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Conceptual Network as a Dynamic Cognitive Construct of the Author-Reader Interaction

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The article is written in the framework of the cognitive paradigm. It is devoted to the problem of text production and perception and aims at description of cognitive operations which the reader undertakes in the process of text interpretation. The study is based on the theory of biological nature of cognition. Therefore, a new approach to define the term "concept" is discussed. The work also investigates the transformations which the author's individual concept undergoes in the process of reader's interpretation. The approach gives possibility to make the conclusion that conceptualization is possible due to some dynamic connections – moduses of perception.

Keywords: text perception and interpretation, concept, conceptual network, modus of perception.

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Introduction

The issues of text production and text perception are subject to modern up-to-date linguistic studies. Although the cognitive paradigm establishes itself as predominating in linguistics, still the cognitive component of interaction between the Author and the Reader is to be studied more thoroughly.

Our objective is to describe the cognitive operations which organize the perception and interpretation of the author's text by its recipients on the conceptual level. We presuppose that an author's text objectifies verbal representations of individual conceptual configurations which "trigger" individual concepts in the reader's

consciousness. These concepts may intercross, overlap or, on the contrary, may not match the ones, objectified in the author's text. At that, in the process of perception new temporary conceptual structures (conceptual networks) are developed. This conceptual network includes various concepts from receptor's conceptual fields which happen to be actualized due to the fact that in the individual consciousness they are bound up with each other by the same modus of perception.

Theoretical framework and methods

The aim of creating a text is traditionally considered to be in objectification of the author's

idea, conveying the meaning to the reader. The Author-Reader interaction space within a framework of a text has always been a subject to scientific speculations of various branches of linguistics. In decoding stylistics text creation is regarded as a process of coding information (images, emotions, relations etc.) by the author by means of language. Getting the coded message the reader is challenged to re-code and re-construct it, however, in the process of decoding and reconstructing some part of information may be lost, adhered, or changed due to cultural, gender or age-dependent differences of the Author and the Reader.

Issues of text perception and text interpretation are widely studied from a perspective of psycholinguistics (Zalevskaia, 2005). From a perspective of “a naïve reader”, native speaker and culture-bearer, the processes of text perception unfold spontaneously, resulting in a projection of the text as a mental (perceptive, cognitive, emotive) formation which can be verbalized only partially. Due to the diverse nature of operations in the process of text perception, and, to the unequal level of involvement into the text under perception, the quality of its interpretation may change.

Discourse theory (Dijk, Kintsch, 1983) introduces “strategies of comprehension” which help to organize a mental (cognitive) model of the object which is being perceived. The founders of the discourse theory distinguish three main kinds of such strategies: proposition, macroproposition and local coherence. Only complex realization of all the strategies provides gradual transition from minimal text structures (words, sentences, propositions) to discourse macrostructures, where this process is the substance of comprehension.

Contemporary cognitive linguistics admits that the traditionally called “language” content is realized in actual speech acts. It means that in the process of communication there is no

transfer of information from the speaker to the listener. The listener creates the information by himself, firstly, according to his own experience of interaction with the object which is associated in his consciousness with this language sign, and secondly, to his experience of interaction with this language sign in speech activity (Kolmogorova, 2006). “The content transfer” is just an illusion which appears only due to recognisability of audio/visual form, whereas the content is what everyone (addressant/addressee) holds himself/herself. In this case we may observe how partial overlapping of the stories of lives of the communicants and of their experiences gives them an impulse to follow different but individually important cognitive “routes”.

Nowadays most of linguistic studies discuss one of the most controversial and vague notions in linguistics – the notion of a concept. Can any word verbalize a concept? Or are there certain criteria considering which we may detach a concept from a lexical unit? May there be an individual concept or are concepts entirely collective constructs? What is the structure of a concept? And how do different concepts interact with each other? These are the problems which make the notion of a concept so vague. A.V. Kravchenko (Kravchenko, 2013) gave a comprehensive summary of the most actual interpretations of the notion of a concept. In his work he says that a concept is an operational mental unit which has a set of features, is structured in a certain way and objectified in a language form. The author notes that very often the term “concept” becomes just a substitute for the terms “meaning” or “notion” and it results in one the main problems of modern conceptual studies: they ignore the empirical nature of the notion “concept”.

