

WHAT IS PSYCHOLOGY?

Learning Objectives:

DEFINE psychology and explain its scientific nature.

UNDERSTAND the historical development of psychology from its roots in philosophy to its emergence as a science in the 19th century.

EXPLAIN the basic principles of psychology and their influence on perception, problem-solving, growth, and free will.

RECOGNIZE the various subdivisions of psychology and their applications.

UNDERSTAND the educational requirements and career opportunities in psychology.

Psychology is a field that seeks to understand the human mind and behavior. Studying psychology can be a rich and rewarding experience that equips students with essential skills and knowledge for a range of personal and professional pursuits. This chapter provides an overview of psychology and its scientific nature. It dives into the history of psychology and explores the impact of scholars such as Wundt, Freud, Pavlov, and Maslow, as well as the many principles and diversions of psychology. Finally, it looks at the careers available to those who study psychology, from academic settings to counselors and psychologists.

WHY STUDY PSYCHOLOGY?

Studying psychology can be a fascinating and fulfilling endeavor for a variety of reasons. Some students are drawn to the subject because they are interested in helping others and want to better understand human behavior. Others may be required to take a psychology course as part of their program of study, while others may find it to be a useful general education requirement.

Regardless of their initial motivations, many students find themselves captivated by the subject and declare psychology as their major. In fact, psychology is one of the most popular majors on college campuses across the United States, with about six percent of all bachelor's degrees granted in the discipline (*Figure 1*).¹

There are numerous benefits to studying psychology. For one, students develop critical thinking skills that are essential in today's world of competing and sometimes misleading information. These skills include maintaining a skeptical attitude, recognizing personal biases, using logical thinking, asking appropriate questions, and making observations. Psychology students also improve their communication skills, which are valuable in a wide range of professional and personal contexts.

Perhaps most importantly, students of psychology gain a deeper understanding of the complex factors that shape human behavior. They learn about the interplay of biology, environment, and experience in determining who we are and how we act. They also explore fundamental principles of cognition and behavior and come to appreciate the tremendous diversity that exists across individuals and cultures.

Figure 1: There are many reasons for students to study psychology, making it a popular major in universities.



PSYCHOLOGY AS A SCIENCE

Psychology is a scientific discipline. It is empirical in nature and uses the scientific method to gather data and test theories. The scientific method is a systematic approach to acquiring knowledge that involves formulating a hypothesis, testing the hypothesis through empirical observation or experimentation, and drawing conclusions based on the results. Psychologists use this method to explore various questions about the mind and behavior, such as creativity, prejudice and discrimination, and consciousness. Psychology is also an interdisciplinary field that draws on other natural and social sciences to understand human behavior.

Empirical Nature of Psychology

Psychology uses the *empirical method*, which means that it is based on measurable data. Psychologists rely on observable and measurable phenomena to formulate hypotheses and test theories. For example, a psychologist might be interested in studying the effect of a particular drug on the brain. The researcher would formulate a hypothesis, such as "this drug will increase dopamine levels in the brain," and then design an experiment to test the hypothesis (*Figure 2*).

Figure 2: Psychology is empirical, meaning psychologists will conduct experiments to obtain measurable data.



Limitations of Scientific Understanding

One limitation of scientific understanding is that science deals only with matter and energy, which means that it cannot provide knowledge about values and morality. This is one reason why our scientific understanding of the mind is limited, since thoughts and emotions are subjective experiences that are difficult to measure objectively.

Interdisciplinary Nature of Psychology

Psychology is an interdisciplinary field that draws on other natural and social sciences, such as biology, anthropology, sociology, and neuroscience. Because behavior is influenced by these other factors, psychologists take a multi-dimensional approach to understanding human behavior. For example, a psychologist studying aggression might examine the biological, psychological, and social factors that contribute to aggressive behavior.

HISTORY OF PSYCHOLOGY

The roots of psychology can be traced back to ancient civilizations such as Greece, Egypt, and China. Philosophers such as Aristotle, Plato, and Confucius discussed topics such as perception, memory, and consciousness. During the Renaissance period, thinkers such as René Descartes and John Locke began to explore the relationship between the mind and the body, laying the foundation for modern psychology. However, it was not until the 19th century that psychology emerged as a distinct scientific discipline.

