

Chapter One

THE EVOLUTION OF PSYCHOLOGY

Review of Key Ideas

FROM SPECULATION TO SCIENCE: HOW PSYCHOLOGY DEVELOPED

1. Summarize Wundt's accomplishments and contributions to psychology.

- 1-1. If you ask most college graduates to name the founder of psychology they might mention the name of a famous psychologist (for example, maybe Sigmund Freud), but they almost certainly would *not* say Wilhelm Wundt. Yet among psychologists Wundt is generally acknowledged to be the "_____ " of our field.
- 1-2. Wundt established the first experimental psychology _____, in Leipzig, Germany, in 1879. He also established the first _____ devoted to publishing psychological research.
- 1-3. The subject matter of Wundt's psychology was (consciousness/behavior).
- 1-4. Wundt's major contributions to the evolution of psychology may be summarized as follows: He is the _____ of psychology as an independent academic field, and he insisted that psychology can and must use the _____ method.

2. Summarize Hall's accomplishments and contributions to psychology.

- 2-1. Wundt had many important students, among them was G. Stanley Hall, an American. In 1883, just four years after Wundt created his laboratory in Leipzig, Hall established the first American psychological _____ at Johns Hopkins. Hall also founded America's first _____ devoted to publishing material in the field of psychology.

- 2-2. In 1892, with 26 of his colleagues, Hall began the American Psychological Association, known by the initials _____. Hall also became the first _____ of the Association. The APA now includes more than 80,000 members.

3. Describe structuralism and its impact on the subsequent development of psychology.

- 3-1. Another of Wundt's students, Edward Titchener, developed the school of psychology known as _____. The major tenet of this viewpoint was that psychology should study the structure of _____ by breaking it down into its basic components or _____.
- 3-2. These basic elements of consciousness were thought to be the sensations (or images or feelings) that people reported when they observed some object. Subjects were first trained to observe (or listen to) something and then, after careful introspection, to report on their conscious experience. Thus, the subject matter of structuralism was _____, and its method involved training observers in the technique of _____.

4. Describe functionalism and its impact on the subsequent development of psychology.

- 4-1. Rather than breaking down consciousness into basic elements, the _____ school emphasized determining the _____ or purpose of consciousness.
- 4-2. The origins of functionalism are associated with William James. Influenced by Darwin's concept of natural selection, James concluded that psychology should study the basic (elements/purpose) of consciousness.
- 4-3. Which "school" is characterized by each of the following descriptions? Place an "S" for structuralism or "F" for functionalism in the appropriate blanks.
- _____ Concerned with the purpose (or function) of consciousness.
- _____ Trained observers to introspect about consciousness.
- _____ Assumed that consciousness could be broken down into basic elements (in the same way that physical matter is comprised of atoms).
- _____ Interested in the flow of consciousness.
- _____ Focused on the adaptive (evolutionary) value of consciousness.
- _____ Emphasized sensation and perception in vision, hearing, and touch.
- 4-4. While neither structuralism nor functionalism survived as viable theories of psychology, functionalism had a more lasting impact. The emphasis of functionalism on the practical (or the adaptive or purposeful) led to the development of these two areas of modern psychology: _____ and _____ psychology.