We think that this problem comes from understanding a concept as some established, invariable construct which exists independently in the mind of an individual. Researchers concentrate

their attention on how human brain processes the information, where it stores the results of this process and in which form it represents the results in the outer world. However, such approach doesn't consider the specific character of human cognition as a living, developing and changing organism, and which functions effectively only when focused on the situation "here and now". In this research we follow the ideas of A.A. Zalevskaia who sees a concept not as a construct located in a certain part of some mental field, but as a set of many separate neuron ensembles distributed among different lots of brains. A word or any other sign may activate these lots. These ideas seem reasonable because they potentially may integrate terminology of cognitive studies and of natural sciences and coordinate epistemological actions of members of academic society. Thus we support the hypothesis that biology and linguistics describe equal processes (cognition, memorizing, adaptation, etc.) but from different points of view (L. Wittgenstein's philosophy, G. Ryle's behaviourism, H. Putnam's functionalism) and suggest representing theoretical model of a concept using analogy with a simplified image of neuron.

Neuron is the main structural and functional element of the nervous system of living organisms. It allows these organisms adapt to the environment. In its structure neuron is a highly specialized cell of the nervous system which is capable of generating and transmitting electrical impulses. Neuron's structure includes soma, long neuron and dendrites. The dendrites carry nerve impulses to the soma and from soma – along the long nerve to a muscle, organ or a dendrite of the following neuron.

By analogy with the function of a neuron in the nervous system "a concept" is a kind of element of the cognitive system which also allows organisms to adapt to the environment, so it is some kind of a medial structure between

biological and verbal in the human being. Medial structures help one organism overcome the inability to experience the emotions and feelings of another. Human society fixes, accumulates and transfers its experience in the form of such mediators. The mediators coordinate cognitive activity of the subjects in the cognitive area of whom they get.

"Individual's capacity for interaction with surrounding reality through sensory organs is reflective and analogue" (Magirovskaia, 2008). Individuals adapt to the environment in the biosocial system through memorizing mechanisms which boost effectiveness of communicative interactions and decrease the number of communicative failures. Such mechanisms include overcoming the entropy of an utterance, eliminating (or saving) epistemological lacunae of an utterance, production of additional clusters of information and other mechanisms which help to make the utterance ergonomically rational. Thus adaptation of communicants is a continuous process of harmonization of their speech actions (Prikhod'ko, 2013). Such harmonization, in its turn, requires systematization of the conceptual corpus of the language. Most of the scholars notice that conceptual systems are not chaotic. They are ordered in a complex system of concepts. D.S. Likhachev (Likhachev, 1997) called this system "conceptosphere" by analogy with "noosphere". In his understanding "conceptosphere" or "conceptual sphere" is an organized complex of concepts existing as generalized representations, mental images, schemes, frames, scenarios, gestalts, which generalize different features of the outer world.

In this article we take into account biological nature of cognition, therefore we assume it as more logical to characterize the system of relations between concepts as "conceptual net (work)" (by analogy with "neuron net").

In European and American tradition of cognitive science the term “conceptual net” has already been used for quite a long period of time with the meaning of some coded symbolic knowledge, also known as a propositional and semantic net (Collins, Loftus, 1975). In such nets concepts are represented as bundles connected with other bundles by “links” or by “labelled relations”. This representation is dynamic since the central concept in the conceptual net and the whole structure of it are changeable and may evolve in different contexts.

The process of the Reader’s perception and interpretation of the author’s text lies in the space of national conceptual sphere. “An author’s individual concept is a dynamic component of culture. Its formation may present either transformation of a cultural concept with the same name or creation of a new concept that does not exist in the culture (when we deal with literary texts belonging to such genres as science fiction, fantasy, fairy tale, the genre of absurd, etc.) and is generated to reflect some aspect of the so-called alternative world” (Kononova, 2015). In other words, certain concepts from national conceptual sphere get individual interpretation in the author’s text and in the Reader’s mind. The interaction of these concepts is based on “links” and “labelled relations”. In this work we try to find what functions these “links” and “labelled relations” have.