The Emergence of Psychology as a Science

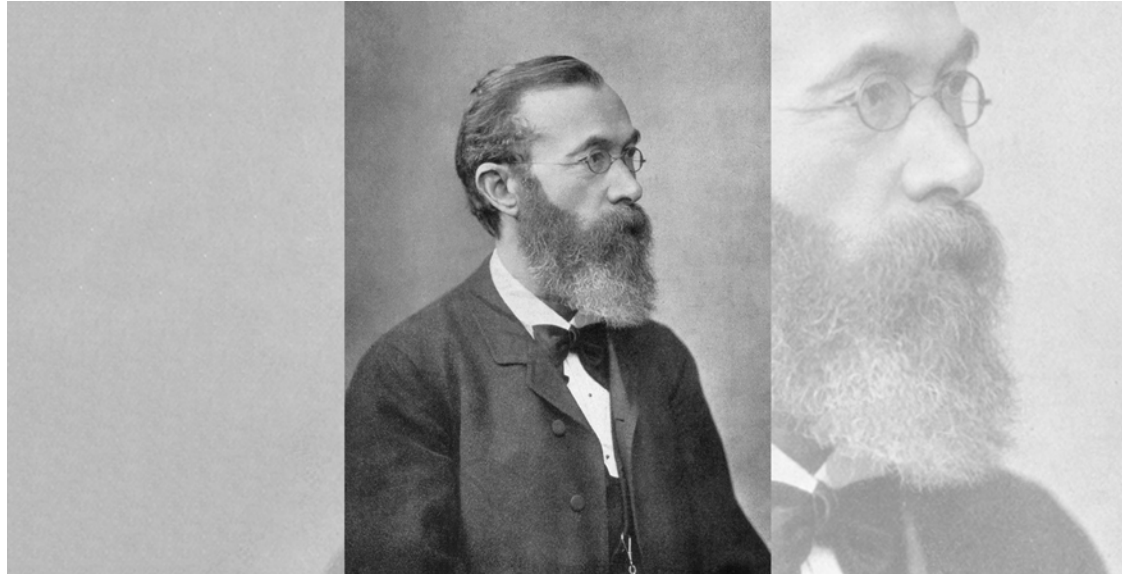
Wilhelm Wundt was a German scientist who is often referred to as the “father of psychology” (**Figure 3**). He published a famous book in 1873 called *Principles of Physiological Psychology*, which laid the foundation for modern psychology. Wundt believed that psychology should be a scientific study of conscious experience, and his goal was to identify the components of consciousness and how they combine to form our conscious experience. To achieve this, he used a process called *introspection*, which involves examining one's own conscious experience as objectively as possible. Wundt considered this process to be a scientific method that could be used to observe the workings of the human mind.

According to Wundt, people have free will and should be aware of the intentions behind a psychological experiment if they were participating. He used instruments such as those that measured reaction time to conduct experiments in his laboratory at the University of Leipzig, which he established in 1879. Wundt and his students conducted experiments on various stimuli and recorded the subject's reaction time. He could measure reaction time to one-thousandth of a second, which was a significant achievement at that time.²

His contribution to psychology extends beyond his experiments. He also wrote *Volkerpsychologie* in 1904, which suggested that psychology should include the study of culture as it involves the study of people. One of his students, Edward Titchener, went on to develop *structuralism*, which focused on the contents of mental processes rather than their function.

Despite his efforts to train individuals in the process of introspection, the process remained highly subjective, and there was little agreement between individuals. However, Wundt's work laid the foundation for modern psychology, and his laboratory at the University of Leipzig remains a significant historical landmark in the field.

Figure 3: Wilhelm Wundt is often referred to as the “father of psychology.” Source: Wikimedia



Functionalism and Adaptive Behavior

Functionalism emerged as a new school of psychology in the late 19th century, championed by William James, John Dewey, and Charles Sanders Peirce. They were inspired by Charles Darwin's theory of evolution and believed that psychology should study the function of behavior in the world. This perspective focused on how mental activities helped an organism adapt to its environment (**Figure 4**).

The theory had a broader scope than structuralism, which had focused on the elements of consciousness. Instead of breaking down the mind into individual parts, functionalists were interested in studying the operation of the entire mind. James, one of the key figures in functionalism, used a combination of introspection and more objective measures such as recordings and physiological examinations to study mental activities.

Functionalists believed that mental processes could not be understood without considering their function in adaptation and survival. They studied a range of topics, from perception and learning to social behavior and consciousness. Although functionalism eventually lost prominence to behaviorism and psychoanalysis in the early 20th century, it was an important precursor to the development of cognitive psychology.

Figure 4: Functionalists examined how the mind works to adapt to its environment, such as experiencing anxiety when faced by something perceived as dangerous.



Psychoanalytic Theory and the Unconscious Mind

Sigmund Freud's *psychoanalytic theory* had a significant impact on the development of psychology. His theories revolutionized the field of psychology and continue to influence it today (*Figure 5*).

His theory emphasized the importance of the unconscious mind and the role of childhood experiences in shaping personality. According to Freud, our behavior is determined by unconscious desires and conflicts that we are not aware of. He believed that the unconscious mind was a reservoir of repressed memories, emotions, and desires that could influence our behavior without our knowledge.

