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**PROSODIC ENCODING OF INFORMATION STRUCTURE
IN LECTURE DISCOURSE: A COGNITIVE APPROACH**

**ПРОСОДИЧНЕ КОДУВАННЯ ІНФОРМАЦІЙНОЇ СТРУКТУРИ
В ЛЕКЦІЙНОМУ ДИСКУРСІ: КОГНІТИВНИЙ ПІДХІД**

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In the center of modern cognitive research is the topic of the cognitive status of discourse. Discourse is a hierarchically highest language phenomenon. It manifests an upper stage of human cognitive activity on comprehension of some fragment of the world at a certain moment of time in a certain sociocultural environment. This cognitive activity is complex and involves closely interrelated processes of knowledge configuration [4, p. 29]. Discourse thus has been studied extensively within the frame of the cognitive approach to language analysis, describing the cognitive nature of many aspects of discourse manifestations including prosodic organization. In recent years there has been an explosion in the number of studies investigating the role of prosody in cognition and linguistics, as well as improvements in techniques for examining prosody.

This paper reviews recent research advances on discourse prosody in cognitive approach. Informational structure of lecture discourse and ways of prosodic encoding is at the focus of the research, however, this paper is predominantly of theoretical character outlining the prospects for further empirical studies.

Works on discourse production increasingly discuss the aspects concerning the cognitive status of prosody, showing the relation between prosodical parameters and cognitive processes in discourse production and perception. Information structure suggests the reflection of cognitive activity and can be conceived as the external manifestation of some of the cognitive processes involved in speech production. "Information structure can be conceived of as a 'cognitive domain' that interacts with the linguistic modules syntax, phonology, and morphology on the one hand, and, on the other hand, with other cognitive capabilities that control, update and infer interlocutors' common beliefs" [2, p. 454].

The relationship between the ‘old’ and the ‘new’ content at the current stage is interpreted by linguists as one of the two main cognitive principles of constructing the cognitive plane of discourse and can serve as a basis for cognitive research. New horizons in the study of this problem are connected with the possibility of deeper penetration into the processes of thinking, consciousness, perception and cognition. A number of arguments indicate the importance of the actual segmentation in the cognitive mechanisms of perception through the peculiarities of the mental processes of human consciousness to perceive information against the background of already known information (apperceptive principle), as well as by limitations on a person's ability to keep certain amounts of information in focus. The segmentation of information structure into ‘old’ and ‘new’ acts as a cognitive mechanism for activating the knowledge of the recipient to whom the “new” information is addressed.

Hierarchical structure of lecture discourse is multi-dimensional. It is obvious that when relying on the auditory perception of information, the first stage will be the perception of the acoustic signal, which serves as the basis for further decoding and processing of the received information. Our *hypothesis* is that in the process of perception, the actualization of information at the prosodic level will affect the activation of perception and other levels of language, and thus the knowledge encoded in the message will have the maximum effect of its transmission.

We believe that particular prosodic encoding within each structural block of lecture discourse will serve as a focal point for the listener and will make it possible to quickly and successfully process didactic information in the process of its transmission and perception. Prosodic cues of actualizing important information play a significant role in these processes, especially in oral perception.

The interdisciplinary approach in cognitive researches provides for the use of elements of psycholinguistic methods. In this scientific work psycholinguistic methods were applied to uncover a correlation between prosodic and cognitive structures by addressing the recipient's consciousness and cognitive abilities. The most contrasting speech samples of 12 lecturers (6 women and 6 men) were involved in the experiment. The task of the informants was to determine the cognitive quality of the lecturers' speech and their distribution according to the developed three-level scale ("good", "average", "bad") by means of a questionnaire.

The conducted experiment verified the proposed *hypothesis* about the influence of prosodic organisation of speech on the degree of acquiring of oral information by the listener. The speeches of the lecturers were characterized differently from the point of view of their cognitive quality. The obtained speech samples of the lectures, distributed according to the three-level interval scale were studied in the following stages of the

experiment by the auditory method and instrumentally in order to identify prosodic encoding of their information structure that affected the degree of information perception.

The first stage of subjective analysis was the study of the informational structure of lecture discourse by informants. During the experiment, the informants established the boundaries of the information structure (new vs. old information) of the units of analysis and identified the structural context of lecture discourses with different degree of perception by the listener. The analysis of the structural blocks of the texts of the experimental material, as expected, did not pose significant difficulties for the informants.

The results of the analysis of the information structure conducted in this way by auditors-informants made it possible to carry out the experiment further. Thus, the results of the psycholinguistic research formed the basis for the further stages of the experiment.

The assertion that information structure is linked to the verbal presentation of knowledge opens up new theoretical and methodological possibilities for its research. The information contained in lecture discourse is mainly perceived through auditory analyzers, accordingly, the study of the prosodic encoding of lecture discourse from a cognitive perspective is central in the processes of describing the cognitive mechanism of perception. Therefore, the study of prosodic organisation in this perspective will be very relevant for both discourse analysis and phonetic studies on the problems of prosodic variability.

Bibliography:

1. Wagner M. and Watson D.G. Experimental and theoretical advances in prosody: A review. *Lang. Cogn. Process* 25 (7-9). 2010 Jan 1. P. 905–945. URL: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3216045/> (дата звернення: 11.03.2024) DOI: 10.1080/01690961003589492
2. Kügler F., Calhoun S. Prosodic Encoding of Information Structure: A typological perspective. *The Oxford Handbook of Language Prosody*. 2021. P. 454–467 URL: <https://doi.org/10.1093/oxfordhb/9780198832232.013.30> (дата звернення: 05.03.2024).
3. Yeari M. Broek P. A cognitive account of discourse understanding and discourse interpretation: The Landscape Model of reading. *Discourse Studies* Volume 13. Issue 5. URL: <https://doi.org/10.1177/1461445611412748> (дата звернення: 03.03.2024).
4. Magirovskaya O.V. What Is Cognitive In Discourse? *Philological Readings*. Vol. 83. *European Proceedings of Social and Behavioural Sciences*. 2020. P. 29–38. European Publisher. URL: <https://doi.org/10.15405/epsbs.2020.04.02.4> (дата звернення: 03.03.2024).