nature versus nurture in explaining experience and behavior. Philosophers propose answers to these questions that are based on personal introspection, observation of others, and logic.
The early psychologists sought to address these same kinds of questions, but using the methods and standards of evidence that characterized the physical sciences. Medical research from the 17th-19th centuries showed that mental experience is affected by changes in the brain; that mind is based in the physical body. This suggested that the mind could be studied with techniques that were already used to study the physical world, producing objective data to test theories about experience and behavior.
Wilhelm Wundt, the man seated in this picture, gets the credit for being the first experimental psychologist. In 1879 he conducted the first documented psychology study, asking how quickly research participants could press a telegraph key after hearing a ball drop.

Wundt’s goal was to understand how the simplest elements of experience (such as hearing a sound) combine to create more complex perceptions, experiences, and behaviors (such as pressing the key). This movement within psychology is called “structuralism.”

Structuralism sought to understand the mind by identifying the smallest elements of perceptual experience. Gestalt Psychologists, such as Max Wertheimer, argued that these elements were meaningless studied in isolation. The German word “gestalt” translates roughly to “whole.” Gestalt psychologists noted that even our simplest perceptions are altered by context, that “the whole is greater than the sum of its parts” even in the mind. For example, the middle figures in these two lines are identical, but mean completely different things depending on the surrounding figures.

Both the structuralist and gestalt movements had great influence on modern psychological approaches to perception and cognition.

The structuralists and Gestalt psychologists tried to understand how the mind works, but did not have an overarching theory of why the mind works as it does. William James, who was strongly influenced by Darwin’s theory of evolution in the late 19th century, proposed that the mind evolved to produce mental processes and behaviors that helped human ancestors survive and reproduce.

This movement, called “functionalism,” is now the dominant perspective in Psychology. Modern evolutionary psychology is one obvious descendant of James’ ideas, but most psychologists now presume that the mind was shaped by natural selection.

The evolutionary perspective offered by functionalism suggested that the minds of humans and other animals might work in similar ways. The behaviorists, such as Ivan Pavlov (shown here with one of his dogs), John Watson, Edward Thorndike, and B.F. Skinner, studied animals extensively to try to understand human learning in particular.

Animals cannot tell us what they are thinking. Behaviorists proposed that even in humans, reports of internal mental states are too subjective to study scientifically. The behaviorists held that psychologists should only study explicit, observable behaviors.

By the 1950s, researchers such as Ulric Neisser were challenging the behaviorists’ assumptions, arguing that internal cognitive processes could and should be studied by psychologists. Early cognitive psychologists developed techniques for measuring thinking and reasoning processes objectively that are still used by researchers today.

Sigmund Freud was not really a scientist in terms of the methods he used, but he did propose a theory of the mind that influenced clinical psychology well into the 1950s. Freud’s psychodynamic theory emphasized the existence of a vast, unconscious mind that was separate from conscious awareness, but very powerful. To Freud this unconscious mind or “id” was violent, selfish, obsessed with sex, and socially unacceptable. The conscious mind is only allowed to see the id in code, through symbols in dreams and fantasies; the goal of psychodynamic therapy is to identify the unconscious needs behind people’s conscious thoughts and behaviors.

Although much of Freud’s theory has been discredited, modern psychologists again acknowledge that many important mental processes happen outside conscious awareness, sometimes with surprising results.
Humanistic psychology, led by Abraham Maslow and Carl Rogers in the 1960s (shown leading a therapy session in this photo), was a reaction against both behaviorism and Freud’s psychodynamic theory. Unlike the behaviorists, the humanists felt that internal experience was extremely important for understanding behavior. Unlike Freud, however, the humanists proposed that human nature is inherently good, and that all people want to improve themselves if they can.

Humanistic approaches involved treating clients as peers rather than subordinates, and changing the environment as a way to help improve the individual – ideas that are still very influential in clinical psychology today.

LO4: Differentiate the seven major perspectives of modern psychology in terms of typical research questions, research methods, and focal causes of behavior.

LO5: Analyze the ways in which the seven major perspectives can be integrated to address a single psychological process or topic.

Modern psychology is not dominated by a single, overarching theory. Instead, psychologists work from a variety of different theoretical perspectives, often reflected in the “areas” within psychology departments. Each perspective addresses somewhat different kinds of research question, uses different methods, and emphasizes some causes of behavior over others. However, psychological processes can often be understood best by integrating knowledge gained from a variety of perspectives.

Biological psychology emphasizes the physiological mechanisms influencing mind and behavior, including the nervous system, genes, and hormones. Typical research questions might ask how changes in neural activity are associated with psychological processes. For example, are physical and emotional pain mediated by activity in the same areas of the brain?

Evolutionary psychology emphasizes the ways in which psychological mechanisms might have evolved to help solve adaptive problems faced by human ancestors. Typical research questions might ask whether psychological processes can be predicted based on functional analyses. For example, are people less extraverted when their fears of disease have been activated?

Cognitive psychology emphasizes the ways the mind processes information. Typical research questions might ask how people store and retrieve memories, or learn associations between concepts. For example, how long can people remember a seven-digit phone number without rehearsing that memory?

Social psychology emphasizes the ways in which psychological processes are influenced by interactions with other people. Typical research questions might ask how we think about other people, or how their presence changes our own behavior. For example, are people more likely to help a person in distress if they are in a group, or alone?

Developmental psychology emphasizes the ways that mind and behavior change throughout the lifespan, from the first days of life through old age. Typical research questions might ask when in childhood certain cognitive abilities typically emerge. For example, how old must children be before they can recognize themselves in a mirror?

Clinical psychology emphasizes implications for well-being when normal psychological processes break down. Typical research questions ask whether symptoms can be explained in terms of abnormal biology or cognition, and how those symptoms can be treated. For example, can fear of heights be treated by having people climb slightly higher up a ladder in each session?

Personality psychology asks how psychological processes differ from person to person. Typical questions ask whether variability in personality traits can predict behavioral and life outcomes. For example, are extroverts or introverts more likely to be happily married?

Often the richest understanding comes when we consider a problem from multiple perspectives. For example, how might each of the perspectives in psychology approach the topic of physical aggression?

(Biological: aggression is associated with low levels of serotonin.
Evolutionary: we aggress against people who challenge our status.
Cognitive: we learn to be more aggressive when we see aggression rewarded.
Social: we are more aggressive when we are anonymous and unaccountable.
Developmental: aggressive behavior decreases sharply from the mid-20s on.
Clinical: aggressive individuals tend to have low impulse control.
Personality: aggressive people tend to have very high self-esteem.)
LO6: Explain why psychology's role as a “hub science” allows psychologists to pursue a wide range of career paths with respect to professional specialties and research areas.

Psychology connects with many other disciplines, and people with training in psychology can pursue a wide range of career paths.

This “map of science” was generated by examining the connections among fields, as represented in citations of published papers from 2000 to 2005. Psychology was one of seven “hub sciences” that strongly influenced work done in other fields.

When people think of a “psychologist” they usually imagine a clinical therapist. However, people with psychology degrees also work in medicine, business, public policy, economics, education, and criminal justice. Any career that requires an understanding of how people tick will benefit from psychology training.