Ecological theory of concepts as cognitive models of objective reality

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Abstract. The relevance of this study is due to the fact that the categories "concept" and "concept" require additional theoretical understanding due to a wide range of terminological interpretations – from stratificationally independent functional essence to synonymization identification). We consider the well-known postulate about the integral, systemic interaction of units of language and culture and their correlation to be the most justified. At the same time, the purpose of this article is to define the external world through the use of language, its functions and motivation for action. Researchers are interested in questions related to the actual functioning of cultural models, why they appear optimal in thought processes and help to present cognitive tasks as a "means of navigation". For the concept of this study, one of the obligatory features of a linguocultural concept is its verbalization and a set of integral and differential features in its composition. The authors came to the conclusion that the linguistic and cultural specificity of cognition is revealed in the necessary way and in the most optimal way only through linguistic analysis, and cultural knowledge is an essential set of propositions. Keywords: concept, linguoculturology, ecological theory, term, meaning.

1 Introduction

The linguistic productivity of culture is placed in the "gap" between the already ready and the still nascent result. This "gap" is associated with the traditional division of language into a logical-grammatical set of normative characteristics (everything that can be called rules or a code of language) and live-sounding speech, with its rhythms, energies, intonations, with its specific appeal to another. Although even with such a straightforward and trivial separation, problems associated with the intuitively obvious unity of a really functioning language are immediately revealed.

Research in the field of the paradigm of cultural models allowed us to come to the conclusion that the linguistic and cultural specificity of cognition is revealed in the necessary way and in the most optimal way only through linguistic analysis, and cultural knowledge is an essential set of propositions. In the aspect of this analysis, the concept is considered as conceptual abstractions formed between stimuli received by the senses and behavioral reactions. These abstractions, in turn, become the basis for processing information [1-3]. N. Quinn adds that the cultural model ("folk model", "thinking system")

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is a system of interrelated ideas about the domain, a concept that is common to all representatives of this linguistic and cultural community [4-12].

By the beginning of the 80s of the last century, models in terms of the above understanding were formulated in connection with the connectivist theory of mental processes. At the same time, the concept was analyzed – without any reference to language – as a construct of a network of associations formed as a result of the repeated experience of an individual. The method of studying concepts did not include linguistic analysis, it assumed a discursive analysis of how people talk about a particular domain.

The emphasis on cognitive schemas and the consideration of culture as a process of generating meaning, which does not always have a linguistic nature, has allowed research in this area to find points of contact with the sphere of linguocognitive study of metaphor. In this regard, metaphor begins to be interpreted as a means of comprehending one experience in terms of another experience, discovering the connectivity between unrelated events, a means of providing conceptual schemes through which people understand the objective world.

The above-mentioned perspective of studying cultural models also fits in with anthropological research, in which it is postulated that culture cannot be equated with what appears explicitly stable in language. The research emphasis in this case is not on universals, but on the process of signification of certain cultural models for certain forms of thinking.

In all linguistic research carried out in this way (for which the issue of interaction between culture and language is relevant), it is indicated that representatives of the linguistic and cultural community have a common cognitive paradigm in which culture manifests as a set of complex, from a rational point of view, mental phenomena. These mental phenomena take the form of hierarchical rules for constructing propositions, many of which are taken for granted and are relatively inaccessible to introspection ("constitutive rules"), others are more pronounced and normative ("regulatory rules").

Some anthropologists and cultural psychologists raise serious doubts about the internality of thought and the fact that knowledge can be represented by a certain set of propositions or concepts [4]. In this case, knowledge is not considered as a product of individual consciousness. Being involved in action, in everyday practices, cognition is "distributed", but not "divided" among the consciousnesses, activities and culturally organized a priori attitudes of representatives of the linguistic and cultural community.

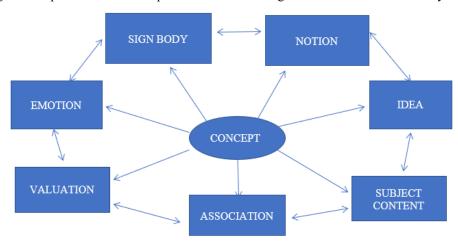


Fig. 1. cognition is "distributed", but not "divided" among the consciousnesses, activities and culturally organized a priori attitudes of representatives of the linguistic and cultural community.