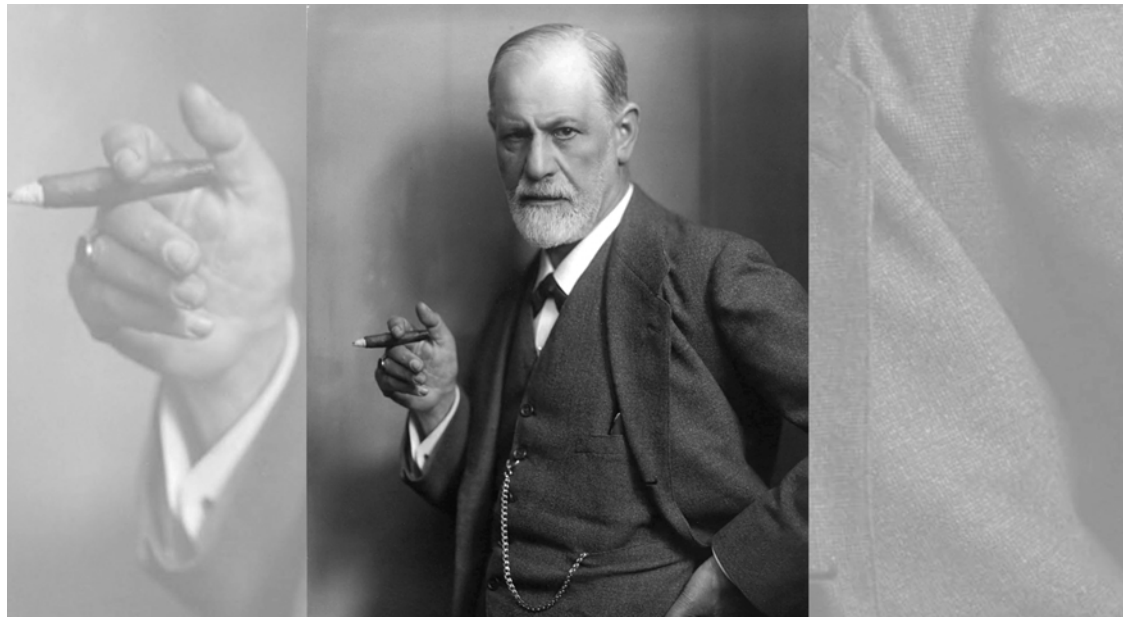
These theories on the human psyche and therapy methods were revolutionary for their time. He developed *psychoanalysis*, a method of therapy that involves exploring a patient's unconscious mind through free association, dream analysis, and other techniques. Psychoanalysis paved the way for new approaches to therapy and greatly expanded our understanding of the human mind.

Personality psychology was greatly impacted by Freud's theories. He proposed that personality was composed of three parts: the id, the ego, and the superego. The id represents our unconscious desires and instincts, the ego is the rational part of our personality that mediates between the id and the external world, and the superego represents our conscience and moral values. Freud's theory of personality provided a framework for understanding the complex interplay between conscious and unconscious processes that shape our behavior.

Freud's theories also had a significant impact on the development of psychopathology. He believed that many psychological disorders were the result of unresolved conflicts and repressed emotions from childhood. His work on the psychosexual stages of development provided a framework for understanding how early experiences can influence our behavior and mental health.

Despite its significant impact on the development of psychology, Freud's psychoanalytic theory has been criticized for its lack of empirical evidence and reliance on subjective interpretations. Critics have argued that Freud's theories are too focused on sexuality and too pessimistic about human nature. However, his influence on the field of psychology cannot be overstated, as his theories continue to inspire new research and approaches to therapy.

Figure 5: Sigmund Freud's theories on the unconscious mind revolutionized psychology and continue to influence it today. Credit: Wikimedia/Max Halberstadt



Gestalt Psychology and Perception

Gestalt psychology was introduced to the United States by three German psychologists who immigrated to the country in the early 20th century to escape Nazi Germany: Max Wertheimer, Kurt Koffka, and Wolfgang Köhler. The word "gestalt" translates to "whole," and a major emphasis of Gestalt psychology is examining how the parts of a sensory experience relate to each other as a whole, and how this is often what individuals respond to in perception. For example, while a song may be composed of individual notes played by different instruments, the real nature of the song is perceived in the combinations of these notes as they form the melody, rhythm, and harmony (*Figure 6*).

Figure 6: Similar to how music notes combine to form a song, Gestalt psychology examines how the parts of a sensory experience relate to each other as a whole.



This perspective contradicted Wundt's ideas of structuralism, which focused on breaking down the components of a sensory experience into individual parts. Unfortunately, the Gestalt psychologists were forced to abandon much of their work when they moved to the United States, and the rise of behaviorism prevented Gestalt principles from being as influential in the United States as they had been in Germany.

However, several Gestalt principles still hold influence today. The humanistic theory, which considers the human individual as a whole rather than as a sum of individually measured parts, was heavily influenced by Gestalt psychology. Gestalt ideas have also continued to influence research on sensation and perception.

Overall, Gestalt psychology introduced a new perspective to the study of perception and cognition, emphasizing the importance of the whole rather than just the sum of its parts. While its influence may have been limited in the United States, Gestalt principles continue to inform research in psychology and other fields.

Behaviorism and the Effect of External Stimuli

While structuralism, Freud, and the Gestalt psychologists were all concerned with describing and understanding inner experience, other researchers chose to exclusively study behavior, the objectively observable outcome of mental processes. These researchers believed that inner experience could not be studied as a legitimate subject of scientific inquiry. This led to the rise of **behaviorism** in the early 20th century, a school of psychology that focused on studying the relationship between behavior and the environment. Behaviorists believed that behavior was shaped by external stimuli, rather than internal thoughts and feelings.

Russian physiologist Ivan Pavlov was one of the early pioneers in this field, focusing on a form of learning behavior called **conditioned reflex**. Pavlov studied the salivation reflex in response to the presence of food, which could be elicited using a second stimulus, such as a specific sound, that was presented in association with the initial food stimulus several times (**Figure 7**). This led to the development of classical conditioning.

Figure 7: A famous experiment conducted by Ivan Pavlov involved conditioning a dog to salivate at the sound of a bell.



