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# Introduction to PSYCHOLOGY

Arno F. Wittig

Gary S. Belkin

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# Introduction to PSYCHOLOGY

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### Introduction to Psychology

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# Preface

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Perhaps no major area of study has grown more rapidly and with more vigor in recent years than psychology. With roots in both philosophy and physiology, psychology—the systematic study of behavior—stands today as a separate scientific discipline. In its efforts to understand how and why organisms behave as they do, psychology provides insights into every aspect of our lives: our perception of the world; our ability to use language and to learn, remember, create, and problem-solve; our emotional expression; our personality development; our sense of self; our motivation, choice-making, and ability to cope; our interpersonal relations; and our behavior in groups.

This book introduces the basic principles of psychology. It may be used in conjunction with a standard textbook, as a supplement to classroom or laboratory instruction, or as a concise text. Tightly organized by a series of subheads that represent the core topics of psychology, the book presents facts, principles, and theoretical explanations for each. Like other disciplines, psychology has a specialized vocabulary; the glossary provides definitions for easy reference and review. Familiarity with key terms is essential for anyone who wishes to have a firm grasp of the subject matter.

Throughout the text the reader will find examples based on

real-life situations or the research literature of psychology. These examples are meant to enhance understanding of the subject and, possibly, suggest areas of practical application. While each chapter can be studied independently, we have frequently tried to indicate where interrelationships exist.

Arno F. Wittig  
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# CHAPTER 1

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## **Psychology: Definition, History and the Profession Today**

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*We are all interested in how people act. Not only do we want to know what is happening, but quite frequently we want to know why. Although these questions often are answered in a rather loose or undisciplined fashion, a more rigorous body of knowledge concerning behavior has developed. This body of knowledge is called psychology.*

*This chapter reviews the history of psychology and looks at some of the major figures who influenced its development. It presents a number of major theories and approaches, including introspection, structuralism, functionalism, Gestalt psychology, psychoanalysis, and behaviorism. It also delineates some of the different areas in which today's psychologists practice—clinical, counseling, social, educational, industrial, experimental, community, and so on.*



### Definition and Purposes

Psychology is the scientific study of behavior. As such, psychology describes behavior (the what) and tries to explain the causes of behavior (the why). The scope of this study is wide, ranging from how we learn to how we think to how we act. Psychology is truly the study of *all* behavior, across all cultures and all socioeconomic levels, over the entire life span. Psychologists study both human and animal behavior from conception to death, including conscious and unconscious influences on behavior.

### Areas of Behavioral Study

The description of behavior that results from psychological study is not casual or without aim. The psychological study of behavior has as its purpose the prediction or the control of behavior. Basically, prediction of behavior occurs when the psychologist correctly anticipates events that occur naturally, whereas control means the psychologist has somehow manipulated the situation and subsequently observed an expected result. For example, teaching a child to name colors controls or changes behavior. Anticipating that the child can recognize the difference between blue and red (even if the child cannot name these colors) is prediction of behavior.

### Humans and Animals

Behavior is defined as any observable or measurable response by a person or animal. Psychology is defined as the study of all behavior, including both human and animal behavior. When using human subjects for study, a psychologist must be concerned with more legal and ethical problems than animals pose, the availability of subjects, the duration of the treatment, and special expenses.

It is generally quite easy to accept psychology as the study of human behavior, but questions often arise as to why psychologists study animals. There are three basic reasons, all of which are important: (1) Sometimes animals are used in studies simply because a psychologist is interested in learning about animal behavior, since animals are important as part of the environment, and understanding their behavior may be worthwhile for that reason alone. (2) Animals are often studied because it would be improper or impossible to use humans in certain types of research. While there is considerable public pressure about the mistreatment of animals in psychological research and increasing regulation regarding their use, they still allow much more flexibility than human subjects. (3) In many cases, the behavior of animal subjects is comparable to the behavior of humans. Thus, psychologists are able to explore many problem areas with animals and can predict, on the basis of the results obtained, what humans might do in comparable situations.

### **Heredity and Environment**

One of the questions psychology seeks to answer is whether behavior occurs as a result of inherited characteristics (hereditary influences) or because of learning (environmental influences). A controversy regarding the relative importance of these two influences has continued in psychology for a long time and remains a subject of lively speculation and intense debate.

Heredity certainly influences behavior, in both direct and subtle ways. For example, heredity may influence directly such traits as brain damage, mental retardation, color blindness, and other characteristics that are likely to have significant effects upon the types of behavior a person will be able to engage in. It also appears likely that heredity influences alcoholism, schizophrenia, and other psychopathological conditions. It also influences such positive traits as musical, artistic, and mathe-

mathematical ability, and may have subtle effects on aspects of personality and social development.

