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TO THE QUESTION OF THE LOGICAL ANALYSIS OF THE STRUCTURE OF THE SENTENCE

***Аннотация:** статья посвящена проблемам взаимосвязи логического и семантического уровней мышления. Такой подход позволяет выявить существенные скрытые закономерности лингвистических структур, служащие вербальной упаковкой результатов сложных ментальных процедур. Понимание существующих концепций в логике и лингвистике в контексте когнитивной науки может способствовать решению актуальных практических и теоретических проблем современной лингвистики, связанных с соотношением логико-когнитивных и синтаксических категорий.*

***Ключевые слова:** мышление, синтаксис, взаимосвязь, предложение, пропозиция, суждение, логико-когнитивный подход, логика языка.*

***Abstract:** the article is devoted to the problems of interrelation between the logical and semantic levels of thinking. This approach allows us to reveal the essential latent patterns of linguistic structures serving as verbal packaging of the results of complex mental procedures. Comprehension of existing concepts in logic and linguistics in the context of cognitive science can contribute to solving actual practical and theoretical problems of modern linguistics related to the correlation of logical-cognitive and syntactic categories.*

***Keywords:** thinking, logical-cognitive approach, language logic, proposition, sentence, syntax, interconnection, judgment.*

The linguistic teachings of the logical model of language as an object of cognition are proofs that language as a scientific subject can be designed by the researcher within the framework of the law of ascent in the form of the object of his thought (image) on

the basis of extracting, structuring and formalizing knowledge (data) from scientific descriptions of socially-fixed knowledge about its system-structural organization. Language, more precisely, linguistic signs is the carrier, the translator of the results of the primary, a verbal level of thinking, giving the birth to logical forms in the process of cognition, this is the reification of abstract logical forms in the forms of a sounding, written physical substance of natural language [3, p. 360].

Both logic and linguistics need to achieve a holistic view of the language that would create the basis for solving actual practical and theoretical problems [2, p. 126]. Any sentence of natural language, or otherwise – the linguistic, semantic thinking represented by this sentence, contains in its hidden form a logical form of thought, like the underwater part of an iceberg, which can always be formalized on the basis of understanding of the semantic form of thought. Logical forms are strictly formalized and are not subject to any changes, in the language they are free, expressed in dozens of different variants and in thousands of variants in various languages [Ibid].

The purpose of studying the connections between language and logic is not to reveal whether a given sentence contains truth or lies in reasoning as the main goal of research in dialectical logic, but to show how a person, using language, thinks in logical categories, as they are expressed, what real logical forms he uses in his daily and scientific activities, and how they relate to each other.

As G.V. Chesnokov writes, apart from the relationship neither the forms and units of language, nor the forms and units of thinking exist and, consequently, their nature can not be understood [5, p. 148–150]. The whole dispute in linguistics about the relationship of language and thinking, propositions and judgments, propositions and statements, about the essence of actual division, and in particular in syntax – about the nature of the sentence, about its semantic structure – is the result of the unresolved question: how do they relate, in particular, syntax and logic?

The main theoretical postulate of logic in the study of syntax is that the objective connections of objects and phenomena of the objective world are reflected in the form of a definite structure of consciousness, and, consequently, objective laws are formed in certain logical forms – in the forms of concepts, judgments, and inferences. The

nature of thought is such that it, on the one hand, assumes the material reality independent of it, which it correctly or distortedly reflects, and on the other hand, it presupposes the language means of its expression, in which it is recorded as the content of thinking – semantic forms of thought, and the logical forms of this content are logical forms of thought [3, p. 492].

It is generally accepted that the syntax occupies the vertex position in the hierarchy of language subsystems. In the known methods of logical analysis of the language, the principles and rules of grammar are considered as patterns by which the structure of a language is brought into line with universal forms of thinking. The task of logical analysis of the structure of the sentence, posed by a number of directions of modern linguistics, distinguishing the level of the abstract representation of a given syntactic unit and the level of its linguistic realization, necessitates the development of its logical-cognitive interpretation. Thus it is in the syntax, at the level of the sentence, that an alloy of thought and a linguistic sign is traced, representing a logical-linguistic phenomenon as an object of research. Hence, the syntax is the field of studying the structure of a language, the structure of a sentence, that is, the formal construction of syntactic links of words. Outside this area, logic extends. This is what is usually considered a statement, an actual division, a semantic structure of a sentence. If we examine the proposition not only from the point of view of formal syntactic links between its words, but also from the point of view of its actual division, intonation, semantic structure, it means either to introduce into the syntaxes logic, or to study one and the same unit of language – proposition from the standpoint of two sciences – linguistics and logic [4, p. 120].

Hereof we can conclude: there is no sentence as an object of syntax, «devoid of semantic meaning, i.e, a semantic form of thought.” Therefore, there is no proposition that would not be the object of studying another science – logic presented in the sentence in form of «logical form of thought.” It means the presence of «logical in the sentence is an integral part of the sentence, consisting of two levels – the semantic-syntactic, i.e., the semantic form of thought, and the logical as a logical form of thought» [3, p. 488].

Thus, grammar and logic are closely interrelated, and to the extent that language and thinking are different, but inextricably linked (if by language we mean a system of conventional signs that are associated «tightly» with a system of logical concepts). The study of the semantics of linguistic units from the point of view of their interaction with the logical substratum of consciousness and cognitive activity of the individual is associated with the structure of mental representations, since «the structure and principles of language, one way or another, reflect the structure and principles of perception.» [1, p. 41]. Strategies for «concept formation» can therefore be based more on the «structure principles» (i.e. syntax or grammar) of the language than on the specific content of the dictionary or words [Ibid]. In our opinion, based on the ideas and achievements of modern cognitive linguistics, we consider it possible to put forward the assumption that the structures of thinking are in close connection with the syntactic forms of their linguistic expression.

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