



International Journal for Innovative Engineering and Management Research

A Peer Reviewed Open Access International Journal

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IJIEMR Transactions, online available on 30th June 2021.

Link: <https://ijiemr.org/downloads/Volume-10/Issue-06>

DOI: 10.48047/IJIEMR/V10/I06/49

Title: **COGNITOLOGY AS A SCIENCE**

Volume 10, Issue 06, Pages: 244-247

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COGNITOLOGY AS A SCIENCE

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Abstract: The article focuses on analyzing the structure of cognitivism - a new domain of cognitive-oriented interdisciplinary studies, which are being intensively developed in the fields of philosophy, science and culture nowadays. Cognitive science is singled out by the author as a paradigm model for integration of cognitive studies and organization of data on cognition and its practices. The main paradigm categories of cognitive science such as method, object, scientific community and others have been described.

Keywords: cognitive, knowledge, brain, comprehension, cognitology, neurology, neurophysiology, neurobiology, mind, human, data.

Introduction

Knowing and perceiving objects and events in reality is a structured activity that involves several logical-spiritual actions. In order to understand this activity, the science of cognitology, which emerged in the 19th century as a unique field in linguistics, plays an important role. With the help of cognitive linguistics, which is an integral part of cognitology, we can scientifically study the events that take place in our thinking. If we study euphemisms, which are considered to be a factor in the development of a society's culture, through cognitive analysis, we will get a glimpse of their essence and meaning. As long as human beings are alive, they will always keep in mind the concepts of "death and life" and recognize that "death" is real at every moment.

Mankind has emerged, and one of the first important signs that sharply distinguishes it from the animal kingdom is language. Through language, a person communicates, interacts, and tries to find his or her place in society. Language and society are inextricably linked. "Language is only a social weapon that exists among people in a society. The fate of a language, the development of its survival, depends only on the society that speaks that

language. Language dies with society, just as it dies with society". Different views on the problem of language and society E.Sepir, B.Warf, G.O.Vinokur, B.A.Larin, N.Ya.Marr, E.D.Polivanov, L.V.Shcherba, L.P.Yakubinsky also occurs in research. As society develops, so does language. As a proof of our opinion we cite one of the antinomies (contradictions) of the nature of language put forward by the founder of general linguistics Wilhelm. von Humboldt: "The second antinomy: language is an everevolving dynamic phenomenon. On the one hand, if the language is an activity, on the other hand, the product of the activity... In fact, language is not "ergon" (product of activity), but "energeia" (activity) itself".

Main part

Cognitive science which has become the subject of my research, is a developing area of scientific knowledge that confidently gaining popularity. It's practical, social orientation and not just the relevance, but the urgency of the set (and quite successfully solved) problems accelerate this process. A complex world, in which the emergence of new ones has already become habitual, all higher technologies, requires more and more complex and dynamic

methods of its comprehension and description. The goal should be not only successful adaptation, but also active activity in it. And in this direction, cognitive technologies are leading in the complex of convergent technologies as the most practical implementation.

Accumulated theoretical knowledge about our brain, thinking, evolution and other objects of philosophical understanding that have long been important for humanity. And this complex phenomenon, characteristic of post-non-classical science, when it is difficult to draw the line between science itself, technologies and implementation practices, determined the choice of the term of my research "cognitive science". Why is this term chosen? "cognitive science" or "cognitology", will become clear in the course of further consideration of the topic of cognitive research. Separate the section will be devoted to the study of their terminological field. Challenges facing cognitive science, extremely difficult - the discovery of the secrets of knowledge and consciousness, still not yet revealed by science. One side, with the advent of new objective methods in neurosciences, psychology, computer science, these secrets become open for research as never before.