The influences of heredity and environment, it is generally agreed, interact. This means the behavior observed is the result of the combined effect of hereditary background and past or current environmental experience. The relative importance of each influence cannot be separated or measured with any accuracy. Each influence may affect the other to produce a result that differs from a simple summation of the two influences.

### Conscious and Unconscious Behavior

Behavior is often the product of a conscious choice. Some behaviors, however, may result from motives that are below a level of awareness. Many theorists refer to these latter motives as unconscious. Both conscious and unconscious motives may lead to responses, and psychology therefore studies both.

### Normal and Abnormal Behavior

Psychology studies both normal and abnormal behavior. There is often great difficulty in deciding whether a behavior should be classified as normal or abnormal. The usual criterion is to judge behavior as abnormal if it creates a problem for the individual or for society. Obviously, the decision depends upon both the individual and the particular characteristics of the society in which the individual lives.

### Age Range

Psychology studies behavior over the entire life span. Indeed, because some behaviors are dependent on hereditary characteristics as well as on learning, psychologists are concerned with the individual from the moment of conception until death. However, very few psychologists study the entire age range;

most prefer to concentrate on a distinct span, such as early childhood, adolescence or old age.

### **Theory or Applied**

The breadth of psychological study is such that it includes both theoretical studies and the application of psychological principles to specific problems. Probably the majority of psychological specialties could be categorized as applied.

## **The Background and Beginning of Psychology**

In the history of scientific endeavor, psychology is considered a relatively new discipline. While many other disciplines—such as biology, physics, and chemistry—have traditions of study dating back to ancient history, the usual date selected for the beginning of psychology is 1879. This date is chosen because in that year, *Wilhelm Wundt* (1832–1920), a German physiologist, established the first psychology laboratory. Wundt set up the laboratory at the University of Leipzig, in Germany.

Three major factors made Wundt's work important. First, he started psychology on its way as an independent discipline. Second, his emphasis on experimental methodology gave psychology a strong scientific footing. Third, the system of structuralism, which he espoused, tested the method of introspection, which he developed in his laboratory, and thus provided a "target" for several other systems that followed.

Other researchers, particularly physiologists, had preceded Wundt in conducting psychological investigations. *E. H. Weber*, who did research on the sense of touch, devised new methods for measuring sensitivity and gave us a formula for the relationship between stimulus and sensation (Weber's law). *Johannes Muller* formulated a theory of sensation that helped explain how

the nerve cells transmit information to the brain. This theory stated that the specific sensation one experiences is primarily the result not of an external stimulus acting on the sense organs but of the specific energy residing in a given nerve. In other words, not only light but any stimulus capable of activating the optic nerve—even a touch of the eyeball—can produce a visual sensation. Muller also produced the encyclopedic *Handbook of Physiology*, in which he gave prominence to psychological matters.

*Hermann von Helmholtz* made many important contributions in the areas of sight and hearing, and was also the first person to measure the speed of a nerve impulse. *Gustav Fechner* developed mathematical principles to explain the relationship between a physical and a mental event.

But Wundt still is considered the founder of psychology as a distinct discipline because he was the first to declare himself a psychologist and describe his facility as a psychological laboratory. Wundt also started the first journal for psychology and wrote an early textbook in the area of physiological psychology.

Psychology did not spring suddenly onto the scientific scene. Concern with “psychological” issues and problems extends into antiquity. Indeed, human and animal behavior have always been a concern of merchants, scientists, philosophers, and all thinking people. Some of the areas of study that contributed to the development of psychology as a separate discipline include philosophy, the natural sciences, medicine, and even some non-scientific and pseudoscientific areas.

## Philosophy

For thousands of years, philosophers have tried to understand behavior. Indeed, many of the basic problems of psychology—such as learning, motivation, personality, perception or physiological influences on behavior—were first discussed by

philosophers. For example, psychologists have always been concerned with questions of how the human mind develops from birth to adulthood.

Philosophers have traditionally grappled with the same questions. Plato, the Greek philosopher of the fourth century B.C., believed that a human was born with certain innate, or given, mental abilities and knowledge. Aristotle, a student of Plato's, wrote impressive essays on sensation, perception, learning, memory, sleep, dreams, youth, and old age. John Locke, a seventeenth-century English philosopher, believed that the human mind was at birth a *tabula rasa*, or "blank slate," upon which impressions were made. Neither philosophers nor psychologists have definitively concluded which, if either, of these views best explains behavior, and the present tendency is to recognize a mix of environmental and innate (hereditary) factors.