Design of the experiment and discussion

14 respondents took part in the experiment. They were asked to read the story *A Clean, Well-Lighted Place* (E. Hemingway) and record their audio-/video commentaries on the story. All the interviews were then transcribed into written texts which constitute the experimental database.

The article studies how the author’s concept LONELINESS is being transformed and modified

by the reader in the process of perception and interpretation.

Linguistic studies hold a great number of various methods and devices of cognitive analysis of concepts and yet there are some general tendencies of the analysis. Building of nominative field is one of the most common stages in description of explication of the concept. In this research we defer to the works of Z.D. Popova, I.A. Sternin, Yu.S. Stepanov, N.N. Boldyrev, V.I. Karasik and others.

On the first stage of our research we analysed the author’s concept through the key-word representative which objectifies it. In the story the key-word representative is the lexical unit LONELINESS. Then we analyse the synonymous extension of the key-word and the contexts in which the concept under analysis is being nominated. Dictionaries and thesaurus of the American variant of the English language record the following synonyms of the word *loneliness*: solitariness, forlornness, desolation, aloneness, lonesomeness, isolation, singleness, solitude. Thus having defined the nucleus of the nominative field of the concept LONELINESS in the language, we made an attempt to elicit the nucleus of the nominative field of the concept in the author’s text (“A Clean, Well-Lighted Place” by E. Hemingway).

It should be noted that in this research we do not deal with the national linguistic and cultural conceptual sphere, but the author’s individual concept LONELINESS. Linguistic personality of the writer transforms the national concept and imparts the unique distinctive features to a new author’s concept of the artistic work.

Having defined the nucleus of the nominative field of the concept LONELINESS in the language, we made an attempt to elicit the nucleus of the nominative field of the concept in the author’s text (“A Clean, Well-Lighted Place” by E. Hemingway). However, this revealed the

absence of the direct reference to a substantive form and the key-word representative, as well as any of the synonyms in the text. Thus, we can assume that the nominative field of the concept LONELINESS does not represent an explicit nucleus.

Our analysis continues with determination of the periphery of the nominative field of the concept. There are no direct nominations of the concept in the text, but we elicit a cognate word for the lexical unit “loneliness” – which is “lonely”. In this case the lexical unit «lonely» functions as substitution of the key-word representative. Afterwards on the basis of 18 dictionaries there were fixed 43 synonyms and 76 words with the close meanings to the mentioned lexical unit.

None of these lexical units was found in the story by E. Hemingway. This fact proves that the method of objectification of the concept LONELINESS in the story analyzed differs from methods of objectification of the same concept national consciousness.

Association dictionaries provide with the following associates of the lexeme LONELINESS (represented by 96 reactions on the word-stimulus LONELINESS): ALONE 10, SOLITUDE 8, SAD 7, OLD 4, RUNNER 4, FEAR 3, AFRAID 2, EMPTY 2, ISOLATED 2, LIFE 2, MISERY 2, QUIET 2, SELF 2, TIRED 2, UNHAPPY 2, VOID 2, AGE 1, ANXIETY 1, BAD 1, BED-SITTER 1, BLANK 1, BOREDOM 1, CLOAK 1, DEATH 1, DESPERATE 1, DONE 1, FED UP 1, FLAT 1, FRIENDSHIP 1, GREY 1, HIGHLANDS 1, HOME 1, HORRID 1, HUNG 1, ISOLATION 1, LOST 1, MAN 1, MELANCHOLY 1, MISSING 1, OLD AGE 1, OLD PEOPLE 1, OLD WOMAN 1, OLD-AGE 1, ONE 1, PEOPLE 1, ROOM 1, SADNESS 1, SILENCE 1, STARK 1, STRIFE 1, TERROR 1, THINK 1, TIME 1, TONY 1, UNDERWATER 1, WOMAN 1.