John B. Watson, an American psychologist, was a major proponent of behaviorism and advocated for a shift in focus from the mind to behavior. Watson believed that objective analysis of the mind was impossible, and preferred to study directly observable behavior. This approach dominated experimental psychology for several decades and led to the establishment of psychology as a scientific discipline.

B.F. Skinner, another influential American psychologist, built on Watson's work by focusing on how behavior is affected by its consequences. Skinner developed the operant conditioning chamber, or Skinner box, which allowed for the study of behavior modification through reinforcement and punishment. Skinner's focus on positive and negative reinforcement of learned behaviors had a lasting influence on psychology, particularly in the areas of behavioral and cognitive-behavioral therapy.

Behaviorism's influence can still be felt in psychology today, particularly in research on environmental influences on human behavior. While cognitive psychology has grown in popularity, conditioned learning is still used in human behavioral modification. Overall, behaviorism played an important role in establishing psychology as a scientific discipline and paved the way for further research in the field.

Humanistic Psychology and Personal Growth

During the early 20th century, behaviorism and psychoanalysis dominated American psychology. However, some psychologists believed that these perspectives were too limited and failed to recognize the potential for good that exists within all humans. This led to the emergence of *humanism*, which emphasizes personal control, intentionality, and the innate predisposition for "good" in human behavior.

Abraham Maslow and Carl Rogers are two prominent figures in humanistic psychology. Maslow proposed a hierarchy of human needs that motivates behavior, with self-actualization representing the highest-level need. Rogers developed a client-centered therapy approach that emphasizes the therapist's unconditional positive regard, genuineness, and empathy for their clients.

Humanistic psychology rejected the reductionist experimentation approach of traditional physical and biological sciences because they missed the "whole" human being. Instead, humanistic psychology emphasized a research program that was largely qualitative but also included some quantitative research on topics such as happiness, self-concept, and the outcomes of humanistic psychotherapy (*Figure 8*).

Maslow's and Rogers' ideas have had a significant influence on psychology as a whole, and their names are well-known among psychology students. Rogers' client-centered approach to therapy is still commonly used in psychotherapeutic settings today.

Overall, humanistic psychology provides a more optimistic and hopeful perspective on human nature than the deterministic views of behaviorism and psychoanalysis. By emphasizing the potential for good in humans, humanistic psychology provides a more holistic understanding of human behavior and mental health.

Figure 8: A humanistic approach focuses more on a person's happiness and the ability of humans to show good behavior.



The Cognitive Revolution: Rediscovering the Mind in Psychology

For a long time, behaviorism dominated psychology and shifted attention away from the mind and onto external behavior. However, in the 1950s, new perspectives in linguistics, neuroscience, and computer science sparked the cognitive revolution, which redirected focus onto the individual human as a conscious and self-aware being (**Figure 9**).

Noam Chomsky, a linguist, was influential in the early days of this movement. He believed that psychology had to re-incorporate mental functioning into its purview to understand behavior fully. This interdisciplinary approach, known as the **cognitive sciences**, enabled psychologists to collaborate with scientists in other fields such as anthropology, linguistics, computer science, and neuroscience.

The cognitive revolution also re-established communication between European and American psychologists. As a result, the study of the mind became more prominent in psychology, and the interdisciplinary approach continues to resonate in modern-day psychology. Ulric Neisser's 1967 textbook *Cognitive Psychology* served as a core text in cognitive psychology courses across the United States. This movement was necessary to understand human behavior fully and has continued to have a significant impact on modern psychology.

Figure 9: The cognitive revolution shifted psychology back toward the study of the mind and human consciousness.



The Impact of Culture on Psychology

In understanding human behavior, psychologists are increasingly recognizing the importance of culture in shaping individuals, groups, and society. However, researchers have acknowledged that certain populations have been over-studied, and the results of these studies have been wrongly applied to other populations. For example, western, educated, industrialized, rich, and democratic (WEIRD) societies have been overrepresented in psychology research, leading to a lack of understanding of how cultural differences affect human behavior. Multicultural psychologists and cross-cultural psychologists have developed theories and conducted research to address this issue.

Francis Cecil Sumner, the first African American to receive a PhD in psychology in the United States, established a psychology degree program at Howard University, leading to the education of a new generation of African American psychologists. Much of the work of early psychologists from diverse backgrounds was dedicated to challenging intelligence testing and promoting innovative educational methods for children. George I. Sanchez, a psychologist of Mexican heritage, challenged the use of intelligence testing with Mexican American children and advocated for equal opportunities.

Mamie Phipps Clark and her husband Kenneth Clark, famous African American researchers and psychologists, conducted studies on African American children's doll preferences, which were instrumental in the *Brown v. Board of Education* Supreme Court desegregation case. They applied their research to social services and opened the first child guidance center in Harlem.

The *American Psychological Association (APA)* has several ethnically based organizations for professional psychologists that facilitate interactions among members. Some psychologists belonging to specific ethnic groups or cultures are interested in studying their own communities, and these organizations provide an opportunity for the growth of research on the interplay between culture and psychology.

