

Evolution of cognitive psychology



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Cognitive psychology is a section of psychology that studies the cognitive, for example, the cognitive processes of human consciousness. Research in this area is usually related to issues of memory, attention, feelings, providing information, logical thinking, imagination, the ability to make decisions. Cognitive abilities in the information units are not very large. Cognitive process is subject to the epistemological principle and has a wave shape in nonlinear media. It is important to study cognitive psychology, as the research that is held to find out more information about attention, imagination, memory and thinking can help to understand the most needed abilities and qualities of the organism.

Many of the provisions of cognitive psychology underlie modern psycholinguistics. This trend has arisen under the influence of information approach. Cognitive psychology is based largely on an analogy between the transformation of information in computing devices and the implementation of cognitive processes in humans. So, there were identified numerous structural components (blocks) of cognitive and executive processes, especially memory (R. Atkinson). The most widely used is a computer version, where the psyche is represented as a device with a fixed capacity to transform the signals. Here the main roles play internal cognitive schemes and activities of the organism in the process of cognition. We represent the actions performed by the computer: obtaining, manipulating symbols, stored in memory elements of information retrieval from memory, etc. It does not encourage assuming that cognitive processes are real, "that they can explore and even, perhaps, to understand" (U. Neisser). In this case, human

cognitive system is regarded as a system having an input device, storage, display information according to its capacity.

Cognitive psychology is one of the most recent additions to psychological research and studies several cognitive processes such as problem solving, reasoning (inductive, deductive, analogical), perception, decision making and language acquisition. It was developed as a separate area of the discipline since the early years of the 1950 and 1960. The term came into use with the publication of the book *Cognitive Psychology* by Ulric Neisser in 1967. But the cognitive approach was brought to the fore after the publication of the book of Donald Broadbent *Perception and Communication* in 1958. Since then, the dominant metaphor in the area has been the model of Broadbent's information processing. The main exponents of cognitive psychology are Alan Baddeley, Frederic Bartlett, Donald Broadbent, Jerome Bruner, Hermann Ebbinghaus, George A. Miller, Ulrich Neisser, David Rumelhart, Herbert Simon, Endel Tulving, Robert L. Solso and Jean Piaget.

From the hypothesis, cognition is defined as the manipulation of symbols by certain rules. The system interacts with the symbols, but not with the meaning, and the system (mind) works properly when the symbols appropriately represent external reality or any aspect thereof, and information processing within the system (symbolic computation) leads to a proper solution of the problem has arisen. This hypothesis is still considered by many as the foremost exponent of the cognitive approach, and the paradigm of information processing and computer metaphor is still the most commonly identified cognitive psychology. The cognitive hypothesis is implied a form of cognition sequential and localized. However, these

approaches are not consistent with recent findings in neuroscience research, which are more accepted in brain patterns that are distributed operations and generate massive interconnections from changing product of experience. However, neural networks have formal properties almost unknown, but nevertheless they mimic neural processes, not necessarily correspond to a strictly empirical level appropriate. Many of these works have been criticized for their biological implausibility. Because of these discrepancies, and the rescue of ideas about self-organizing systems that were present in the formational phase of this branch of psychology, but were hidden by the cognitive hypothesis, there is the need for a new conceptualization of the human mind.

Jerome Bruner, one of the fathers of the cognitive revolution accuses some neo-cognitive that have been involved with technical issues that are marginal to the purposes and the impulse that animates the revolution he helped to create. According to the writer, cognitive came not to reform but to replace behaviorism. For Bruner cognitive is the study of mental processes and as such should be turned to the study of meaning of the act of a person. The cultural construction of meaning information flows is therefore the scaffold from which to work psychology.

Cognitive psychology is a school of psychology that examines internal mental processes such as problem solving, memory and language. Cognitive psychology goes back to the late model behaviorism. The basic principles are also found in the Gestalt psychology of Max Wertheimer, Wolfgang Köhler, and Kurt Koffky and in the work of Jean Piaget, who studied intellectual development in children. Cognitive psychologists study how

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people understand, diagnose and solve problems, engaging in mental processes which mediate between stimulus and response. Cognitive theory contends that solutions to problems take the form of algorithms - rules that are not necessarily understood but promise a solution, or by trial and error - rules that are understood but not always guarantee solutions. In other cases, the solution can be found through insight, a sudden awareness of relationships.

The study of mental processes had already been addressed in general psychology, especially by Wilhelm Wundt, Gustav Fechner Theodor, Ernst Heinrich Weber and Francis Galton. Cognitive theories are found within social psychology, personality, psychopathology and in developmental psychology. Applications of cognitive theories in comparative psychology have led to many recent studies in animal cognition.

In the twentieth century, cognitive psychology received a major boost through studies on artificial intelligence, which allows people to relate and compare to some extent, processing and feed the information with electronic processes, such as the computer. As a theory of a human behavior, cognitive psychology emerged as an alternative, since neither physiology nor behaviorism could solve the behavior problem in a satisfactory manner. The physiology did not reach the higher levels of behavior, behaviorism did not put in the focus of his analysis of cognitive processes, since these are private events, observable only (and quite limited) in person. Cognitive psychology, in turn, proposes to fill this gap.

Perception refers to functions that let to capture the environmental stimuli for subsequent information processing. The sense organs are responsible for the capture of environmental information, which can be either visual, olfactory, tactile, gustatory, auditory and kinesthetic (body movement and balance). The brain process depends heavily on information provided by the sensory structures, which are the basis of our understanding of the world. There is a lot of research on perceptual processes in cognitive psychology that are used to understand the behavior. One example is the study of illusions, especially those optical illusions. Attention is also the topic of study related to cognitive process, although several authors consider the derivative function of consciousness. Through the attention the mind can select the stimuli received, giving priority to some while others are minimized or even excluded from processing. Examples of studies on attention include some controversial, as subliminal stimuli. Therefore, although attention can be studied on the topic of perception, it would be considered an initial level of processing of the stimuli.

Likewise, the pattern recognition depends on a basic level of information processing. The various sensory stimuli received from the environment are organized in an active manner by various perceptual systems of the brain, so as to constitute a " pattern that makes sense."

Interdisciplinary perspectives for the cognitive psychology include a scientific co-operation of specialists in different disciplines with a common scientific goal, which can be related to the cognitive psychology. Certainly, there is interdisciplinary perspective in this sphere as there should be followed the next profound research that will determine the possible connections and

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benefits of interdisciplinarity. Based on the concept of cognitive psychology, cognitive therapy is the fundamental principle, which shows the way individuals perceive and process reality influences how they feel and behave. A major goal of cognitive therapy is to organize an active change of thoughts that change the suffering, attempting to produce a more realistic perception of the environment and generating behavior patterns that are better suited. It is very common to use techniques derived from other areas of knowledge, like the dialectic, the downward arrow technique, record of dysfunctional thoughts and other psychological techniques developed specifically for this purpose.

All in all, the study of the cognitive psychology and innovative approaches is necessary for the everyday life of people, as new ideas or approaches can help identify the problems, or to find perspectives in this area.