We remark the wide range of associations, however only a few of them can be found in the

story (marked with bold type and underlined for convenience). These associations mostly include similar semantic components and can be combined and categorized upon the following cognitive features:

- 1) being alone, without company;
- 2) to be isolated (not) of one's own free will;
- 3) not to have or deprive of personal relations (friendship, family, sexual, etc.);
- 4) to have certain physical/psychological problems, without proper care;
- 5) to feel negative emotions, to be depressed;
- 6) being old (not to have sufficient life-time);
- 7) connected with the void in physical or psychological terms;
- 8) can be caused or accompanied by the silence or absence of sound;
- 9) can lead to physical exhaustion;
- 10) can be caused by the death of someone, can lead to the death of the subject in a state of loneliness;
- 11) in some cases can be defined with house, family hearth, or lack of these things.

Next step is to analyse which of these cognitive features are realized in the individual author's consciousness, with the help of which linguistic means and in what ratio. The most frequently realized features are (in brackets – examples of linguistic representation; figures – number of linguistic representations of this feature in the story): AGE/OLD vs YOUNG (“He must be eighty years old”, “An old man is a nasty thing”) 33, NOTHINGNESS (“Nada”, “nothing”) 30, ALCOHOL (“drunk”, “brandy”) 20, HOME (“I want to go home to bed”) 12, TIME PRESSURE (“He was only in a hurry”) 11. The least frequently realized features are EMPATHY (“Each night I am reluctant to close up because there may be someone who needs the

cafe”) 2, BEING ALONE WITH YOURSELF (“Turning off the electric light he continued the conversation with himself”) 2, RELIGION (“Why did they do it?” - «Fear for his soul”) 2, EMPTINESS (“Where the tables were all empty except where the old man sat”) 1.

In the final stage of the research we carried out cognitive analysis of the author’s individual concept LONELINESS in readers’ interpretation. Respondents’ interviews were examined for cognitive features in the same way as the story was.

We have interviewed 14 respondents, 8 of whom managed to undergo the procedure twice (all in all 22 interviews). There were 19 cognitive features elicited from E. Hemingway’s story. The data obtained from the respondents show that none of 22 interviews realizes the whole set of these cognitive features. Moreover, less than half of all the cognitive features incorporated by the author are realized in just 13 interviews (which is 60% of total). Repeated interviews also showed that the set of features may vary not only depending on individual characteristics of the respondents, but also on particular circumstances in which the reader’s interpretational processes take place. 8 respondents repeated the procedure of reading and commenting on the extract in a short period of time. The result of analysis of these interviews indicates that in 100 % of cases the hierarchy and number of cognitive features realized in the interviews after the second reading doesn’t match ones realized in the interviews after the first reading. Nevertheless, it seems possible to identify which features appear to be most frequently realized in the majority of interviews. The cognitive feature “negative emotions” is most frequently realized in 17 out of 22 interviews, the cognitive feature “age” – in 16 out of 22, the feature “empathy” – in 11 out of 22. Special attention should be paid to the fact that being

essentially distinct in the interviews of most of the respondents these features have undergone fairly extensive modifications (in comparison to those which have been elicited in the structure of individual author’s concept). The cognitive feature “age” hasn’t been modified considerably: both in respondents’ interviews and in the story itself it is similarly actualized as the idea of generation gap. Contrariwise the features “negative emotions” and “empathy” are significantly extended in the interviews of the respondents mainly through descriptions of their own emotions and feelings about the story and main characters. As a rule the extension is received with the help of verbs and predicative of feeling (feel like, feel bad, feel despairing, feel sorry, be worried, sympathize with etc.)

The results obtained confirm the statement that cognitive interaction of conceptual networks of the author and the reader is achieved through some “links” – moduses of perception. Modus of perception is understood as a currently experienced emotion which functions as an attractor for the conceptual network which is being constructed. Modus is directly dependent on the objective reality and therefore is invariably modified in accordance with relevant factors of the situation of speech.

Conclusions

In the process of text creation the author definitely embeds a certain set of senses, concepts and their features in a text but still he uses both typed knowledge schemas, cognitive models conventional in this linguistic community and his personal experience and individual conceptual system. However, the reader guided by his own individual characteristics uncovers only some of those senses and concepts. Getting in the process of perception of the text the reader “submerges” into the artistic space and exists in it organizing the existence in different ways than the author.