The *Association for Psychological Science (APS)* was founded in 1988 to promote the scientific orientation of psychology. It publishes five research journals and advocates for funding agencies. The APS is comprised of members from all over the world, with the majority based in the United States. Other organizations such as the National Latina/o Psychological Association, the Asian American Psychological Association, the Association of Black Psychologists, and the Society of Indian Psychologists focus on networking and collaboration opportunities for professionals from specific ethnic or racial groups, while also studying psychological and social issues within those communities.

Understanding the impact of culture on psychology is crucial for developing more accurate and effective psychological theories and practices. As the world becomes increasingly diverse, it is important for psychologists to acknowledge and study cultural differences to ensure that their work is relevant and applicable to all individuals and communities (*Figure 10*).

Figure 10: Psychologists have become increasingly aware that culture plays a critical role in their theories and practices.



CONTEMPORARY PSYCHOLOGY: EXPLORING THE DIVERSIONS OF PSYCHOLOGY

Psychology is a diverse field that encompasses many different specialties, and this diversity is reflected in the dozens of divisions of the American Psychological Association. These divisions cover a wide range of interests, including the psychology of religion and spirituality, exercise and sport psychology, behavioral neuroscience, and comparative psychology. These specialties attract members from various backgrounds, including students, doctoral-level psychologists, and professionals in educational settings, as well as professionals in criminal justice, healthcare, the armed forces, and industry.

This section provides an overview of the major subdivisions of psychology, including biological, cognitive, developmental, personality, social, and clinical psychology. Coverage of these divisions is not exhaustive, but it provides insight into the research and practice of modern-day psychologists.

Biological Psychology: Human Biology and Behavior

Biopsychology explores the link between our biology and behavior by studying the structure and function of the nervous system. Biological psychologists use research strategies from both psychologists and physiologists to investigate domains such as sensory and motor systems, sleep, drug use and abuse, reproductive behavior, and psychological disorders. The interdisciplinary approach to this field is known as *neuroscience*.

On the other hand, *evolutionary psychology* examines the ultimate biological causes of behavior by studying how behaviors adapt to the environment, including the physical and social surroundings. This field had its origins with Charles Darwin, who believed that behaviors should be adaptive (**Figure 11**). To be subject to evolution by natural selection, a behavior must have a significant genetic cause. The approach of evolutionary psychologists is to predict the outcome of a behavior based on evolutionary theory and then test whether the results match the theory. However, demonstrating that a trait is naturally selected is challenging, especially for humans, as it requires knowledge of the environmental and social conditions in which the trait evolved.

Evolutionary psychology can predict many areas of human behavior, such as memory, mate choice, relationships between kin, friendship and cooperation, parenting, social organization, and status. Researchers have found experimental correspondence between observations and expectations, such as the study of mate preference differences between men and women, in which women valued earning potential factors greater than men, and men valued potential reproductive factors greater than women in their prospective mates.³ Although there were deviations in some cultures, the predictions were mostly in line with the predictions of evolution.

Figure 11: Evolutionary psychology is influenced by the ideas of Charles Darwin, who believed behavior is adaptive.



Cognitive Psychology: Mental Processes

Cognitive psychology is an exciting and dynamic field that aims to understand how we think, perceive, learn, and remember. This area of psychology focuses on studying the mental processes that underlie our behavior and experiences. Cognitive psychologists use a variety of research methods to explore different topics, such as attention, problem-solving, language, and memory.

The interdisciplinary nature of cognitive psychology has led to the development of cognitive science, which involves collaboration between researchers from various disciplines. This collaboration has enabled cognitive psychology to explore topics more comprehensively and from different perspectives.

Developmental Psychology: A Lifetime of Changes

Developmental psychology examines the changes that occur throughout an individual's lifespan. Researchers in this field investigate a range of topics, including physical maturation, cognitive skills, moral reasoning, social behavior, and other psychological attributes (**Figure 12**).

Early developmental psychologists focused on the changes that occur from infancy to adulthood, providing insights into the differences in physical, cognitive, and social abilities between very young children and adults. For example, Jean Piaget's research on cognitive changes during infancy and childhood showed that young children do not demonstrate object permanence. However, as children develop, they come to understand that objects continue to exist even when they are not visible.

As the population of developed nations continues to age, there is an increasing interest in studying the changes that occur later in life. This is particularly important given that the number of individuals aged 65 or older in the United States is expected to increase significantly in the coming years. Researchers are exploring the changes that occur as a person grows older, including issues related to memory, decision-making, and relationships.

Figure 12: Developmental psychology explores the different changes people face throughout their lifespan, from learning skills when young to facing mental challenges when old.