The intensification of scientific research in the field of cognitive linguistics, linguoculturology contributes to the continuous process of clarifying, detailing the linguistic specifics of the concept, which naturally leads to the emergence of new interpretations of this term. Despite all the efforts of linguists to streamline and systematize the theoretical base associated with the concept, many questions remain open and debatable, such as, for example, the question of the structure of the concept, the features of its verbalization, the typology of concepts, the relationship of notion and concept, meaning and concept, etc.

The direction of studying a fragment of the linguistic picture of the world chosen in this study dictates the need for a detailed consideration of the relations and correlations of the concept and the notion in order to identify their integral and differential characteristics. Both theoretical constructs appear as complex, multidimensional cognitive models of objective reality, complex in nature, which predetermines their certain terminological "vagueness", "uncertainty", "approximation". In the course of their functioning, these terms have undergone significant analytical changes. Note that the clarification of the meaning of these terms and the essence of these phenomena has not lost its relevance. To date, the process of comprehending the content of these terms has not reached the final stage, which is undoubtedly facilitated by the complex nature of their complex structure, in which abstract and concrete, ideal and material components are distinguishable, etc. Objectively and subjectively, these terms are difficult to define unambiguously.

The ambiguity of the interpretation of these terms is due to many circumstances, among which, first of all, we should mention the interdisciplinary, integrative nature of the studied formations. Indeed, both the notion and the concept are actively used in the whole complex of humanities and social sciences. In addition, the existing terminological "discrepancy" is explained by the diversity of the studied phenomena (for example, as philosophical phenomena and as linguistic phenomena), the presence of numerous approaches to their understanding.

Currently, most linguists agree that the notion and the concept by their nature are phenomena of the same order, of the same level, "comparable, but not equivalent" [1], which means that they are not interchangeable. Therefore, it is necessary to establish the common thing that unites these phenomena, and, accordingly, the differences on the basis of which scientists differentiate and differentiate the studied cognitive models. There are different points of view on this issue in linguistics. Let us consider only some of them, the most characteristic and typical for the general understanding of these phenomena.

It is well known that until a certain time these terms were perceived as equivalents, were interchangeable, which, in our opinion, is quite understandable and natural at a certain stage of their functioning, because the borrowed term concept was originally translated as "notion". In everyday scientific communication, the term "concept" was very often used as a synonym for the term "notion". However, the full-fledged entry of the "foreign" term concept into the linguistic environment contributed to a certain discrepancy both in the understanding and in the use of the studied constructs.

The attempt of some researchers to position these terms as terms belonging to different sciences and serving only them, in our opinion, does not reflect the real situation of their functioning: "the notion and the concept are terms of different sciences; the second is used mainly in logic and philosophy, whereas the first, concept, is a term in one branch of logic – in mathematical logic, and recently it has also become entrenched in the science of culture, in cultural studies" [13]. It is difficult, perhaps, to find other terms that could compete with the terms "notion", "concept" in terms of the frequency of their use in the scientific environment. Indeed, the term "notion" is widely used in the field of humanities and natural science research, in particular, it is an important component of the

terminological system of logic, philosophy, psychology. In the sphere of traditional logic, the notion is understood as a thought that fixes "the signs of objects and phenomena displayed in it, which make it possible to distinguish these objects and phenomena from those adjacent to them" [5]. The formation of the notion, from the standpoint of logic, is due to the processes of generalization, specification and abstraction. The notion captures the features that reflect the properties of the studied phenomena and the relationship between them. It is in the paradigm of traditional logic that specific features are distinguished, which serve to distinguish individual or several items as elements of a class, and common features belonging to all elements of educated classes. Thus, with the help of the notion, genus-species relations are established when classifying the phenomena of reality, which are explicated in the language as hyper-hyponymic. It is the notions that make it possible not only to characterize fragments of reality in a variety of ways in abstraction from change and development, but also the dynamics of reality and knowledge about it. The verbalized form of notions as their obligatory feature allows us to project this term into the sphere of language. Since in each notion the content and volume are distinguishable, which makes it possible to represent any notion as a set of features of objects / elements reflected in it and as a set (class) of objects / elements, each of which has features related to the content. This perspective of understanding the notion has created certain grounds for revising some of the postulates of traditional logic and gradually moving to the position of the logic of utterance as a modern scientific paradigm.

