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Живокина Майя Александровна
Доцент, кандидат филологических наук, ВУНЦ ВВС "Военно-воздушная академия им. проф. Н.Е. Жуковского и Ю.А. Гагарина" (г. Воронеж)
Проценко Екатерина Александровна
Кандидат филологических наук, доцент, Воронежский институт МВД России

КАТЕГОРИИ И ПРОТОТИПЫ: ОТ АНТИЧНОСТИ ДО СОВРЕМЕННОЙ ЛИНГВИСТИКИ

Аннотация

В данной статье рассматриваются два подхода к исследованию категорий: классический или логический, берущий свое начало еще в учениях Аристотеля и современный или когнитивный, утверждающий, что процесс категоризации сложнее и предусматривает апелляцию к таким понятиям, как нечеткая логика, понятия с нечеткими краями, прототип, фамильное сходство.

Ключевые слова: категории, прототипы, фамильное сходство, нечеткая логика.

Zhivokina Mayya Alexandrovna
Associate Professor, PhD in Philology, Military Education and Research Center "The Zhukovsky and Gagarin Air Force Academy" (Voronezh)
Protsenko Ekaterine Alexandrovna
Associate Professor, PhD in Philology, Voronezh Institute of the Russian Minitry of the Interior

CATEGORIES AND PROTOTYPES: FROM CLASSICAL ANTIQUITY TO CONTEMPORARY LINGUISTICS

Abstract

The article considers two approaches to category studies: a classical or logical one pronciples of which were formulated by Aristotle, and a contemporary or cognitive one that deals with such concepts as fuzzy logic, fuzzy sets, prototype, family resemblance.

Keywords: category, prototype, family resemblance, fuzzy logic.

Categories, as a philosophical and linguistic notion, go back to ancient times. Aristotle was first who studied a number of concepts using

the semantic terms of the language. These general notions were essence, quality, relation, place, time, state, quantity and a few others [1]. Each category, according to the Greek philosopher, is characterized by a set of necessary and essential attributes which makes all the members of the category equal. Thus, the boundaries of the categories are clearly cut, the membership is based on the criterion ‘true / false’, all members of the category are equal and all the objects belong only this or that category having this or that attribute [6, p. 22].

Without denying the importance of Aristotelian categories for cognition, modern science admits that ordinary consciousness of a person classifies parts of reality in a different way. Scientists paying a tribute to the classical approach with its proportions and precision claim that not all concepts have a finite set of attributes, there are ‘good’ and ‘bad’ examples of the category and cases where it is not clear whether the object belongs to the category or not [7, p. 79].

The world around us is more complex than it seemed to Aristotle: most birds fly but not all of them; dogs, horses, birds are animate but stones, liquids and plants are inanimate and yet sea stars and bacteria are somewhere in between [9, p. 338]. Moreover, conceptual and language categories might not coincide: watermelon is a berry but we consider it a fruit and tomato is a berry though it is a vegetable for an ordinary person.

In usual circumstances we do not have any difficulty identifying, classifying and giving names to an infinite number of animate and inanimate objects. However, it is not always true. Let’s consider, for example, knees, ankles and feet of human beings and branches and the trunk of a tree. “It may be fairly clear that one’s kneecap belongs to one’s knee and that the trunk of a tree includes the section which grows out of the ground. Yet at which point does one’s knee end and where does one’s thigh start? Where does a trunk turn into a treetop and where does a branch turn into a twig? Similar problems arise with landscape names and words denoting weather phenomena” [8, p. 1].

Here we come across ‘the boundary’ notion. Cars, tables, books have clear-cut boundaries. Boundaries of such concepts as a knee, trunk, valley, mist are fuzzy. This fuzziness has been the subject of studies of many philosophers and linguists whose interests lay in the sphere of the relations between word meanings and extra-linguistic reality. It lead to the formation of the theory of fuzzy sets that was developed by a famous logician and mathematician L. Zadeh. In the attempt to analyze systems that cannot be analyzed with the help of Aristotelian criteria, he demonstrated that human mind and the processes of cognition cannot be exact and clear.