Personality Psychology: Individual Distinction

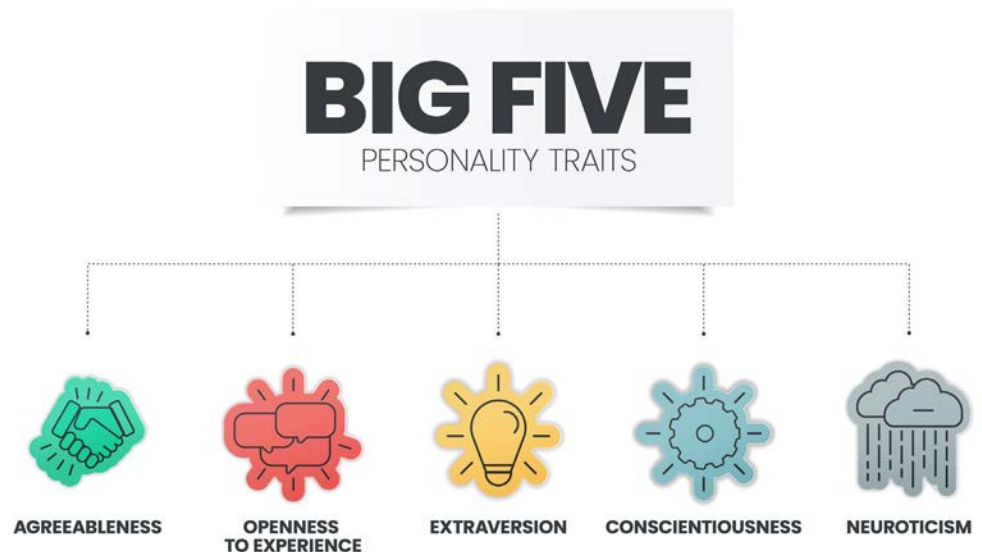
Personality psychology explores the unique patterns of thought and behavior that make individuals distinct from each other. Early theorists, such as Freud and Maslow, attempted to explain the development of personality from their particular perspectives. However, modern research on personality has taken a more quantitative approach.

The **Five Factor Model**, also known as the Big Five, is the most widely accepted framework for studying personality traits. These traits are conscientiousness, agreeableness, neuroticism, openness, and extraversion (**Figure 13**). Conscientious individuals are reliable, responsible, and hardworking, while agreeable individuals tend to be cooperative, friendly, and compassionate. Neurotic individuals are prone to worry, anxiety, and negative emotions, whereas open individuals are creative, curious, and open to new experiences. Finally, extraverted individuals are outgoing, assertive, and sociable.

Studies have shown that these traits are relatively stable throughout an individual's life and are influenced by genetic factors. While the Five Factor Model provides a comprehensive framework for understanding personality, it is important to note that individuals may express these traits in different ways depending on the context.

Research on personality has practical applications in a variety of settings. For example, understanding an individual's personality traits can be useful in predicting job performance and academic success, and even treating mental health disorders. By identifying the traits that make each person unique, personality psychology provides a valuable framework for understanding human behavior.

Figure 13: The Five Factor Model looks at a number of traits that provide a framework for personality.



Social Psychology: How We Interact With Others

Social psychology is the study of how we interact with and relate to others. Social psychologists investigate topics such as prejudice, attraction, and conflict resolution. They also explore how being among other people affects our behavior and thinking patterns (**Figure 14**).

Figure 14: Social psychology explores how interaction with others affects our behavior and thoughts.



One of the most controversial studies in social psychology was conducted by Stanley Milgram in 1961. Milgram was interested in understanding how Nazi soldiers were capable of committing atrocities during the holocaust, and whether the excuse of “just following orders” was valid. He conducted an experiment in which participants were instructed to deliver what they believed to be lethal shocks to another person, simply because they were told to do so by an authority figure. Milgram found that nearly two-thirds of his participants were willing to carry out this task, despite the potential harm it could cause.

While Milgram’s study was informative, it also raised ethical concerns about the use of deception and emotional harm to study participants. In response to such concerns, ethical guidelines for conducting psychological research now discourage the use of deception unless it can be argued that it will not cause harm, and informed consent of participants is required.

Social psychologists conduct research on a wide variety of topics, and you will learn about many of these in later chapters. One area of study involves differences in how we explain our own behavior versus the behavior of others. Another area explores the factors that influence attraction between individuals. Overall, social psychology helps us understand how we interact with others and why we behave the way we do in social situations. It continues to yield new insights into the human experience.

I-O Psychology: Improving the Workplace

Industrial-organizational psychology (I-O psychology) focuses on applying psychological research to improve organizational and workplace outcomes. I-O psychologists work to optimize workplace productivity, efficiency, and employee well-being by using psychological principles to solve problems related to personnel management, organizational structure, and workplace environment (**Figure 15**).

For instance, I-O psychologists may be involved in the recruitment and selection of employees, developing training programs, improving work design, and assessing job satisfaction and motivation. They may also be called upon to consult on workplace diversity, employee engagement, and performance management.

In addition to applying psychological principles to practical workplace issues, I-O psychologists also conduct scientific research to develop new insights and solutions to problems encountered in the workplace. This research can be used to inform organizational policy and improve practices within a range of industries, including healthcare, technology, and finance.

Figure 15: I-O psychology focuses on workplace optimization and a positive environment for workers.



Health Psychology: Health and Wellness

Health psychology investigates how biological, psychological, and sociocultural factors impact an individual's overall well-being. Health psychologists strive to improve people's health by conducting research, education, and intervention programs. They may study how an individual's genetic makeup, behaviors, relationships, and stress levels influence their health. Health psychologists also explore effective ways to motivate individuals to adopt healthier habits that can improve their overall quality of life.

By utilizing the biopsychosocial model, health psychologists recognize that health is not solely determined by biological factors, but is also influenced by psychological and social factors. Therefore, they work to address all aspects of an individual's health to promote optimal wellness. The research conducted by health psychologists can inform public health policies, education programs, and intervention strategies that aim to improve the health and well-being of individuals and communities.