So, in the above definitions, the linguistic form of notions and the obligatoriness of integral and differential features in the composition of the concept are significant for this study. In addition, the logical organization of relations between the features presented in the structure of the concept allows us to talk about the projection of these correlations on the linguistic phenomena of antonymy, synonymy, polysemy, which is a relevant feature of the notion as a linguocultural phenomenon. The representation of the object of research dictates the use of the term concept, taking into account its correlation with the linguistic and cultural concept, which is determined by the chosen angle of studying a particular fragment of the linguistic picture of the world.

The concept and the notion have the same origin, but a different sphere of manifestation [2]. The notion refers to the categorical composition of consciousness in the totality of crystallized linguistic forms of thought. The notion always claims to be exhaustive in the definition and description of the subject, it does not tolerate ambiguity. The notion is closely related to rational-logical representations, which are projected onto the logical-grammatical aspects of the language.

The difference between the concept and the notion is related to the "conditions of existence in the language" of these terms. The concept is immersed in the element of sounding speech, through which all the richness of both the logical and emotional state of a person is manifested. The concept is inseparable from the appellative-expressive function of human consciousness, while the concept tends to the explicative function [14].

The concept can never get rid of the individual expressiveness of the object of its expression, the objectified fixity of the notion is alien to it, collecting in its synthetic unity the integrity of the conceptually reproducible thing. The concept grasps, but does not fix it, because it is aimed at understanding, establishing associative connections, and not at cognition. The transformation of the notion is possible only through the concept assembled together in the subject as a native speaker of language and meaning, and the crystallization of the concept into a notion completes the objectifying transition to a state of stability of semantic expression. It is through this mechanism that the formation of a linguistic and cultural notion takes place, including. In this sense, conceptuality arises as the ultimate utterance of the subject under consideration, it is theoretical in the modern sense of the word, representing a way of structural manifestation of the subject and, thereby, assuming

the possibility of predicting its further "behavior". Conceptuality in this aspect has the character of fundamental incompleteness as a sayability [6].

The fundamental distinction between the concept and the notion is connected with the fundamental process of signification and operational use of ready-made sign meanings [7]. It is characteristic of the concept to attach meaning (to signify), connecting the denoted and the denoting. This can be argued because, as already mentioned, the concept is directly related to sense generation and sense detection. The notion, on the contrary, operates with meaning as with a sign with a stable content. Therefore, we can say that the concept has the intention of stability, and the notion has the status of stability.

The similarity of the notion and the concept is found in the initial rootedness of both in the sphere of thought as stability and structuring of being in contrast to the indefinite-fluid blurriness, which was called matter by the first philosophers. The concept and the notion are formative principles that, if we use a visual metaphor, give "visibility" to the subject under study and discussed, and if we use an auditory metaphor, then, respectively, articulation, and in this sense, the audibility of an object or thing [9]. In other words, both the concept and the notion are a condition for the subject's dialogue with the surrounding reality.

The semantic tension in the concept is presented at the moment of its implementation, that is, it is actually manifested, in contrast to the notion in which the meaning is in a collapsed, potential state [10]. The concept is held as a temporal structure of meaning in all the richness of its characteristics. The notion is close to the descriptive procedure of describing a thing, and the concept is close to the formal–substantive procedure of definition, therefore, the concept will always be in a state of intellectual movement, because it is in search of logically consistent possible worlds. Every formal grammatically consistent statement has the right to exist, but its correlation with reality, the existential moment of such a statement is no longer a conceptual, but a conceptual form of the existence of meaning.

The concept is more complex than the notion; it has a multi-layered structure, fundamentally differs from the latter in its status: concepts are "the main cell of culture in the mental world of man" [13].

Yu.S. Stepanov distinguishes in the concept:

- "literal meaning" or "inner form";
- "passive", "historical" layer;
- the newest, up-to-date and active layer of the concept;
- a multi-layered structure, genetically determined by its origin from some hypothetically reconstructed prototype a concept as a historically formed stratification of meanings, as an evolutionary-semiotic series;
 - meta-position "hovering" over words and things;
- the boundary of his knowledge is "from above" the sphere of abstract definitions, "from below" the sphere of individual experience, but in the end "we can bring our description (concept) only to a certain line, beyond which lies a certain spiritual reality that is not described, but only experienced" [13].

Thus, the content of the concept is multidimensional and multifaceted, which is why it is so difficult to define; and the notion, on the contrary, is "open to definition" [1].

