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## LANGUAGE OF SCIENTIFIC COMMUNICATION (Problems in Semantic Variation in Terminology)

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The problem of scientific communication is the subject of study. The language of science can be varied. The study offers a definition of the term “Variation”. Variation is separated from other semantic phenomena. A peculiarity of scientific speech lies in the fact that the meaning of the term highly depends on the language context, possibility of its change, personalizing of the speech, usage of different methods of lexical diversity. The object of study are Russian scientists’ lectures published in the book “Modern Russian Oral Scientific Speech”.

**Key words:** term, terminology, variability of the term, the language of science, semantics

Gvishiani N.B. states that metalinguistics is a system which is not closed, but it consists of a variety of dialects, as there are different approaches, and methodology conceptually opposed opinions (on the basis of oppositions by method of componential analysis) [1. P. 7]. Numerous cases of semantic variation within terms definitions exaggerate the problem in the frame of cross cultural scientific communication.

Ideas of component analysis of a word meaning of its hierarchy organization, of its central and peripheral semes are based upon a hypothesis of semantic transformation in science language. We tend to understand under semantic variation of a term a change of semes; presence or lack of meaning components within the term sense; explicit or implicit formulation of some semes; variations in semes’ structure (if it’s in speech or in a dictionary). In this article we examine different semantic modifications of term senses. The modifications are neither to go beyond definite scientific approach not to be connected with polysemy. The language investigation is based on materials of different lectures and public reports of well-known Russian scientists. The texts were not changed, they are published in a multi-authored monograph under the editorship of O.A. Lapteva “The modern Russian scientific speech” Vol. IV. Texts” [3]. We refer to them in order to characterize terms-variants in vivid scientific speech.

A peculiarity of scientific speech lies in the fact that the meaning of the term highly depends on the language context, possibility of its change, personalizing of the speech, usage of different methods of lexical diversity.

The variation of oral scientific speech is determined by extra- and intratextual factors. The extralinguistic factors are considered to be some peculiarities of a conversation (shared knowledge, speech intentions, the aim of their communication, social and personal relationships, communication role, location of the communicative act, its duration, Formal / Informal style of Communication, and others). Internal factors can depend both on the subject of scientific communication and speech organization. The choice of terms can be due to the genre, the type of speech (monologue or polylogue). These factors have a complex impact on the variation of the terms.

We deduce the so-called metaterms. These terms include a large variety of meanings, they generalize. They are used for defining denotative groups. They get the exact meaning only in context or by narrowing of meaning. For example in the lecture on botanic we have got: “Our work in medical plant production will depend on the *assortment* of plants, i.e. types of medical plants, more narrow — *production quantity of drug raw materials*, given by one or another type” [3. P. 95—96].

The metaterm *assortment* has got (represents) the particular meaning “a group of medical plant that vary in type”. The word of wider semantic “production” is used to denote narrower meaning.

Words in wide meaning play a role of hyperonyms. Hyperonym unite the variety of terms. The hyperonym’s meaning can vary, differentiate. Marked and unmarked elements of hyperonym groups can replace the notions. In professional sphere broad terms appear as semantic variants of a more narrow meaning. It is widely used in a scientific sphere. We can consider species and kinds as semantic variants. They belong to the same categorical concepts. Moreover the meaning of a kind includes an additional differential seme.

In some cases hyperonyms and hyponyms can be regarded as antonyms, as their meanings have got related semes. A hyponym obtains a specifier “For instance”: “Specialists and economists were engaged in the plant’s activity” [3. P. 214].

A specialist is someone who has a lot of experience, knowledge, or skills in a particular subject. Here the term specialist is opposed to the term economist. The specialist gets the meaning of someone specialized in technology (engineering). This way the opposition specialist-economist becomes equal to the opposition technician-economist. We examine here semantic variation when a hyperonym narrows its meaning to a hyponym.

The variation of definitions of a term can be varied depending on the speaker’s attitude towards it. For example colloquial speech (spoken language, formal speech) E.A. Zemskaya describes as unprepared speech of literary language. It can be found in a spontaneous conversation between people who have informal relationships. At the same time Sirotnina O.B. characterizes the same phenomenon as a variation of literary speech in informal situations. The both of the researches mark its informal character and regard it as a main point.

Semantic variation is more common for new spheres of science at the stage of their development and the evolution of their terminology. We may find in lectures on biology the following: What is a species? The greatest botanic of our days, the father of the term, Komarov described it “as a complex of generations having the same origins... Species is a specific step into evolution”. The lecturer meets some difficulties in defining the term “species” and he tries to give a definition in a pragmatic sense; “All is relative and coordinative. What is a species? Let us give it a working definition. Species is a sum of identical things. Semantic variability is reached by adding the seme “identity”. Then the lecture used the aphoristic version of Komarov’s definition. “Species is a morphological stability multiplied to the geographical constant” [3. P. 98—100]. This results in a variable role of definitions of the term “species”. Such terminological variability is connected with complexity of the problem and under discussion and multiplication of scientific explanation of this phenomenon.

Examples of semantic term variability allow following the evolution of a scientific thoughts, the stages of creation search. As the new knowledge appears the old term gets outdated and stops corresponding to modern understanding.