Sport and Exercise Psychology: The Mind-Body Connection

Sport and exercise psychology examines the psychological factors that influence athletic performance and physical exercise. Researchers in this field are interested in topics such as motivation, performance anxiety, and the impact of physical activity on mental and emotional health. They also study the connection between mental and physical performance in high-pressure situations, such as military operations and surgery, as well as other activities that require high levels of physical performance, such as dance and firefighting (**Figure 16**).

Researchers in this field use a variety of methods to investigate the complex relationship between the mind and body, including surveys, experiments, and interviews.

Overall, the goal of sport and exercise psychology is to help individuals and teams achieve peak performance by understanding and improving the mental factors that contribute to physical success. This field also emphasizes the importance of physical activity for overall health and wellbeing, and explores the psychological benefits of regular exercise.

Figure 16: In addition to sports performance, sport and exercise psychology examines physical and mental performance in high-pressure situations, like military operations and firefighting.



Clinical Psychology: Treating Psychological Disorders

Clinical psychology focuses on diagnosing and treating psychological disorders and problematic patterns of behavior. While some clinicians engage in research, the discipline is generally considered to be more applied. **Counseling psychology**, on the other hand, focuses on improving emotional, social, vocational, and health-related outcomes in individuals who are considered psychologically healthy.

The ideas of both Freud and Rogers have been influential in shaping how clinicians interact with people seeking psychotherapy. While some therapists still use aspects of psychoanalytic theory, Rogers' client-centered therapy has been especially influential in modern clinical practice. Additionally, behaviorism and the cognitive revolution have played significant roles in shaping clinical practice, leading to the development of behavioral therapy, cognitive therapy, and cognitive-behavioral therapy.

Forensic Psychology: Psychology in the Justice System

Forensic psychology deals with how psychological principles can be applied in the context of the justice system. Forensic psychologists work in a variety of settings, such as assessing a person's competency to stand trial, evaluating the state of mind of a defendant, acting as consultants on child custody cases, and advising on issues such as eyewitness testimony and children's testimony (**Figure 17**). They may also be involved in providing psychological treatment within the criminal justice system.

As expert witnesses, forensic psychologists must have a good understanding of the law and provide information in the context of the legal system. Criminal profilers are a relatively small proportion of psychologists that act as consultants to law enforcement. Forensic psychologists may also be involved in the jury selection process and witness preparation.

This field requires a strong understanding of both psychology and the legal system, and forensic psychologists must be able to apply their knowledge in a way that is relevant to the specific case they are involved in. As such, forensic psychology is an important area that helps to ensure that the legal system is fair and just.

Figure 17: Forensic psychologists apply their knowledge of psychology to the justice system and must have a good understanding of the law.



CAREERS IN PSYCHOLOGY

A career in psychology can be rewarding and provide a wealth of opportunities for individuals with varying levels of education. From bachelor's degrees to doctoral degrees, the field of psychology offers diverse career paths for those interested in understanding and improving human behavior. Understanding the options available can help individuals make informed decisions about their career paths.

Academic Faculty Positions

Psychology offers a wide variety of career options, including opportunities in academic settings. Generally, to pursue a career in psychology at a 4-year institution of higher education, individuals will need to earn a doctoral degree in psychology for some specialties and at least a master's degree for others. In the United States, earning a PhD generally involves completing a dissertation, which is a long research paper or bundled published articles describing research conducted during the candidate's doctoral training. The dissertation must be defended before a committee of expert reviewers before the degree is conferred.

Once someone earns a PhD, they may seek a faculty appointment at a college or university. However, being on the faculty of a college or university involves dividing time between teaching, research, and service to the institution and profession, and the amount of time spent on each responsibility varies by school. Additionally, faculty may move from place to place in search of the best personal fit among various academic environments. Depending on their training, an individual could be anything from a biological psychologist to a clinical psychologist in an academic setting.

Academic Settings Beyond Faculty Positions

In addition to faculty positions, there are other careers in academic settings available to individuals with advanced degrees in psychology. Adjunct faculty members and instructors are often employed by colleges and universities to teach courses in psychology, particularly in areas where full-time faculty are limited or have specialized expertise. These individuals may have primary careers outside of academia and serve as adjuncts on a part-time basis or may use these opportunities to gain teaching experience before pursuing full-time faculty positions.

Master's degree holders in psychology may also find careers in academic settings at 2-year colleges and vocational schools, teaching introductory courses or specialized courses in areas like industrial-organizational psychology. While a PhD is typically required for full-time faculty positions at 4-year institutions, some PhD holders may also pursue teaching positions at 2-year colleges or vocational schools.

For individuals with PhDs who are more interested in research than teaching, there are also positions available in academic settings that focus solely on research. These positions are more common at large research-focused universities, where individuals may conduct research in areas like neuroscience or developmental psychology. These positions typically involve collaborating with other researchers and working to secure grant funding to support ongoing research (**Figure 18**).

Figure 18: Those with a PhD in psychology may choose a career that focuses more on research.