5. Summarize Watson's view on the appropriate subject matter of psychology, nature versus nurture, and animal research.

- 5-1. A literal translation of the root words of psychology (*psyche* and *logos*) suggests that psychology is the study of the _____. For both Wundt and James, this was the case: they studied human _____. For Watson, however, the subject matter of psychology was _____.
- 5-2. , Watson believed that psychology could not be a science unless it, like the other sciences, concentrated on _____ rather than unobservable events.
- 5-3. Which of the following are observable behaviors? Place an "O" in the blank if the event is observable and an "N" if it is not.
- _____ writing a letter
 - _____ feeling angry
 - _____ saying "Please pass the salt"
 - _____ passing the salt
 - _____ perceiving a round object
 - _____ experiencing hunger
 - _____ walking rapidly
- 5-4. Watson largely discounted the importance of genetic inheritance. For Watson, behavior was governed by the _____.
- 5-5. Watson also made a shift away from human introspection by using _____ as the subjects for research. Why the change in orientation? First, animal behavior is observable; human consciousness is not. Second, the environment of laboratory animals, in contrast to that of humans, is subject to much more _____.
- 5-6. Let's briefly review structuralism and behaviorism:
- (a) As defined by the structuralists, what was the subject matter of psychology?
 - (b) For behaviorists, what was the subject matter of psychology?
 - (c) While structuralists and behaviorists differed in their views of the subject matter of psychology, their approach to the new field was similar in one major respect. In what way were the two systems similar?

6. Summarize Freud's principal ideas and why they inspired controversy.

- 6-1. For Wundt, the subject matter of psychology was human consciousness. For Freud, a major subject of study was what he termed the _____. With this concept, Freud asserted that human beings are (aware/unaware) of most of the factors that influence their thoughts and behavior.
- 6-2. There is a word beginning with s that means the same thing as feces. This word, however, may be more likely to cause laughter, embarrassment, or anger than the word feces. Why do two words that mean the same thing produce such differing reactions? Freud would assert that our more emotional response to one of the words would be caused by the _____.
- 6-3. Although generally not accessible to us, the unconscious is revealed in several ways, according to Freud. Freud thought, for example, that the unconscious is revealed in mistakes, such as "_____ of the tongue," or the symbolism in nighttime _____.
- 6-4. Freud's ideas were (and still are) considered quite controversial. The general public tended to find Freud's ideas unacceptable because of his emphasis on _____. And scientific psychologists, with their increasing emphasis on observable behavior, rejected Freud's notion that we are controlled by _____ forces. Nonetheless, Freud's theory gradually gained prominence and survives today as an influential theoretical perspective.

7. Summarize Skinner's work, views, and influence.

- 7-1. While he did not deny their existence, Skinner said that (mental/environmental) events are not observable and cannot be studied scientifically.
- 7-2. The fundamental principle of behavior, according to Skinner, is that organisms will tend to _____ behaviors that lead to positive outcome (and tend not to repeat responses that lead to neutral or negative outcomes).
- 7-3. Skinner asserted that because behavior is under the lawful control of the environment, our feeling of _____ is an illusion.
- 7-4. According to Skinner, to adequately account for and predict behavior psychologists must understand:
 - a. the relationship between thinking and behavior
 - b. the physiological basis of action
 - c. the way environmental factors affect behavior
 - d. all of the above

8. Summarize Rogers' and Maslow's ideas and the contributions of humanistic psychology.

- 8-1. Both Rogers and Maslow, like other _____ psychologists, emphasized the (similarities/differences) between human beings and other animals.
- 8-2. While Freud and Skinner stressed the way in which behavior is *controlled* (by unconscious forces or by the environment), Rogers and Maslow emphasized human beings' _____ to determine their own actions.
- 8-3. Rogers and Maslow also asserted that human beings have a drive to express their inner potential, a drive toward personal _____.
- 8-4. Perhaps the greatest contribution of the humanistic movement has been in producing (scientific findings/new approaches) in psychotherapy.

9. Explain how historical events have contributed to the emergence of psychology as a profession.

- 9-1. Applied psychology is the part of psychology that is concerned with (research issues/practical problems). Prominent among the applied areas of psychology is the field of _____ psychology, which deals with the treatment of psychological disorders.
- 9-2. Clinical psychologists were relatively rare in a field devoted primarily to research. One of the historical events that changed this picture was the advent of _____. With the increased need for screening recruits and treating emotional casualties, the Veterans Administration began funding many new training programs in the field of _____ psychology.
- 9-3. Other applied areas followed, including the fields of industrial, counseling, and school psychology. In contrast to its founding in the 19th century as a research or academic endeavor, then, psychology in the 20th century has developed a prominent _____ branch directed toward solving practical problems.

