

Name

Class

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Chapter 01: Essay

1. Contrast the views of Locke's realism with Kant's idealism. What position do modern psychologists take on this issue?

ANSWER: The answer should provide the following information: (1) Locke argued that perceptions of the physical world are produced entirely by information from the sensory organs. (2) Kant argued that perceptions of the physical world are the brain's interpretation of information from the sensory organs. (3) Modern psychologists agree that our perception of the world is an inference—our brain's best guess at what is out there.

2. Differentiate between a structuralist and a functionalist approach to understanding consciousness. Identify the founders of both approaches and the earlier influences that gave rise to these schools of psychology.

ANSWER: The answer should indicate that Wilhelm Wundt began structuralism and was greatly influenced by the physiology and physics research of Helmholtz, for whom he was a research assistant. Structuralism attempts to identify the basic elements that constitute the mind by deconstructing the conscious experience through techniques such as introspection. William James began functionalism with John Dewey and James Angell. James did not believe that consciousness could be broken down into basic elements; rather, he believed consciousness was more like a flowing stream than a collection of components. Functionalism sought to identify the adaptive significance of mental processes, rather than deconstructing it into elements. James was highly influenced by Darwin's theory of natural selection.

3. Discuss Sigmund Freud's influence on the field of psychology. What are the contributions and critiques of psychoanalytic theory?

ANSWER: The answer should provide the following information: (1) Though many people disagree with Sigmund Freud's psychoanalytic theory, he is one of the most influential psychologists ever. (2) Freud had been educated as a physician and noticed that patients were coming into his office with problems that had no physical justification. Freud decided to talk with these patients about their psychosomatic symptoms, termed hysteria in Freud's day. Over time, he developed a therapy called psychoanalysis. (3) Freud developed a theory of how the mind works and how people may be governed by forces of which they are unaware. This idea of an unconscious has had a tremendous impact on psychology, literature, and art. It also formed the basis of psychoanalysis, which involves bringing unconscious motivations, desires, and thoughts into the conscious mind. (4) One limitation of psychoanalytic theory is that it does not lend itself to testable predictions. Because there is little empirical support for Freud's theories, his influence has diminished over the decades. Another criticism of psychoanalytic theory is that it portrayed the human condition pessimistically, positing that human behaviour was governed by rather dark forces that were outside of our conscious awareness.

4. Why would John Watson disagree with the definition of psychology as stated in the textbook?

ANSWER: The answer should indicate that psychology can be defined as the scientific study of behaviour and mental processes. John Watson was the founder of behaviourism. He believed that mental processes could not be studied scientifically because they were not objectively observable. He believed that if psychology was to be a science, it should limit itself to studying the things people do rather than the things they claim to think and feel. For this reason, Watson would disagree with the definition of psychology as presented in the textbook. In fairness to Watson, however, he lived before modern brain-scanning devices allowed psychologists to make objective observations of the neurological processes underlying cognition.

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5. Humans have a tendency to be afraid of the dark. Provide an explanation of this phenomenon within the framework of both behaviourism and evolutionary psychology. Are the two explanations necessarily incompatible?

ANSWER: The answer should provide the following information: (1) Humans tend not to see well at night. As such, we are prone to accidents when navigating in the dark. In addition, we are at a disadvantage if surrounded by large nocturnal animals that could possibly harm us. In contrast, hunkering down and sleeping in small groups at night provides some measure of safety. (2) Behaviourists would focus on the learning that occurs within an individual's lifetime. For example, the last time Bob went hunting at night, he broke his ankle and almost got eaten by a lion. Hunting at night, then, has been punished by its consequences. Conversely, seeking a safe shelter is reinforced with warmth, safety, and companionship. As a result of these learning experiences, Bob fears the dark and would rather stay inside. (3) Evolutionary psychologists would note that during the course of mammalian evolution, our ancestors who ventured outside in the dark tended not to reproduce in great numbers, perhaps because they fell off cliffs or got eaten by crocodiles. Those ancestors, who just so happened to be leery of the dark, lived to pass on their genes. Thus, we are left with the genes of those who did not particularly enjoy nightly jaunts through the forest. (4) On the surface, the two explanations are very different. While behaviourists do not deny the role of genetics, they point to the environment as the major determinant of behaviour. As such, a behaviourist would first seek to understand the learning experiences that shaped an individual's fear of the dark. On the other hand, an evolutionary psychologist will focus on differential reproductive success as a result of the behaviour of our ancestors. We are left with their genes, and thus, their behaviour patterns. (5) The two explanations are not incompatible, but rather represent different levels of analysis. For example, early mammals might learn to avoid the dark through natural consequences within their lifetime. Principles of reinforcement and punishment from a behavioural account would explain this behaviour. These are the mammals that live to reproduce and pass on their genes. To the extent that susceptibility to reinforcement is, in part, genetically based, we are genetically predisposed to fear the dark due to the learning experiences of our remote ancestors.