Finally, some individuals who have recently earned their PhDs may choose to pursue postdoctoral training programs before applying for full-time faculty positions. Postdoctoral programs provide young scientists with the opportunity to continue developing their research skills and programs under the supervision of experienced professionals in their field. These programs typically last one to two years and involve a combination of research and teaching experiences.

Careers Outside of Academic Settings

Outside of academic settings, there are many other career options for individuals with a background in psychology. These include roles in mental health settings, government agencies, and private industry. Psychologists may work in hospitals, clinics, or private practices, providing therapy or conducting research (**Figure 19**). They may also work in government agencies, such as the Department of Defense or the Veterans Administration, providing mental health services to military personnel and veterans. In private industry, psychologists may work in human resources, marketing, or product design, applying their knowledge of human behavior to improve organizational outcomes.

Figure 19: There are many career options in psychology outside of academic settings, such as being a therapist for a private practice or organization.



Psychology is a diverse and exciting field, offering a range of career opportunities to individuals with varying levels of education. From bachelor's degrees to doctoral degrees, there are many paths to becoming a licensed clinical or counseling psychologist or pursuing other careers in psychology.

A bachelor's degree in psychology provides a solid foundation in the study of human behavior and can lead to careers in a variety of fields. Graduates with a bachelor's degree in psychology can become case managers or work in sales, human resources, or education, among other options.

A master's degree in psychology is also a viable option for individuals looking to pursue careers in psychology. Graduates with a master's degree in psychology can become licensed professional counselors or work as school psychologists or consultants in industrial settings.

For those interested in becoming licensed clinical or counseling psychologists, pursuing a doctoral degree in psychology is necessary. Two options for doctoral degrees are a PhD or a PsyD, with the latter placing more emphasis on the application of psychological principles in clinical settings.

After completing a doctoral degree, individuals must complete postdoctoral work under the supervision of a licensed psychologist in most states. Once they have met state requirements, their credentials are evaluated to determine eligibility to sit for the licensure exam.

Licensed clinical or counseling psychologists can work in various settings, including private practice or hospitals, and can administer and interpret psychological tests. It is important to note that psychiatrists, who can prescribe medications, have a doctor of medicine degree rather than a doctor of psychology degree.

An education in psychology is valuable in other fields, as well. For example, undergraduate coursework in psychology can be applicable to careers in psychiatric social work or psychiatric nursing, where assessments and therapy may be part of the job.

GLOSSARY TERMS

- American Psychological Association (APA):** professional organization representing psychologists in the United States
- Association for Psychological Science (APS):** professional organization representing psychologists all over the world
- behaviorism:** a school of psychology that focuses on the relationship between behavior and the environment
- biopsychology:** a school of psychology that explores the link between biology and behavior by studying the nervous system
- clinical psychology:** area of psychology that focuses on the diagnosis and treatment of psychological disorders and other problematic patterns of behavior
- conditioned reflex:** a form of learning behavior that relies on external stimuli to elicit behavior
- cognitive psychology:** a school of psychology that studies cognitions, or thoughts, and their relationship to experiences and actions
- cognitive science:** study of psychology that involves collaboration between researchers from various disciplines
- counseling psychology:** area of psychology that focuses on improving emotional, social, vocational, and other aspects of the lives of individuals
- developmental psychology:** scientific study of development across a lifespan
- empirical method:** method for acquiring knowledge based on observation and experimentation
- evolutionary psychology:** school of psychology that examines the biological causes of behavior by studying how behaviors adapt to the environment
- Five Factor Model:** framework for studying personality traits including conscientiousness, agreeableness, neuroticism, openness, and extraversion
- forensic psychology:** area of psychology that applies the science and practice of psychology to issues within and related to the justice system
- functionalism:** perspective within psychology that focuses on how mental activities help an organism adapt to its environment
- Gestalt psychology:** school of thought that examined how the parts of a sensory experience relate to each other as a whole, and how this is what individuals respond to in perception
- health psychology:** school of thought that investigates how biological, psychological, and sociocultural factors impact an individual's overall well-being

humanism: perspective within psychology that emphasizes the potential for good that is innate to all humans

introspection: process by which someone examines their own conscious experience in an attempt to break it into its component parts

Industrial-organizational psychology (I-O psychology): school of thought that focuses on applying psychological research to improve organizational and workplace outcomes

neuroscience: interdisciplinary approach to how the nervous system functions

personality psychology: study of patterns of thoughts and behaviors that make each individual unique

psychoanalytic theory: school of thought that focused on the role of the unconscious in affecting conscious behavior

psychoanalysis: method of therapy that involves exploring a patient's unconscious mind

social psychology: area of psychology that studies how we interact with and relate to others

sport and exercise psychology: area of psychology that focuses on the interactions between mental factors and physical performance

structuralism: perspective within psychology that seeks to understand the conscious experience through introspection

REFERENCES

- 1 National Center for Education Statistics. "Most Popular Majors." Accessed 9/18/23 from <https://nces.ed.gov/fastfacts/display.asp>.
- 2 Nicolas, S., and Ferrand, L. (1999). "Wundt's laboratory at Leipzig in 1891." *History of Psychology*, 2(3), 194–203.
- 3 Buss, D.M. (1989). "Sex differences in human mate preferences: Evolutionary hypotheses tested in 37 cultures." *Behavioral and Brain Sciences*, 12(1), 1–49.