From the results of the experiment it can also be concluded that a literary concept undergoes cognitive transformations not only from a reader to a reader, but also from the first reading to the second reading and so on. The combination of cognitive features is not stable and doesn't usually have a distinct nucleus and periphery, and the

features tend to change their structure and arrangements with every incessant change of environmental and situational factors. Therewith conceptualization unfolds on the basis of moduses of perception – dynamic connections, emotions experienced here and now which profile this or that cognitive feature from the structure of the concept.

References

Dijk Van, T.V., Kintsch, W. (1983). *Strategies of Discourse Comprehension*. New York, Academic Press, 387 p.

Zalevskaia, A.A. (2005). *Psikholingvisticheskie issledovaniia. Slovo. Tekst: Izbrannye trudy [Psycholinguistic Studies. Word. Text: Selectas]*. Moscow, Gnozis, 543 p.

Kolmogorova, A.V. (2006). Iazykovoe znachenie kak struktura znaniia i opyta [Linguistic Meaning as a Structure of Knowledge and Experience], *In Studia Linguistica Cognitiva*, 1, 240-256.

Kononova, I.V. (2015). Transformation of Cultural Concepts Within the Conceptual Sphere of a Literary Text (on the Material of the Short Story by R. Bradbury “the Smiling People”), *In Journal of Siberian Federal University. Humanities & Social Sciences*, 12, 2868-2874.

Kravchenko, A.V. (2013). Kontsept, kontsepta, kontseptu: modnyi diskurs na nezadannuiu temu [Concept, of Concept, to Concept: Modern Discourse on a Non-given Topic], *In Zapiski z romano-germanskoi filologii [Notes on Romano-Germanic philology]*. Odessa I.I. Mechnikov National University, 115-124.

Likhachov, D.S. (1997). Kontseptosfera russkogo iazyka [Conceptosphere of the Russian Language], *In Russkaia slovestnost': ot teorii slovestnosti k structure teksta: antologiiia [Russian Language Arts: from Theory to Text Structure: Anthology]*. The Peoples' Friendship Institute of Russia, 280-287.

Magirovskaia, O.V. (2008). Osobennosti kontseptualizatsii i kategorizatsii mira v ramkakh kognitivnoi deiatel'nosti nabludatel'ia [Peculiarities of Conceptualization and Categorization of the World within the Frame of Cognitive Activity of an Observer], *In Vestnik Cheliabinskogo gosudarstvennogo universiteta. Serii: Filologiya. Iskuststvovedenie [Bulletin of Cheliabinsk State University. Philology section. Art history section]*, 21 (122), 105-114.

Prikhod'ko, A.N. (2013). *Kontsepty i kontseptosistemy [Concepts and Conceptosystems]*. Dnepropetrovsk, Belaia E.A., 307 p.

Collins, Allan, M., Loftus, Elizabeth, F. (1975). A Spreading-Activation Theory of Semantic Processing, *In Psychological Review*, 82, 6, 407-428, available at: https://webfiles.uci.edu/eloftus/CollinsLoftus_PsychReview_75.pdf?uniq=20ou4w

**Концептуальная сеть
как динамический когнитивный
конструкт взаимодействия автора
и читателя**

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Статья написана в рамках когнитивной парадигмы. В фокусе исследования находятся процессы создания и восприятия текста, а также когнитивные операции, которые осуществляются читателем в процессе интерпретации текста. Исследование опирается на положения теории биологической природы языка, что позволяет применить новый подход к определению понятий «концепт» и «концептуальная сеть». Данный подход дает возможность проанализировать, каким образом трансформируется индивидуальный авторский концепт в процессе интерпретации текста читателем. Приводятся и выносятся на обсуждение выводы о том, что концептуализация осуществляется на базе динамических связей – модусов восприятия.

Ключевые слова: восприятие и интерпретация текста, концепт, концептуальная сеть, модус восприятия.

Научная специальность: 10.00.00 – филологические науки.