6. Describe Skinner's ideas about the forces that control behaviour. What would contribute to your studying behaviour, according to Skinner?

ANSWER: Skinner believed that consequences control behaviour. His principle of reinforcement stated that any behaviour that is rewarded will be repeated and any behaviour that is not rewarded won't. Therefore, when students study hard, they may be rewarded with good grades and approval from teachers, parents, and peers. These students' studying behaviours will be reinforced and are more likely to occur in the future.

7. Discuss some benefits that behaviourism brought to the field of psychology. Then discuss some problems associated with behaviourism.

ANSWER: The answer should provide the following information: (1) Behaviourists highlighted the need for psychologists to study phenomena that were objectively observable. This advanced the science of psychology. (2) The research of Ivan Pavlov and John Watson demonstrated how associations between stimuli and responses are formed. (3) Using rats, B. F. Skinner developed a methodology demonstrating that the consequences of behaviour determine its future occurrence. This work has taught psychologists how people—not just rats—learn. His principle of reinforcement pervades modern psychology. (4) His theories spread across the globe and became the foundation of

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classroom education, government programs, psychological therapies, and even child-rearing practices. (5) By focusing their study only on observable behaviour, however, behaviourists neglected important areas of study such as perception, memory, cognitive and brain processes, and language. As a result, most psychologists ultimately shifted away from the behaviourist approach.

8. Discuss how technological advancements, along with work in the field of linguistics, advanced cognitive psychology and ultimately led to the downfall of behaviourism as the dominant field within psychology.

ANSWER: The answer should indicate that the advent of the computer gave psychologists a useful model of mental processes. For example, both computers and people seem to register, store, and retrieve information. This computer model inspired much research in the field of cognitive psychology. This growing field of cognitive psychology studied important processes that behaviourists largely ignored, such as perception, memory, and attention, and ultimately supplanted behaviourism as the dominant theoretical position within psychology. Contributing to the downfall of behaviourism was Noam Chomsky's scathing review of B. F. Skinner's *Verbal Behavior*. Skinner believed that language (he called it verbal behaviour) was essentially the product of reinforcement. For example, if saying please is reinforced, that person may become more polite. Chomsky charged that Skinner's theory of language was overly simplistic and behaviourist principles could never explain some of the most obvious features of language- learning. Children use grammar rules that are not explicitly taught and generate novel phrases that were never explicitly reinforced.

9. How might an evolutionary psychologist explain human behaviour that is largely detrimental to the individual or the culture, such as aggression or a preference for a high-fat diet?

ANSWER: The answer should provide the following information: (1) Evolutionary psychologists believe that human behaviour is the product of millions of years of natural selection. Although these behaviours are largely detrimental today, they were adaptive in the environment of our ancestors. (2) Our ancestors who aggressively procured food and sexual partners tended to be the ones who lived and passed on their genes. (3) In an ancestral environment where food was scarce, those ancestors who had a preference for high-fat foods obtained the calories that they needed to survive. (4) In today's environment where food is abundant and behaving aggressively can send one to prison, these behaviours are largely detrimental. But we are stuck with the genes of our ancestors. To the extent that these behaviours are, in part, biologically determined, we will continue to have a propensity to engage in these behaviours.

10. Discuss the growing impact of neuroscience within psychology and identify some pioneering people within cognitive neuroscience.

ANSWER: The answer should provide the following information: (1) Psychologists learned from brains that were damaged by nature, but they also learned from brains that they damaged themselves. (2) Lashley found that while brain damage impaired performance, it didn't really matter where on the cortex the damage was inflicted. This led him to conclude that learning is not "localized" or tied to a specific brain area. (3) In the 1920s, Wilder Penfield founded the Montreal Neurological Institute and pioneered the surgical removal of brain tissue to relieve seizure disorders. He discovered how different parts of the brain support different mental functions and behaviours. (4) In 1949, Donald Hebb published *The Organization of Behaviour*, in which he lays out his theory of the neural basis of learning. His ideas are now the basis of our understanding of how the physical structure of the brain changes with experience. (5) Brenda Milner made several fundamental contributions to the understanding of how human thinking and behaviour depend on different parts of the brain,

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specifically the hippocampus. She is best known for the discovery of the brain basis of long-term memory.

11. Describe four career specializations within psychology.

ANSWER: The answer should provide four of the following: (1) Clinical psychologists (also called therapists) assess and treat people with psychological disorders, such as depression, anxiety, or eating disorders. They work closely with counselors and psychiatrists, who have a medical degree and can prescribe medication. (2) School psychologists work in educational settings and provide guidance to students, parents, and teachers. (3) Industrial/organizational psychologists help businesses and organizations hire employees and maximize the employees' performances. (4) Sports psychologists help athletes train and compete. (5) Forensic psychologists assist attorneys and courts in dealing with crime. (6) Consumer psychologists help companies develop and market new products.