Psychology and Life
Richard J. Gerrig
Twentieth Edition

Pearson New International Edition

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Psychology and Life

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Why should you study psychology? The answer to that question is quite straightforward. Psychological research has immediate and crucial applications to important issues of everyday experience: your physical and mental health, your ability to form and sustain close relationships, and your capacity for learning and personal growth. One of the foremost goals of this text is to highlight the personal relevance and social significance of psychological expertise.

Every semester when I begin to teach, I am faced with students who enter an introductory psychology class with some very specific questions in mind. Sometimes those questions emerge from their own experience ("What should I do if I think my mother is mentally ill?" "Will this course teach me how to improve my grades?"); sometimes those questions emerge from the type of psychological information that is communicated through the media ("Should I worry when people use cell phones while they're driving?" "Is it possible to tell when people are lying?") The challenge of introductory psychology is to bring the products of scientific research to bear on questions that matter to you.

Research in psychology provides a continuous stream of new information about the basic mechanisms that govern mental and behavioral processes. As new ideas replace or modify old ideas, psychologists are continually intrigued and challenged by the many fascinating pieces of the puzzle of human nature. I hope that, by the end of this journey through psychology, you too will cherish your store of psychological knowledge.

Foremost in the journey will be a scientific quest for understanding. We will inquire about the how, what, when, and why of human behavior and about the causes and consequences of behaviors you observe in yourself, in other people, and in animals. We will consider why you think, feel, and behave as you do. What makes you uniquely different from all other people? Yet why do you often behave so much like others? Are you molded by heredity, or are you shaped more by personal experiences? How can aggression and altruism, love and hate, and mental illness and creativity exist side by side in this complex creature—the human animal? In this chapter, we ponder how and why all these types of questions have become relevant to psychology's goals as a discipline.

WHAT MAKES PSYCHOLOGY UNIQUE?

To appreciate the uniqueness and unity of psychology, you must consider the way psychologists define the field and the goals they bring to their research and applications. I hope you will begin to think like a psychologist. This first section will give you a strong idea of what that might mean.

Definitions

Many psychologists seek answers to this fundamental question: What is human nature? Psychology answers this question by looking at processes that occur within individuals as well as forces that arise within the physical and social environment. In this light, we'll define **psychology** as the scientific study of the behavior of individuals and their mental processes. Let's explore the critical parts of this definition: *scientific, behavior, individual,* and *mental.*

The scientific aspect of psychology requires that psychological conclusions be based on evidence collected according to the principles of the scientific method. The **scientific method** consists of a set of orderly steps used to analyze and solve problems. This method uses objectively collected information as the factual basis for drawing conclusions.

Behavior is the means by which organisms adjust to their environment. Behavior is action. The subject matter of psychology largely consists of the observable behavior of humans and other species of animals. Smiling, crying, running, hitting, talking, and touching are some obvious examples of behavior you can observe. Psychologists examine what the individual does and how the individual goes about doing it within a given behavioral setting and in the broader social or cultural context.

The subject of psychological analysis is most often an *individual*—a newborn infant, a college student adjusting to life in a dormitory, or a woman coping with the stress of her husband's deterioration from Alzheimer's disease. However, the subject might also be a chimpanzee learning to use symbols to communicate, a white rat navigating a maze, or a sea slug responding to a danger signal. An individual might be studied in its natural habitat or in the controlled conditions of a research laboratory.

Many researchers in psychology also recognize that they cannot understand human actions without also understanding *mental processes,* the workings of the human mind. Much human activity takes place as private, internal events—thinking, planning, reasoning, creating, and dreaming. Many psychologists believe that mental processes represent the most important aspect of psychological inquiry. As you shall soon see, psychological investigators have devised ingenious techniques to study mental events and processes—to make these private experiences public.

The combination of these concerns defines psychology as a unique field. Within the *social sciences,* psychologists focus largely on the behavior of individuals in various settings, whereas sociologists study social behavior of groups or institutions, and anthropologists focus on the broader context of behavior in different cultures. Even so, psychologists draw broadly from the insights of other scholars. Psychologists share many interests with researchers in *biological sciences,* especially with those who study brain processes and the biochemical bases of behavior. As part of *cognitive science,*

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Watch the **Video** *How Much Do You Know About Psychology?* on **MyPsychLab**

psychology The scientific study of the behavior of individuals and their mental processes.

scientific method The set of procedures used for gathering and interpreting objective information in a way that minimizes error and yields dependable generalizations.

behavior The actions by which an organism adjusts to its environment.

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Most psychological study focuses on individuals—usually human ones, but sometimes those of other species. Is there anything happening in your life that might make you want to conduct a research study?