Modern cognitive science (or cognitive neuroscience) uses brain imaging techniques to prove, at an empirical level, the connection between mental phenomena and brain physiology. And if in the past traditional cognitive science did not take into account a person's consciousness, then today's cognitive science does not just take consciousness into account - it is one of the main objects of its research. Perhaps the most important technical achievement that has made possible the existence and development of cognitive science in general is innovative methods of brain scanning, for example, tomography. It was she, along with some other methods, that made it

possible for the first time in the history of mankind to learn what the brain is from the inside, as well as to obtain unique practical information about its functioning, and not just indirect data, as it was before. Of course, the development and creation of ever more powerful computers is of no small importance in this process. If you try to divide the entire cognitive science into parts, you can be amazed at how many components it contains. It includes cognitive psychology and cognitive linguistics, mathematical logic and artificial intelligence, material cognitive science and cognitive ethology, philosophy of mind and neurology, neurophysiology and neurobiology, as well as neuro linguistics, cognitive geography, cognitive anthropology, neuroscience and experimental psychology.

Even ancient Greek philosophers, for example, Aristotle and Plato, showed interest in understanding the nature of human consciousness. Many works have been written on this topic and a huge number of assumptions have been put forward. Later, in the 17th century, the French philosopher, physicist and mathematician Rene Descartes popularized the idea that the mind and body of a person are two independent objects.

Other great thinkers of the 17th and 18th centuries who pondered on reason include John Locke, Immanuel Kant, David Hume, Thomas Hobbes, Robert Burton, George Berkeley, and others. But if at that time most of the reflections on this topic were more theoretical in nature, then already at the end of the 19th century the issue of human knowledge began to be studied by experimental psychology, the reason for which was the activity of the German physician, physiologist and psychologist Wilhelm Wundt. At the beginning of the 20th century, the popular at that time people's understanding of the mind was changed by the founder of behaviorism -

the American John Brodes Watson. According to him, human consciousness in itself cannot be the subject of interest of science, but only behavior that can be observed can and should be studied using scientific approaches. Marvin Minsky and John McCarthy) became the founders of a field called "artificial intelligence".

Subsequently, the study of the mind was removed by the American linguist Noam Chomsky from behaviorism and some other areas that were initially in the focus of psychological science. And the very concept of "cognitive science" was first proposed in 1973 by the researcher of artificial intelligence Christopher Longuet-Higgins. Over the next ten years, the Society for Cognitive Science and the journal "Cognitive Science" appeared. Since then, cognitive science began to develop as a separate direction.

Among the most famous cognitive scientists are the following:

- Daniel Dennett - Computer Science Researcher
- John Searle - author of the China Room thought experiment
- Jerry Fodor - renowned defender of functionalism
- Douglas Hofstadter - famous computer scientist and physicist
- George Lakoff - Linguistics Researcher
- James McClelland - physiologist and brain researcher
- Stephen Pinker - Experimental Psychologist

Already only this small list can say that cognitive science is a very relevant scientific direction. And the reason for this is largely due to her methods - they are extremely interesting, and they are worth mentioning separately.

The methodology of cognitive science is based on the use of computer models borrowed from the theory of artificial

intelligence, and experimental methods taken from psychology, as well as the physiology of the higher central nervous system. This is how accurate theories of how the human brain works.

Cognitive science applies two classical computational methods aimed at modeling cognitive systems:

- Symbolism - based on the idea that human thinking is similar to the thinking of a computer that has a central processor and processes streams of character data
- Connectionism - based on the idea that human thinking cannot be compared to a computer processor, because it is incompatible with neurobiological data on brain activity; thinking can be stimulated by artificial neural networks consisting of "formal" neurons that simultaneously process data streams

In the classical approach of cognitive science, the problem of the relationship between consciousness and the brain was ignored, as was the problem of the relationship between the psychological and neurobiological sciences, which was the cause of one of the failures of cognitive science in the past. But in the 80s of the last century, neuroscientists began to interact much closer with psychologists, thanks to which a new science appeared - cognitive neuroscience.

Conclusion

The progress that is observed in cognitive science at the present time, according to scientists, can help humanity to reveal the secrets that the mind hides in it, in other words, to describe in detail the processes occurring in the human brain and are responsible for the activity of the higher nervous system. If humanity possesses such data, it will make it even more real and significantly accelerate the creation of an artificial intelligence capable of having independent cognitive abilities, capable

of creative activity and even full interaction with a person.

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