Despite the "simplicity" and conciseness of the above definitions, we note that the notion as a category of thinking and as a linguistic category is a rather complex multicomponent cognitive model of objective reality, since it meaningfully combines all the mental operations (units of thinking) associated with a particular language sign, and the entire volume of lexical meaning with additional components (synthesis of denotation and connotation). At the same time, the notion as a universal category has an amazing terminological "load", including the frequency and regularity of the reproduction of this

term in the discourse of different directions, which in turn creates the impression of its "vagueness".

Consequently, the main parameters by which the differentiation of the studied cognitive models of objective reality occurs are, in our opinion, in the generalizing dominant characteristics:

- the notion is a "product of scientific description", and the concept is "... sensually perceived and experienced cognition (knowledge) of a dynamic nature existing in the human mind" [15].
- "Concepts are not only thought, they are experienced" [13], in contrast to the notion, which "is not experienced, it is the thought of objects and phenomena, reflecting their common and essential features" [1].
- "Notions are what people agree on people construct them in order to "have a common language" when discussing problems; concepts exist by themselves, people reconstruct them... Sometimes the referents of the terms concept and notion coincide" [11].

Summing up the most constructive ideas of domestic and foreign linguists, current modern views on the term "concept", we believe that we can generalize the following: a concept is a cognitive model designed to connect culture, consciousness and language, since it belongs to consciousness, is determined by culture and is objectified in language; a concept as a mental unit necessarily contains a value component, value components. The concept contains a notion, and, accordingly, the concept is richer in content than the notion. "The notion is only one of the modes of the concept (its side, hypostasis, aspect) [1], which does not at all indicate the "poverty" of the notion content. And at the same time, we support the position of V.A. Maslova on the correlation of the phenomena studied: "there is no impassable boundary between concepts and notions: under certain conditions, notions can turn into concepts" [8].

In our opinion, the notion parameterized from linguoculturological positions differs from the concept by the complete absence of subjectivity manifested in its functioning, but at the same time by the presence of connotative meanings assigned to the linguistic representations of this notion, which are formed under the influence of both extralinguistic (for example, the sociohistorical context of the use of the lexeme, the appearance of borrowings determined by intercultural and interethnic interaction), as well as linguistic factors themselves (for example, the functional and stylistic affiliation of a certain nomination). In addition, the linguocultural notion is characterized by explication in its lexico-semantic space of relations of polysemy, antonymy, synonymy, which in general can be characterized from the standpoint of logic, whereas the concept in its structure is associative.

References

- N.F. Alefirenko, Linguoculturology: value-semantic space of language (Flint: Nauka, Moscow, 2012)
- 2. N.N. Boldyrev, *Concept and linguistic meaning. Lexical and grammatical concepts* (TSU named after G.R. Derzhavin, Tambov, 2001)
- 3. R.W. Casson, Language, Culture and Cognition (Macmillan, NY., 1983)
- 4. N.I. Gribanov, *Philosophical foundations of science and the phenomenon of presupposed knowledge: Abstract. dis. Doctor of Philosophical Sciences* (Samara, 1996)
- 5. D.P. Gorsky, *A concise dictionary of Logic* (Enlightenment, Moscow, 1991)
- 6. V.V. Kolesov, Vestnic of St. Petersburg State University **2.3(16)**, 30-40 (1992)

- 7. E.V. Lukashevich, *Cognitive semantics: evolutionary-prognostic aspect* (Alt. un-ty, Moscow; Barnaul, 2002)
- 8. V.A. Maslova, *Linguoculturology: textbook: for university students* (Academia, Moscow, 2004)
- 9. I.S. Merzlyakova, Linguocultural concepts and their role in the formation of national character (based on the materials of France): Abstract. dis. Candidate of Philological Sciences (Ulan-Ude, 2010)
- 10. Z.D. Popova, Cognitive linguistics (Moscow, ACT: Vostok-Sapad, 2007)
- 11. U.E. Prokhorov, *In search of a concept* (Flint: Science, Moscow, 2008)
- 12. N. Quinn, *Psychological Anthropology: State of the Art* (San Diego University, San Diego, 1997)
- 13. Yu.S. Stepanov, *Constants: Dictionary of Russian culture. Research experience* (Languages of Russian culture, Moscow, 1997)
- 14. S.G. Vorkachev, *Linguocultural concept: typology and areas of existence* (Volga, Volgograd, 2007)
- 15. A.A. Zalevskaya, *Methodological problems of cognitive linguistics* (Publishing House of Voronezh University, Voronezh, 2001)