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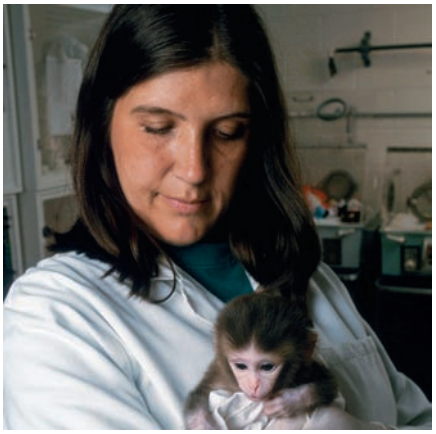

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psychologists' questions about how the human mind works are related to research and theory in computer science, philosophy, linguistics, and neuroscience. As a *health science*—with links to medicine, education, law, and environmental studies—psychology seeks to improve the quality of each individual's and the collective's well-being.

Although the remarkable breadth and depth of modern psychology are a source of delight to those who become psychologists, these same attributes make the field a challenge to the student exploring it for the first time. There is so much more to the study of psychology than you might expect initially—and, because of that, there will also be much of value that you can take away from this introduction to psychology. The best way to learn about the field is to learn to share psychologists' goals. Let's consider those goals.

The Goals of Psychology

The goals of the psychologist conducting basic research are to describe, explain, predict, and control behavior. These goals form the basis of the psychological enterprise. What is involved in trying to achieve each of them?

Describing What Happens The first task in psychology is to make accurate observations about behavior. Psychologists typically refer to such observations as their *data* (*data* is the plural, *datum* the singular). **Behavioral data** are reports of observations about the behavior of organisms and the conditions under which the behavior occurs. When researchers undertake data collection, they must choose an appropriate *level of analysis* and devise measures of behavior that ensure *objectivity*.

To investigate an individual's behavior, researchers may use different *levels of analysis*—from the broadest, most global level down to the most minute, specific level. Suppose, for example, you were trying to describe a painting you saw at a museum (see **Figure 1**). At a global level, you might describe it by title, *Bathers,* and by artist, Georges Seurat. At a more specific level, you might recount features of the painting: Some people are sunning themselves on a riverbank while others are enjoying the water, and so on. At a very specific level, you might describe the technique Seurat used—tiny points of paint—to create the scene. The description at each level would answer different questions about the painting.

Different levels of psychological description also address different questions. At the broadest level of psychological analysis, researchers investigate the behavior of the whole person within complex social and cultural contexts. At this level, researchers might study cross-cultural differences in violence, the origins of prejudice, and the consequences of mental illness. At the next level, psychologists focus on

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behavioral data Observational reports about the behavior of organisms and the conditions under which the behavior occurs or changes.

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FIGURE 1 Levels of Analysis

Suppose you wanted a friend to meet you in front of this painting. How would you describe it? Suppose your friend wanted to make an exact copy of the painting. How would you describe it?

narrower, finer units of behavior, such as speed of reaction to a stop light, eye movements during reading, and children's grammatical errors while acquiring language. Researchers can study even smaller units of behavior. They might work to discover the biological bases of behavior by identifying the places in the brain where different types of memories are stored, the biochemical changes that occur during learning, and the sensory paths responsible for vision or hearing. Each level of analysis yields information essential to the final composite portrait of human nature that psychologists hope ultimately to develop.

However tight or broad the focus of the observation, psychologists strive to describe behavior *objectively*. Collecting the facts as they exist, and not as the researcher expects or hopes them to be, is of utmost importance. Because every observer brings to each observation his or her *subjective* point of view—biases, prejudices, and expectations—it is essential to prevent these personal factors from creeping in and distorting the data. Psychological researchers have developed a variety of techniques to maintain objectivity.

Explaining What Happens Whereas *descriptions* must stick to perceivable information, *explanations* deliberately go beyond what can be observed. In many areas of psychology, the central goal is to find regular patterns in behavioral and mental processes. Psychologists want to discover *how* behavior works. Why do you laugh at situations that differ from your expectations of what is coming next? What conditions could lead someone to attempt suicide or commit rape?

Explanations in psychology usually recognize that most behavior is influenced by a combination of factors. Some factors operate within the individual, such as genetic makeup, motivation, intelligence level, or self-esteem. These inner determinants tell something special about the organism. Other factors, however, operate externally. Suppose, for example, that a child tries to please a teacher to win a prize or that a motorist trapped in a traffic jam becomes frustrated and hostile. These behaviors are largely influenced by events outside the person. When psychologists seek to explain behavior, they almost always consider both types of explanations. Suppose, for example, psychologists want to explain why some people start smoking. Researchers might examine the possibility that some individuals are particularly prone to risk taking (an internal explanation) or that some individuals experience a lot of peer pressure (an external explanation)—or that both a disposition toward risk taking and situational peer pressure are necessary (a combined explanation).

