

## NEUROLINGUISTIC ASPECT OF APHASIA RESEARCH

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Neurolinguistics as a relatively young scientific discipline is an important area at the intersection of linguistics, neuropsychology and medicine. It offers a special approach to the analysis of clinical manifestations of speech disorders, such as aphasia, through the prism of linguistic categories and based on modern linguistic theories. The emergence of neurolinguistics became possible due to advances in the development of neuropsychology and psycholinguistics, which formed the foundation for the study of speech disorders as cognitive and neurophysiological phenomena.

The neurolinguistic method of aphasia analysis is considered as an auxiliary but valuable tool within the framework of complex neuropsychological and psychological research. It allows to more accurately determine the nature and structure of speech disorders, to identify patterns of disorder at the level of various language levels (phonetics, morphology, syntax, semantics, pragmatics), and also to establish the relationship between the language system and the brain organization of speech function.

Aphasia, being a deeply impaired form of speech activity, affects not only verbal and non-verbal aspects of communication, but also influences the patient's personal sphere, his emotional state and general cognitive functioning. As a result, aphasia often becomes a trigger for the disintegration of other higher mental processes based on speech regulation. That is why the study of aphasia goes beyond the scope of one discipline and requires the joint participation of neuropsychology, clinical psychology, neurology, neurolinguistics and other related sciences.

Despite this, in recent years there has been a simplified interpretation of aphasia exclusively as a subject of linguistics, which is not entirely correct. This view is criticized by a number of researchers (in particular, Critchley, 1974), who emphasize the need for a comprehensive approach that includes neurophysiological, cognitive and linguistic aspects.

In modern neuropsychology, neurolinguistics occupies a significant place, acting as a full-fledged scientific tool for the analysis of speech disorders. Its main goal is to deepen the understanding of the mechanisms of speech disorders by identifying correlations between the linguistic structure of language and the brain mechanisms of its implementation. In this context, neurolinguistics provides unique opportunities for diagnostics, typology and therapy of various forms of aphasia.

Luria made a significant contribution to the development of neurolinguistic analysis of aphasia, combining the principles of neuropsychology, psychology and psycholinguistics in his scientific work. His approach was fundamentally new - he was the first to carry out a scientific analysis of oral speech disorders in aphasia, taking into account the

neuropsychological mechanisms of the defect. Already in his early works, Luria used the achievements of structural linguistics, in particular the theory of the phoneme developed by the Prague School, which made it possible to give a scientific explanation of the nature of sensory aphasia, first described by Wernicke in 1874.

The fruitful interaction of neuropsychology and linguistics has been especially clearly demonstrated in the development of the concept of two classes of aphasic disorders: those associated with disruption of the syntagmatic (linear) and paradigmatic (elective) organization of the language system. In cases of damage to the frontal lobes of the brain (in dynamic or efferent motor aphasia), difficulties in constructing a coherent, grammatically organized utterance are most often observed — the syntagmatic aspect of speech suffers. At the same time, paradigmatic skills (choice of words, replacement by analogy) can be partially preserved. On the contrary, in case of damage to the parietal-temporal and posterior - temporal areas (afferent motor, sensory, semantic aphasia, etc.), the paradigmatic structures associated with the choice and combination of lexical units are the first to suffer.

Luria emphasized that both of these language organizations — syntagmatic and paradigmatic — include multiple levels (phonological, lexical, grammatical), which can be selectively disrupted depending on the area of brain damage. This allows for a more accurate classification and prognosis of speech recovery in patients with aphasia.

Neurolinguistic methods of analysis are widely used in the study of the structure of speech disorders at various language levels - from individual words to complex syntactic constructions. They are also used to create correction programs aimed at restoring speech function. A number of experimental studies have examined the dynamics of lexical disorders in patients with aphasia, with an emphasis on difficulties in choosing words, disrupting semantic connections, and restructuring the lexical system.

Particular attention in neurolinguistics is paid to the role of grammatical structures in understanding utterances in aphasia. It has been established that in agrammatism, both the syntactic organization and the interaction between the grammatical and psychological planes of speech are disrupted — the levels that L.S. Vygotsky spoke about. Experimental data have shown that even with distortion of the grammatical form of a phrase, healthy subjects can restore its meaning due to the functioning of the psychological plane. This points to the important compensatory role of the redundancy of grammatical structures in the Russian language and the possibility of partial restoration of speech understanding even with pronounced structural disorders.

It was also found that the degree and type of agrammatical disorders, the length of the phrase and its syntactic complexity affect the success of conveying meaning. Particularly pronounced disorders of the psychological aspect of speech are observed in efferent motor aphasia, whereas in the case of damage to the posterior parts of the brain, it remains more intact, compensating for defects at the grammatical level.

Thus, neurolinguistic analysis of aphasia allows not only to systematize the types of disorders, but also to develop more accurate and effective methods of diagnostics and speech restoration. It complements the data of neuropsychology and psycholinguistics, revealing the complex mechanisms of interaction between language, thinking and brain structures that provide speech.

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