What made psychology separate from philosophy was a difference in approach. As the philosophies of the eighteenth and nineteenth centuries began to develop a greater emphasis on empirical values, the eventual rise of an independent psychology became possible. An attitude of scientific inquiry became the mainstay of psychology. Many departments of psychology within colleges and universities originated in departments of philosophy and only later gained independent status.

## **The Sciences**

Much of the methodology that accompanied the introduction of scientific inquiry into behavioral areas was borrowed or adapted from other sciences. Physics, chemistry, biology, and physiology were all important as contributors to the start of psychology. The methodologies that developed are discussed in detail in Chapter 2, but it is worthwhile to briefly mention here some of the contributions that came from these sciences.

### ***The Experimental Method***

Perhaps the most important contribution of the natural sciences to psychology was the experimental method, which is discussed in Chapter 2. This method enabled psychologists to investigate problems of human behavior, learning, and perception with the same rigor used by natural scientists. It also allowed the replication of experiments by other psychologists, thus establishing a basis for the objective verification of findings.

### ***Subjects for Investigation***

In addition, various problems and theories of the natural sciences provided psychologists with subjects for investigation. Both physics and chemistry provided not only methodology but concerns regarding sensations and perceptions. These quickly were to become part of the prevailing concerns of physiological study during this time. From biology came a concern with heredity and its effects on individual development.

### ***Support to Developing Studies***

The biological theory of evolution and findings from zoology gave strong support to the development of comparative psychology, in which the behavior of one species is compared to that of another. Biology also provided much of the information on genetics and heredity that was eventually used by psychologists considering the effects of these influences on behavior. Thus, methodology, areas for investigation, and justification for study were all taken from older scientific disciplines.

### **Medicine**

In a somewhat indirect manner, medicine made a major contribution to the beginning of psychology. Until the early 1800s, most people exhibiting abnormal personality patterns were thought to be possessed by the devil. During the early

1800s, medical practitioners developed treatments for physical illnesses that were thought to contribute to abnormal patterns of behavior.

By the late 1870s, the attitude had changed. These abnormal patterns were classified as mental illnesses, and treatment changed accordingly. This led to the development of what is now called psychiatry and had an important effect upon the beginnings of clinical psychology.

Although the concerns of psychiatry and clinical psychology both came from a medical tradition, there are differences in the training of psychologists and psychiatrists. A person who wishes to become a *psychiatrist* must, after finishing undergraduate work, receive both a degree in medicine and subsequently specialize in psychological and psychotherapy training. As a result, a strong orientation for psychiatrists is what has come to be called the medical model. That is, the psychiatrist may treat a client as a "sick" person. But many other psychiatrists and psychologists do not accept this concept of "disease." They prefer terms such as "abnormal patterns of behavior" to describe the responses of the people they observe and treat.

*Psychologists*, on the other hand, are not medically trained. After completing their undergraduate work, they earn a doctoral degree in psychology, with an emphasis on a particular specialty. A clinical psychologist must also undergo a rigorous internship in a mental health facility, where he or she works directly with patients under the supervision of experienced practitioners.

### **Nonscientific and Pseudoscientific Influences**

Some areas of psychological study arose because investigators wanted to show that commonly accepted statements about behavior were wrong. Often, these incorrect statements appeared to have some "scientific flavor"—they were labeled



with sophisticated-sounding names such as physiognomy, phrenology or typology.

Physiognomists believed that the appearance of the face and head reveal personality characteristics. Phrenologists “mapped” the areas of the human skull in an attempt to label brain functions and their consequent effects on human behavior. Typologists tried to correlate body type with behavioral characteristics. Although all of these areas eventually were shown to be inaccurate (for example, fat people are not always jolly), the questions they raised did generate research that explained more about behavior. Psychological studies were often conducted as responses to nonscientific prompting.

## Early Development of Psychology

Early psychology was characterized by attempts to develop unified psychological systems. These systems were attempts to explain all of behavior by using a single set of principles. These included investigations in perception, thinking, consciousness, intelligence, and other areas. Although none continues to have major importance, all contributed significantly to present-day psychology.

### Structuralism

The position developed by *Wundt* in Germany and later expanded by *Edward Titchener* (1867–1927) in the United States was called structuralism. Psychology, for the structuralists, was the study of the introspective reports of normal adult humans. Trained subjects made descriptive reports of how stimuli appeared to them. These reports were supposed to allow the psychologist to interpret the structure of the mind and how it worked.

In a structuralist experiment, you might be asked to report