Often a psychologist's goal is to explain a wide variety of behavior in terms of one underlying cause. Consider a situation in which your professor says that, to earn a good grade, each student must participate regularly in class discussions. Your roommate, who is always well prepared for class, never raises his hand to answer questions or volunteer information. Your professor chides him for being unmotivated and assumes he is not bright. That same roommate also goes to parties but speaks only to people he knows, doesn't openly defend his point of view when it is challenged by someone less informed, and rarely engages in small talk at the dinner table. What is your analysis? What underlying cause might account for this range of behavior? How about *shyness*? Like many other people who suffer from intense feelings of shyness, your roommate is unable to behave in desired ways (Zimbardo & Radl, 1999). We can use the concept of shyness to explain the full pattern of your roommate's behavior.

To forge such causal explanations, researchers must often engage in a creative process of examining a diverse collection of data. Master detective Sherlock Holmes drew shrewd conclusions from scraps of evidence. In a similar fashion, every researcher must use an informed imagination, which creatively *synthesizes* what is known and what is not yet known. A well-trained psychologist can explain observations by using her or his insight into the human experience along with the facts previous researchers have uncovered about the phenomenon in question. Much psychological research is an attempt to give accurate explanations for different behavioral patterns.

Predicting What Will Happen Predictions in psychology are statements about the likelihood that a certain behavior will occur or that a given relationship will be found. Often an accurate explanation of the causes underlying some form of behavior will allow a researcher to make accurate predictions about future behavior. Thus, if we believe your roommate to be shy, we could confidently predict that he would be uncomfortable when asked to give a speech in front of a large class. When different explanations are put forward to account for some behavior or relationship, they are usually judged by how well they can make accurate and comprehensive predictions. If your roommate was to speak happily to the class, we would be forced to rethink our diagnosis.

Just as observations must be made objectively, scientific predictions must be worded precisely enough to enable them to be tested and then rejected if the evidence does not support them. Suppose, for example, a researcher predicts that the presence of a stranger will reliably cause human and monkey babies, beyond a certain age, to respond with signs of anxiety. We might want to bring more precision to this prediction by examining the dimension of "stranger." Would fewer signs of anxiety appear in a human or a monkey baby if the stranger were also a baby rather than an adult, or if the stranger were of the same species rather than of a different one? To improve future predictions, a researcher would create systematic variations in environmental conditions and observe their influence on the baby's response.

A psychological prediction.

Controlling What Happens For many psychologists, control is the central, most powerful goal. Control means making behavior happen or not happen—starting it, maintaining it, stopping it, and influencing its form, strength, or rate of occurrence. A causal explanation of behavior is convincing if it can create conditions under which the behavior can be controlled.

The ability to control behavior is important because it gives psychologists ways of helping people improve the quality of their lives. Psychologists have devised many *interventions* to help people gain control over problematic aspects of their lives, such as treatments for mental illness. Such interventions enable people to harness psychological forces to eliminate unhealthy behaviors like smoking and initiate healthy behaviors like regular exercise.

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What causes people to smoke? Can psychologists create conditions under which people will be less likely to engage in this behavior?

Psychologists have also studied what types of parenting practices can help parents maintain solid bonds with their children, as well as what forces make strangers reluctant to offer assistance in emergency situations and how those forces can be overcome. These are just a few examples of the broad range of circumstances in which psychologists use their knowledge to control and improve people's lives. In this respect, psychologists are a rather optimistic group; many believe that virtually any undesired behavior pattern can be modified by the proper intervention. Perhaps you will come to share that optimism.

Stop *and* Review

1. What are the four components of the definition of psychology?
2. What four goals apply to psychologists who conduct research?
3. Why is there often a close relationship between the goals of explanation and prediction?

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THE EVOLUTION OF MODERN PSYCHOLOGY

Today, it is relatively easy to define psychology and to state the goals of psychological research. As you begin to study psychology, however, it is important to understand the many forces that led to the emergence of modern psychology. At the core of this historical review is one simple principle: *Ideas matter.* Much of the history of psychology has been characterized by heated debates about what constitutes the appropriate subject matter and methodologies for a science of mind and behavior.

This historical review will be carried out at two levels of analysis. The first section will consider the period of history in which some of the critical groundwork for modern psychology was laid down. This focus will enable you to witness at close range the battle of ideas. The second section will describe in a broader fashion seven perspectives that have emerged in the modern day. For both levels of focus, you should allow yourself to imagine the intellectual passion with which the theories evolved.

Psychology's Historical Foundations

In 1908, **Hermann Ebbinghaus** (1858–1909), one of the first experimental psychologists, wrote "Psychology has a long past, but only a short history" (Ebbinghaus, 1908/1973). Scholars had long asked important questions about human nature—about how people perceive reality, the nature of consciousness, and the origins of madness—but they did not possess the means to answer them. Consider the fundamental questions posed in the

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