10. Describe two recent trends in research in psychology that reflect a return to psychology's intellectual roots.

- 10-1. Two recent trends in research in psychology involve the reemergence of areas largely discarded or ignored by the behaviorists. What are these two areas?

10-2. Think about sucking on a lemon. When you do, the amount of saliva in your mouth will increase measurably. While it would be enough to describe your observable response as a function of my observable instruction, it is also obvious that thinking, or cognition, is involved: My instruction changed your _____ image, which was accompanied by a change in salivation.

10-3. The study of mental imagery, problem solving, and decision making involves _____ processes. The second more recent trend also concerns “internal” processes: Research on electrical stimulation of the brain, brain specialization, and visual signals involves _____ processes.

11. Explain why Western psychology traditionally had scant interest in other cultures and why this situation has begun to change.

11-1. Several factors contributed to the narrow focus of Western, and especially United States, psychology:

(a) First, studying other cultures is expensive and time consuming. It's much _____ for researchers to study people in their own country (and especially middle-class students at their own schools).

(b) Second, some psychologists worry that study of diverse groups may inadvertently foster _____, especially with regards to groups that have historically been the objects of prejudice.

(d) Third, there may be a tendency among Western psychologists to view their own group as superior, the group tendency referred to as _____.

11-2. The situation has begun to change in recent years for two primary reasons: (1) increased communication and trade worldwide, the so-called _____ economy or global interdependence; and (2) increased diversity of ethnic groups within the countries of the Western World, including the _____ mosaic characteristic of the United States.

12. Summarize the basic tenets of evolutionary psychology.

12-1. According to evolutionary psychologists, all aspects of human behavior—including not only aggression and mate selection but perception, language, personality, and cognition—are strongly influenced by the _____ value that these factors have had for the human species.

12-2. While Darwin's influence is clear in other psychological theories (e.g., James, Freud, and Skinner), the new emphasis on natural selection is (less/more) comprehensive and widely researched than the earlier versions.

- 12-3. The viewpoint has its critics. Some charge that evolutionary conceptions are simply posthoc accounts rather than explanations, and that the theory is not subject to scientific _____. Nonetheless, the viewpoint has gained a high degree of acceptance and is clearly a major new perspective in contemporary psychology.

PSYCHOLOGY TODAY: VIGOROUS AND DIVERSIFIED

13. Discuss the growth of psychology and the most common work settings for contemporary psychologists.

- 13-1. Psychology is a thriving field that has experienced a remarkable growth since its founding in 1879. Which of the following statements about that growth are true? (Use a T or F to indicate true or false for the following statements.)
- _____ APA membership now numbers more than 80,000.
- _____ Almost 10 percent of doctorates awarded in science and humanities are in psychology.
- _____ Psychology is the second most popular undergraduate major.
- _____ About 200 journals worldwide publish articles in psychology.
- 13-2. Psychology was founded in a University, and earlier in this century almost all psychologists were employed as academics. Today, however, more than two-thirds of psychologists are employed in (university/non-academic) settings that include hospitals, business and industry, schools, and government agencies.

14. List and describe seven major research areas in psychology.

- 14-1. Read over the descriptions of the research areas in Figure 1.9. Then match the names of the areas with the sampled research topics by placing the appropriate letters in the blanks. (Note that the separation between these areas is not always perfect. For example, a personality theorist might also be a psychometrician who has a physiological focus in explaining behavior. Nonetheless, the following topics have been chosen so that one answer is correct for each.)
- A. Experimental _____ attitude change, group behavior
- B. Physiological _____ personality and intelligence assessment, test design, new statistical procedures
- C. Cognitive _____ personality assessment, personality description
- D. Developmental _____ "core" topics (e.g., perception, conditioning, motivation)
- E. Psychometrics _____ influence of the brain, bodily chemicals, genetics
- F. Personality _____ child, adolescent, and adult development
- G. Social _____ memory, decision making, thinking

- 14-2. In case you want to remember the list of seven research areas, here's a mnemonic device: Peter Piper Picked Some Exceptionally Costly Dills. List the seven research areas by matching them with the first letter of each word.

