

Examrace

Psychology Notes Competitive Exams Schools of Thought Part 7

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How is Cognitive Psychology Different?

- Unlike behaviorism, which focuses only on observable behaviors, cognitive psychology is concerned with internal mental states.
- Unlike psychoanalysis, which relies heavily on subjective perceptions, cognitive psychology uses scientific research methods to study mental processes.

Who Should Study Cognitive Psychology?

Because cognitive psychology touches on many other disciplines, this branch of psychology is frequently studied by people in a number of different fields. The following are just a few of those who may benefit from studying cognitive psychology.

- Students interested in behavioral neuroscience, linguistics, industrial-organizational psychology, artificial intelligence and other related areas.
- Teachers, educators and curriculum designers can benefit by learning more about how people process, learn, and remember information.
- Engineers, scientists, artists, architects and designers can all benefit from understanding internal mental states and processes.

Major Topics in Cognitive Psychology

- Perception
- Language
- Attention
- Memory
- Problem-Solving
- Decision-Making and Judgment
- Intelligence

Important People in the History of Cognitive Psychology

- Gustav Fechner
- Wilhelm Wundt
- Edward B. Titchener
- Hermann Ebbinghaus
- William James
- Wolfgang Kohler
- Edward Tolman
- Jean Piaget
- Noam Chomsky

The Biological Perspective

The study of physiology played a major role in the development of psychology as a separate science.

Today, this perspective is known as biological psychology.

Sometimes referred to as biopsychology or physiological psychology, this point of view emphasizes the physical and biological bases of behavior.

This perspective has grown significantly over the last few decades, especially with advances in our ability to explore and understand the human brain and nervous system.

Tools such as MRI scans and PET scans allow researchers to look at the brain under a variety of conditions. Scientists can now look at the effects of brain damage, drugs, and disease in ways that were simply not possible in the past.

Neuroscience and Biological Psychology

While our mind plays a role in our physical well-being, our biological processes also influence our mental health. Learn more about how the brain and nervous system impact our behavior, thoughts, and feelings.

Biopsychology is a branch of psychology that analyzes how the brain and neurotransmitters influence our behaviors, thoughts and feelings. This field can be thought of as a combination of basic psychology and neuroscience. Many psychology programs use alternate names for this field, including biopsychology, physiological psychology, behavioral neuroscience and psychobiology. Biopsychology's often look at how biological processes interact with emotions, cognitions and other mental processes. The field of biopsychology is related to several other areas including comparative psychology and evolutionary psychology.

If you are interested in the field of biopsychology, then it is important to have an understanding of biological processes, anatomy and physiology. Three of the most

important components to understand are the brain, neurotransmitters and the nervous system.

The Brain and Nervous Systems

The Central Nervous System is composed of the brain and spinal cord. The outermost part of the brain is known as the cerebral cortex. This portion of the brain is responsible for functioning in cognition, sensation, motor skills, and emotions.

The brain is comprised of four lobes:

- *Frontal Lobe*: Also known as the motor cortex, this portion of the brain is involved in motor skills, higher level cognition and expressive language.
- *Occipital Lobe*: Also known as the visual cortex, this portion of the brain is involved in interpreting visual stimuli and information.
- *Parietal Lobe*: Also known as the somatosensory cortex, this portion of the brain is involved in the processing of other tactile sensory information such as pressure, touch and pain.
- *Temporal Lobe*: Also known as the auditory cortex, this portion of the brain is involved in the interpretation of the sounds and language we hear.
 - Another important part of the nervous system is the Peripheral Nervous System, which is
 - divided into two parts:
- *The Somatic Nervous System*: Controls the actions of skeletal muscles.
- *The Autonomic Nervous System*: Regulates automatic processes such as heart rate, breathing, and blood pressure. There are two parts of the autonomic nervous system:
 - The Sympathetic Nervous System: Controls the “fight or flight” response. This reflex prepares the body to respond to danger in the environment.
 - The Parasympathetic Nervous System: This system works to bring your body back to its normal state after a fight or flight reflex.

Neurotransmitters

Also important in the field of biopsychology are the actions of neurotransmitters.

Neurotransmitters carry information between neurons and enable chemical messages to be sent from one part of the body to the brain, and vice versa.

There are a variety of neurotransmitters that affect the body in different ways. For, example, the neurotransmitter dopamine is involved in movement and learning. Excessive amounts of dopamine have been associated with psychological disorders such as schizophrenia, while too little dopamine is associated with Parkinson’s disease.

A biopsychologist might study the various transmitters to determine their effects on human behavior.

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