Cognitive Psychology: Theories, Concepts, and Models

Cognitive psychology is the study of mental processes, including perception, memory, thinking, decision-making, and language.

This field helps explain how individuals acquire, store, and use knowledge. Understanding these mental processes offers insight

into how we interpret the world and make decisions in our daily lives.

Historical Foundations of Cognitive Psychology

1. Nativism vs. Empiricism

Empiricism suggests that knowledge comes from experience. Philosophers like John Locke and Aristotle argued that people are

born with a "blank slate" (tabula rasa) and learn through interactions with the environment. Nativism argues that knowledge

is innate, biologically inherited, and influenced by genetic factors. Plato and René Descartes were prominent advocates of

nativism.

2. Key Philosophers and Their Contributions

- John Locke: Proposed that the mind comprises mental images (thoughts), which are the result of associating sensory experiences.

- George Berkeley: Criticized Locke, arguing that abstract ideas like judgment and truth cannot be reduced to mere mental images.

- Plato: Introduced the "wax tablet" analogy, where memory was likened to impressions made in wax.

Early Psychological Schools of Thought

1. Wilhelm Wundt and Structuralism

 Wundt founded the first scientific school of psychology, known as Structuralism, in 1879. He aimed to break down mental

 processes into their most basic elements, focusing on sensations and feelings. He developed a method called introspection,

 where individuals reported their thoughts and feelings when presented with stimuli. His goal was to uncover the basic elements

 of consciousness and how they combine to form complex experiences.

 Criticism: Structuralism was criticized for focusing too much on breaking down mental processes, ignoring the complexity and

 holistic nature of human thought.

2. William James and Functionalism

 Functionalism, developed by William James, focused on the purpose and function of mental processes rather than their structure.

 This theory emphasized the practical functions of behavior, such as how mental activities (e.g., learning, thinking) serve to

 promote survival.

3. Gestalt Psychology

 Gestalt psychologists emphasized that "the whole is greater than the sum of its parts." Gestalt theory proposed that

 psychological phenomena should be studied as structured, organized wholes rather than broken

into individual components.

Behaviorism

Behaviorism emerged as a dominant school of thought in the early 20th century. Behaviorists like John Watson and B.F. Skinner

focused on observable behaviors rather than internal mental states.

The Cognitive Revolution and the Emergence of Cognitive Psychology

The cognitive revolution in the mid-20th century shifted the focus back to internal mental processes. Cognitive psychology

emerged as a field dedicated to studying how people think, remember, learn, and perceive. The development of computers played

a crucial role in this shift.

Mind vs. Brain

Cognitive psychology distinguishes between the mind (the software responsible for mental processes) and the brain (the hardware

or biological structure where these processes take place). The comparison between the mind and computers is useful but has

limitations since the brain and mind are interconnected, unlike computer hardware and software.

Mental Representations

Mental representations are internal models or symbols that represent external reality. Each mental representation consists of:

- Form: The format in which the information is encoded (e.g., visual, auditory).
- Content: The actual meaning or information being conveyed.

Mental Processing

Cognitive processing involves various operations, such as attention, perception, and memory, which work together to interpret

mental representations. Algorithms guide how information is processed, ensuring that the processing system follows a structured

path from input to output.

Conclusion

Cognitive psychology has evolved through contributions from various schools of thought, each offering unique insights into how

humans acquire and use knowledge. From structuralism and functionalism to the modern cognitive revolution, this field continues

to advance our understanding of mental processes.