15. List and describe the four professional specialties in psychology.

- 15-1. Review Figure 1.10. Then match the following specialties with the descriptions by placing the appropriate letter in the blanks.

- | | | |
|----------------------------------|-------|--|
| A. Clinical | _____ | Treatment of less severe problems and problems involving family, marital, and career difficulties. |
| B. Counseling | _____ | Treatment of psychological disorders, behavioral and emotional problems. |
| C. Educational and school | _____ | Involves work on curriculum design and achievement testing in school settings. |
| D. Industrial and organizational | _____ | Psychology applied to business settings; deals with personnel, job satisfaction, etc. |

- 15-2. What is the difference between psychology and psychiatry? The major difference is a matter of degree (this is a pun, folks). Psychiatrists have _____ degrees. Clinical psychologists generally have _____ degrees (although some clinical psychologists have Ed.D. or Psy.D. degrees).

- 15-3. The major portion of psychiatrists' training occurs in _____ schools and in the residency programs in psychiatry that follow medical school. Clinical psychologists' training occurs in _____ schools.

- 15-4. While clinical psychologists and psychiatrists frequently use the same psychotherapeutic treatment procedures, only _____, as physicians, are licensed to prescribe drugs and engage in other medical treatment.

PUTTING IT IN PERSPECTIVE: SEVEN KEY THEMES

16. Summarize the text's three unifying themes relating to psychology as a field of study.

- 16-1. When my (R. S.'s) older daughter, Samantha, was about three years old, she pulled a sugar bowl off of a shelf and broke it while I was not present. Later, when I surveyed the damage, I said, "I see you've broken something." She said, "How do yer know, did yer see me do it?" I was amused, because while it was obvious who had broken it, her comment reflected psychology's foundation in direct observation. **Theme 1** is that psychology is _____. Empiricism is the point of view that knowledge should be acquired through _____.

- 16-2. My daughter's comment caused me to think about one other aspect of empiricism: she expressed *doubt* (albeit somewhat self-serving with regard to the sugar bowl). One can describe belief systems along a continuum from *credulity*, which means ready to believe, to *skepticism*, which means disposed toward doubt. Psychology, and the empirical approach, is more disposed toward the _____ end of the continuum.
- 16-3. We would ordinarily think that if one theory is correct, any other theory used to explain the same data must be wrong. While scientists do pit theories against each other, it is also the case that apparently contradictory theories may both be correct—as with the explanation of light in terms of both wave and particle theories. Thus, **Theme 2** indicates that psychology is theoretically _____.
- 16-4. Psychology tolerates (and in fact encourages) different theoretical explanations because:
- 16-5. As is the case with science in general, psychology does not evolve in a vacuum. It is influenced by and influences our society. For example, the current interest in cultural diversity has prompted increased interest in cross-cultural research, which in turn affects the viewpoints in our society. As stated in **Theme 3**, psychology evolves in a _____ context.

17. Summarize the text's four unifying themes relating to psychology's subject matter.

- 17-1. When looking for an explanation of a particular behavior, someone might ask: "Well, why did he do it? Was it greed or ignorance?" The question implies the very human tendency to reason in terms of (one cause/multiple causes) for each event.
- 17-2. What influences the course of a ball rolled down an inclined plane? Gravity. And also friction. And the presence of other objects, and a number of other factors. That is the point of **Theme 4**: even more than is the case for physical events, behavior is determined by _____.
- 17-3. Among the multiple causes of human behavior is the category of causes referred to as *culture*. Cultural factors include the customs, beliefs, and values that we transmit across generations—what we eat, how we walk, what we wear, what we say, what we think, and so on. **Theme 5** indicates that our behavior is shaped by our _____ heritage.
- 17-4. For example, I have observed that many American students traveling abroad initially think that their European lecturers talk down to them; the lecturers, in turn, may regard our students as spoiled and insolent. Perhaps closer to the truth is that there is a clash of customs invisible to both cultures. While we are shaped by our _____, we are often (aware/unaware) of the precise rules and customs that affect us.