This conclusion of results may receive positive or negative evaluation, e.g. “Taxonomic linguistics” in Akhmanova’s opinion gets offensive sense, but indeed there is nothing abusive in this term as in the term classification or in the periodical system of Mendeleev. Simply the modern interest to text and discourse linguistics diminished the importance of taxonomic research. Thus, the neutral term obtains the negative characteristics. Such labels are quite subjective. And negative connotation in the semantic structure of the term “taxonomic” should be considered occasional.

A scientist has a right to characterize scientific discoveries with the use of ideological semes. For example, “*Conception (by Skinner) was a mechanistic conception... Skinner created a behavioristic psychological conception. He developed anti-utopia or Utopia... This a ideal fascist scheme.... It is a social fascism*” [3. P. 143]. In the lecture’s speech we may see such variants of Conception (by Skinner) as *mechanistic conception — behavioristic psychological conception — ideal fascist scheme — social fascism*. (About the role of cognitive linguistic and decoding emotions and intentions and speaker’s verbal behaviour) [4. P. 46].

Sometimes one of the term variants acts as a euphemism, uncertainty or indented concealing the proper meaning. As in case when doctors, due to medical ethics may not call a patient *stupid* they should say instead *partial silly* [3. P. 128]. The doctor used this diagnose in a formal speech with a layman, though he could express the same with the use of words such *a bit stupid, slightly stupid*. But even in informal situations within professional communication doctor may not do without special medical terms.

Peripheral semes sometimes come to the fore, take the centre stage. Therefore semantic peculiarities (details) are replacing (shifting). That way we may witness term rearranging. Compare: In the Russian Explanatory Dictionary the word *scholar* is defined as *Scholar* 1. Trained in smth. 2. An intelligent person with comprehensive knowledge. 3. Smth related to science. 4. Someone who work or is trained in science [2. P. 753].

In all the meanings the main seme is related with science and knowledge. However we meet occasional meaning “a big community of scholars, if do not explain the exact meaning, but just talk about scientist, like people with a degree or will obtain it” [3. P. 213]. In this context a characteristic of the central seme was completed by a formal peculiarity (a scientific degree). In The Russian Explanatory Dictionary it was not set.

Oral scientific speech combine both extra- and intratextual factors. Targeting (weather it is oriented to humanists or engineers), speech style, character of the target audience, time and place factors, individual peculiarities, methodological disposition, and other circumstances effect on the usage of term variants. The speaker knows a lot of methods to vary the meaning weather it is a regularly of occasional substitutions. The serve to achieve a good comprehension of a scientific text, quickly and firm, because such factors as time and the quality of receiving information are key.

## REFERENCES

- [1] Gvishiani N.B. *Jazyk nauchnogo obshhenija: voprosy metodologii* [Scientific language: methodological questions]. 3-e izd. M.: LKI, 2013. 280 s.
- [2] Lopatin V.V., Lopatina L.E. *Russkij tolkovyj slovar* [The Russian explanatory dictionary]. M.: Russkij jazyk, 1997. 832 s.
- [3] Skorikova T., Kraevskaja N. *Sovremennaja russkaja ustnaja nauchnaja rech* [Modern Russian scientific oral speech]. T. IV. *Teksty / Pod obshhej redakciej O.A. Laptevoj*. M.: URSS, 1999. 376 s.

- [4] Shaklein V.M., Muzychuk T.L. K voprosu opredelenija ponjatija neverbal'nogo diskursa [On the question of the definition of non-verbal discourse]. *Russkij jazyk za rubezhom*. 2009. № 2. S. 45—50.

## **ЯЗЫК НАУЧНОЙ КОММУНИКАЦИИ (проблема семантического варьирования термина)**

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Темой статьи являются проблемы устной научной коммуникации. Автор доказывает, что язык науки так же, как литературный язык, имеет возможности варьирования. В статье предлагается дефиниция термина «вариантность», описываются отличия вариантности от других семантических явлений, различные случаи вариантности устной научной речи. Устанавливается, что устная научная речь характеризуется высокой степенью зависимости значения термина от языкового контекста, возможностью его изменения, ситуативностью, индивидуализацией речи, использованием различных способов лексического разнообразия речи. Материалом для статьи послужили записи лекций российских ученых, расшифрованные и опубликованные в книге «*Современная русская устная научная речь*».

**Ключевые слова:** термин, терминология, вариантность термина, язык науки, семантика

### **ЛИТЕРАТУРА**

- [1] *Гвишиани Н.Б.* Язык научного общения: вопросы методологии. 3-е изд. М.: ЛКИ, 2013. 280 с.
- [2] *Лопатин В.В., Лопатина Л.Е.* Русский толковый словарь. М.: Русский язык, 1997. 832 с.
- [3] *Скорикова Т., Краевская Н.* Современная русская устная научная речь. Т. IV. Тексты / под общ. ред. О.А. Лаптевой. М.: УРСС, 1999. 376 с.
- [4] *Шаклеин В.М., Музычук Т.Л.* К вопросу определения понятия невербального дискурса // *Русский язык за рубежом*. 2009. № 2. С. 45—50.