The contradictions between the classical approach to categorization and the real process of cognition were reflected in L. Wittgenstein’s “Philosophical studies” in the 1950s. Proving that it is impossible to define a word in every detail, he introduced the term ‘fuzzy concept’. His example of this concept that became classical was the word ‘game’. Because you use this word to describe a wide variety of leisure activities (Olympic games, games with a ball, chess, card games etc.), the scientist came to the conclusion that it is hardly possible to give a definition to this word. “What is common to them all? – Don’t say: ‘There must be something common, or they would not be called games’ – but look and see whether there is anything common to all. – Foe if you look at them you will not see something that is common to all, but similarities, relationships, and a whole series of them at that” [cit. 8, p. 25]. Such concepts, according to the philosopher, are grouped together by a network of overlapping similarities – family resemblances. This principle helps include new games that resemble the usual ones like relatives of a family take after each other in terms of appearance, traits of character, habbits, manners etc.

L. Wittgenstein and later the psychologists S. B. Mervis and E. Rosch showed that the principle of family resemblance is an alternative

to the classical approach. It can explain why attributes contribute to the internal category structure without being shared by all category members, without being necessary and essential according to the Aristotelian model. An ostrich is an ostrich not only because it has feathers and it lays eggs. It also has a long neck like a flamingo and decorative feathers like a peacock. We should consider any sensible attribute suggested for a candidate in order to find a place for it in the category.

W. Labov studied categorization of crockery: cups, mugs, bowls, vases. The results of his experiments showed that in everyday situations we do not draw a sharp line between category 'X' and 'not X' and in ambiguous cases we us the names of the neighbouring categories [4].

It was also proved by other experiments. B. Berlin and P. Key demonstrated that despite the universal principles of color terms categorization, the reference boundaries of any color term is fuzzy [5]. So the term 'focus' meaning the best and most typical colors was introduced.

In order to study cognitive categories, we should look into the dictionary definitions. We can find the name of the category there (bird).

It also gives us the attributes that characterize birds: feathers, two legs, two wings, a beak and laying eggs. So there are attributes that group a robin, a parrot and an ostrich together and also differentiate them from each other. All these attributes lead to a detailed description of the internal category structure.

However, dictionary definitions are for practical use, not for systematic linguistic and cognitive analyses. Lexicographers can omit attributes that go without saying, it is important to grasp the general meaning. The question is: are the attributes necessary and essential. As we already mentioned in the beginning, the answer was put forward by Aristotle. So, a bird can be only a creature that has two legs, two wings, a beak, feathers and lays eggs. And if some creature has these attributes, it can be classified as a bird.

Speaking about cognitive categories with 'good' and 'bad' representatives and fuzzy boundaries, there can be a difficulty describing them. That is why it is important to turn to the prototypical approach formulated by E. Rosch.

It was proved that category members take a prototype as the best example with most obvious characteristics of the category. E. Rosch together with other psychologists put forward the idea that each category has got an internal structure with the center and periphery. Some category members become more salient than others in the human mind due to onthological reasons. Yet, this structure is not rigid. Both objective and subjective knowledge about the world is taken into account and the internal structure of the cognitive category consists of family resemblances mentioned by L. Wittgenstein,

Alternatively, A. Wierzbicka would not rely on the prototype in every case. She thinks we can give an exhaustive definition to the 'cup' and the 'game' in everyday situations. It is important to find a compromise between a classical and prototypical approaches and speak about the synthesis of two traditions [2, p. 226].

In conclusion we should say that categorization plays an important role in the processes of cognition and thinking. According to W. Labov, research in linguistics is about research in language categories. Most attempts are aimed at finding these categories, defining them and working out rules that help language elements find their place in this or that category [4, p. 133].

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Ванина Татьяна Олеговна

Кандидат педагогических наук, доцент кафедры, Уральский филиал ФГБОУВО "Российский государственный университет

правосудия"

Голощапова Татьяна Геннальевна

Кандидат филологических наук, доцент кафедры , Уральский филиал ФГБОУВО "Российский государственный университет

правосудия", Южно-Уральский государственный университет

СТРУКТУРНАЯ МОДЕЛИРУЕМОСТЬ ЕДИНИЦ С ФРАЗООБРАЗУЮЩИМ ТВОРИТЕЛЬНЫМ ПАДЕЖОМ ИМЕНИ

Аннотация

В статье рассматриваются продуктивные модели морфологически неизменяемых фразеологизмов современного русского языка, фразообразующим компонентом которых является форма творительного падежа имени существительного в ракурсе их структуры и семантики. Для анализа взяты 877 фразеологических единиц в более чем 11000 употреблений.

Ключевые слова: фразеологизм, фразеологическое значение, фразообразующий компонент, синтаксическая модель, словосочетание, слово-форма, сочетание слов, семантика.