- 17-5. Theme 6 relates to the influence of heredity and environment. What is the consensus among psychologists about the effect of heredity and environment on behavior?
- 17-6. The scientific method relies on observation, but observation by itself isn't sufficient. Why isn't it?
- 17-7. Theme 7 indicates that our experience is subjective. What does this mean?

PERSONAL APPLICATION • IMPROVING ACADEMIC PERFORMANCE

18. Discuss three important considerations in designing a program to promote adequate studying.

- 18-1. Three features of successful studying are listed below. Elaborate on them by providing some of the details asked for.
- (a) A schedule: When should you plan your study schedule? Should you write it down? Should you do the simpler tasks first or begin the major assignments? What is a major difference between successful and unsuccessful students regarding time management?
 - (b) A place: What are the major characteristics of a good study place?
 - (c) A reward: When should you reward yourself? What kinds of rewards are suggested?

19. Describe the SQ3R method and explain what makes it effective.

19-1. Below are descriptions of an individual applying the five steps of the SQ3R method to Chapter 1 of your text. The steps are not in the correct order. Label each of the steps and place a number in the parentheses which indicates the correct order.

() _____ Vanessa looks at the title of the first subsection of the chapter. After wondering briefly what it means for psychology to have “parents,” she formulates this question: How was the field of psychology influenced by philosophy and physiology?

() _____ Vanessa turns to the back of Chapter 1 and notes that there is a chapter review. She turns back to the first page of the chapter, sees that the outline on that page matches the review at the end, and browses through some of the other parts of the chapter. She has a rough idea that the chapter is going to define the field and discuss its history.

() _____ Keeping in mind the question she has posed, Vanessa reads the section about the meeting of psychology’s “parents” and formulates a tentative answer to her question. (She also formulates some additional questions: “Who was Descartes?” and “What method did philosophers use?”)

() _____ Vanessa answers her first question as follows: “Philosophy (one of the parents) posed questions about the mind that made the study of human thinking and actions acceptable; physiology (the other parent) contributed the scientific method.” She decides to note down her answer for later review.

() _____ When she has finished step 4 for all sections, Vanessa looks over the entire chapter, section by section. She repeats the questions for each section and attempts to answer each one.

19-2. What makes the SQ3R technique so effective?

20. Summarize advice provided on how to get more out of lectures.

20-1. Indicate T or F for the following statements:

_____ Poor class attendance is associated with poor grades.

_____ Research has shown that the average student records less than 40% of the crucial ideas in lectures.

20-2. Using a few words for each point, summarize the four points on getting more out of lectures.

21. Summarize advice provided on improving test-taking strategies.

21-1. Is it better to change answers on multiple-choice tests or to go with one's first hunch?

21-2. Following are situations you might encounter while taking a test. Reread the section on general test-taking tips and then indicate what you would do in each situation.

(a) You run into a particularly difficult item:

(b) The answer seems to be simple, but you think you may be missing something:

(c) The test is a timed test:

(d) You have some time left at the end of the test:

21-3. Following are samples of the situations mentioned under the discussion of tips for multiple-choice and essay exam questions. Based on the suggestions, what would you do?

(a) In a multiple-choice test, item *c* seems to be correct, but you have not yet read items *d* and *e*: What would you do next?

(b) You know that items *a* and *b* are correct, are unsure of items *c* and *d*, and item *e* is an "all of the above" option. Which alternative (*a*, *b*, *c*, *d*, or *e*) would you choose?

(c) You have no idea which multiple-choice alternative is correct. You note that option *a* has the word "always" in it, items *b* and *c* use the word "never," and item *d* says "frequently."

(d) You have read the stem of a multiple-choice item but you have not yet looked at the options.

(e) Faced with an essay, you wonder whether to simply begin writing and let the ideas flow or to spend a few minutes in organization.

CRITICAL THINKING APPLICATION • DEVELOPING CRITICAL THINKING SKILLS: AN INTRODUCTION

22. Explain the nature of critical thinking skills and why they need to be taught.

- 22-1. The previous section on test-taking strategies asked whether it is better to change answers or go with one's first hunch. Actually, that is a critical thinking question. While our hunches are often pretty good, sometimes they don't lead to the desired outcome. When we use critical thinking, we use the same principles that we would use in a _____ investigation. We also use formal and informal rules of _____ and analyze events in terms of _____ or likelihood.
- 22-2. Critical thinking is not something that we come by naturally. And, critical thinking (is also/is not) a normal part of instruction in most subject areas. So, for people to develop the skill of critical thinking, it has to be deliberately and consciously _____.

23. Discuss some weaknesses in evolutionary explanations for gender differences in spatial abilities.

- 23-1. Some evidence suggests that males tend to have better visual-spatial perception than females, and that females have better memories for locations. The reason for these gender differences, according to evolutionary psychologists, is that in our evolutionary past natural selection favored a division of labor in which men were _____ and women were _____. Hunting (aiming a spear, traveling long distances) required _____ perception, while gathering required _____ for locations of food.
- 23-2. As previously discussed, evolutionary psychology is a major new theoretical perspective in psychology. While the interpretation of the evolutionary psychologists is certainly plausible, critical thinking urges us to consider the following two questions when assessing a truth claim: (1) Are there _____ explanations for these results? And, (2) are data available that _____ the evidence provided?
- 23-3. It turns out that the answer to both of these questions is a qualified "yes." For example, it may be that most cultures encourage male children to engage in visual-spatial activities (e.g., playing with blocks) that would provide an _____ interpretation to one based on evolutionary principles. In addition, some scholars have suggested that women in early hunter-gatherer societies often did, in fact, travel long distances to obtain food and were also involved in hunting. While certainly not "disproving" evolutionary theory, this type of evidence would _____ some of the data presented by evolutionary psychologists.

Review of Key Terms

Applied psychology
Behavior
Behaviorism
Clinical psychology
Cognition
Critical thinking
Culture
Empiricism

Ethnocentrism
Evolutionary psychology
Functionalism
Humanism
Introspection
Natural selection
Phi phenomenon
Psychiatry

Psychoanalytic theory
Psychology
SQ3R
Stimulus
Structuralism
Testwiseness
Theory
Unconscious

- _____ 1. Any detectable input from the environment.
- _____ 2. The branch of psychology concerned with practical problems.
- _____ 3. School of thought based on notion that the task of psychology is to analyze consciousness into its basic elements.
- _____ 4. Observation of one's own conscious experience.
- _____ 5. School of thought asserting that psychology's major purpose was to investigate the function or purpose of consciousness.
- _____ 6. The theoretical orientation asserting that scientific psychology should study only observable behavior.
- _____ 7. An observable activity or response by an organism.
- _____ 8. Examines behavioral processes in terms of their adaptive or survival value for a species.
- _____ 9. The use of cognitive skills and strategies to increase the probability of a desirable outcome.
- _____ 10. The illusion of movement created by presenting visual stimuli in rapid succession.
- _____ 11. Freudian theory that explains personality and abnormal behavior in terms of unconscious processes.
- _____ 12. According to psychoanalytic theory, that portion of the mind containing thoughts, memories, and wishes not in awareness but nonetheless exerting a strong effect on human behavior.
- _____ 13. The psychological theory asserting that human beings are unique and fundamentally different from other animals.
- _____ 14. The tendency to view one's own group as superior to other groups.
- _____ 15. Widely shared customs, beliefs, values, norms, and institutions that are transmitted socially across generations.
- _____ 16. The branch of psychology concerned with the diagnosis and treatment of psychological disorders.
- _____ 17. Mental processes or thinking.
- _____ 18. The science that studies behavior and the physiological and cognitive processes that underlie it, and the profession that applies this knowledge to solving various practical problems.