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**TERM “HOMONYMY” AS A SEMANTIC CATEGORY**

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**Abstract**

The article attempts to go over the status of the term “homonymy” as a semantic category. The author reveals the specifics of the interaction of the form and meaning of a term as a special lexical unit, to focus on the semantic relationships of terms that have the same form and identify these relationships. This work examines such issues as – the nature of terminological homonymy, the problem of distinguishing between the term “homonymy” and polysemy and types of terminological homonymy. It shows that the terminological homonymy is determined by the linguo-semiotic features of the term, which inherently begins with the unambiguity, with the association of a certain lexical form to a specific special concept. Thus, homonymy in terminology is nothing more than the use of one form to denote different, but intersected concepts, while homonymy in a general literary language appears to be always different polysemantic structures that do not contain common semantic components. The problem of differentiating polysemy and homonymy is resolved both within the framework of the term theory – with the regular shifts in the meaning of terms as lexical units and lexicographic practice to describe polysemantic and homonymous terms in different types of dictionaries. The author identified three types of terminological homonymy – brunch, intersystem, and interscientific and three types of relations between homonymous terms - intersection, inclusion, and externality.

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## 1. Introduction

At first glance, we can hardly compare homonymy with such semantic categories as polysemy and synonymy. That *impossibility* is because the word does not have homonymy as the ability of one word form to hold overlapping concepts. Homonymous words are always two (or more than two) lexemes that do not have common semes. While a special word can be used in different special sublanguages and denote different special concepts with common semantic components, for example, such genetic and language terms as *code*, *dictionary*, *alphabet*, *semantics*, *transcription*, *reading* (borrowed from linguistics and semiotics), *polysemy*, *transcript*. Perhaps, only within the framework of the diachronic approach, the etymological analysis of homonymous words makes it possible to trace complex semantic overlapping in the process of their formation. Thus, we can approach the problem of terminological homonymy and track multilevel and multidimensional relationships between the lexical term form and the special concepts designated by it.

Traditionally, homonymy is defined as the coincidence of words in form. We emphasize that the generic concept *coincidence* in that definition is not a linguistic category. Over time, the phenomenon of homonymy takes its place in the lexical semantics and is defined through *semantic relation*: homonymy is “a semantic relation of internally unrelated (unmotivated) meanings expressed formally by similar signs (lexemes) and differing in the text due to different contextual environments”<sup>1</sup> (Novikov, 1982, p. 209). At the same time, as we can see in the above definition the emphasis is still to be on the identity of the form when the meaning is a secondary differential feature. This happens, perhaps, because the formal nature of lexical homonymy is only so and we have some reasons to put the question about the semantic dependence of this phenomenon.

It is worth emphasizing that homonymy itself in the general language has long remained a formal characteristic of literary words rarely considered as a system phenomenon. Such *rare* studies include the monograph by Golovnya (2007), who has investigated it in terms of the general systems theory, namely, as systemic categories: *isomorphism / polymorphism and symmetry / asymmetry*. Term theory, as far as we know, has never defined homonymy a semantic category. Thus, we propose to move from the formal category of homonymy in the general literary language to the semantic category of homonymy in terminology.

## 2. Problem Statement

To move from lexical to terminological homonymy, it is necessary to revise the status of homonymy, reveal the specifics of the relationship between the form and the meaning of the term as a special lexical unit, to focus on the semantics of the terms that have the same form, but interrelated concepts behind and identify these relations.

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<sup>1</sup> Hereinafter, all the quotations from Russian are translated by the author.

### 3. Research Questions

This paper addresses the following issues:

- The nature of terminological homonymy.
- The problem of differentiating the term “homonymy” and polysemy.
- The types of terminological homonymy.

### 4. Purpose of the Study

The purpose of this study is to show the multidimensional and multilevel nature of terminological homonymy as a semantic category.

### 5. Research Methods

#### 5.1. The Nature of Terminological Homonymy

With all the variety of existing definitions and interpretations of the term, its definition through the concept *linguistic sign* remains unchanged. In order to reveal the linguasemiotic nature of the term, let us briefly dwell on the semantic structure of a word-sign and a term-sign.

In formal logics, the sign structure appears to be a strict relationship between the form of a sign and its content. The formal structure of a sign (including a linguistic one) follows the principle of parallelism of content and form – each element of the sign corresponds to the strictly defined element of content, and the way of linking the elements of content exactly corresponds to the method of communication elements of the iconic form.

In linguistics, the formal structure of a sign applied to language units and thereby created models of linguistic signs of different completeness. Thus, the semiotic word structure usually begins with the dual structural model of the word proposed by Ferdinand de Saussure when the word is represented through the connection of a sound form – *denoting* and what it relates to – *denoted* (signifier – signified). Over the course of several decades, the dual model has expanded and become more complex. In the second half of the 20th century, the semiotic triangle became the classic model of the semantic structure of a word, which reflects the interaction of three elements: a sign, a concept, and a referent. In short form, the semantic structure of a linguistic sign is a description of the relationship of a sign to a concept and a referent. In a word, an external element – a sequence of sounds or graphic signs –

is connected in the system of language and in the minds of its speakers with two other elements.

On the one hand – with the object of reality, that is with a thing, phenomenon, process called *denotation, referent, extensional*; on the other hand – with the concept or representation of this subject, called (in different theories in different ways) *the signified, significant, concept, intentional* (Stepanov, 2002, p. 11).

Now let us try to adapt the semiotic structure of a word-sign to a term-sign. Following the dual structure of the word-sign, we will say that behind the lexical term form there is a special concept. If we make a three-element structure from a two-element structure and expand the name of each of the elements, then the semantic structure of a sign-term will look like a triangle, in which the term serves as a

sign, name, a substitute for a special concept, representing a piece of objective reality, a phenomenon, i.e. referent. We can also add a term definition to expand the concept. Finally, it seems possible to include the encyclopedic information into the linguo-semiotic model to encyclopedize the extension. In any case, the concept remains the main element of the semantic structure of a term, which completely covers its content plan, while for a word the concept is only the core of the lexical meaning.

In terminology, it has become currently accepted that terms are not different from words and phrases in expression plane. They differ in content plane. The lexical form of a term does not denote permanently expanding and changing semantic structure like that of a common word, but a special concept. Moreover, it is initially one concept proposed by experts for which a certain form is *selected*. A term is always the secondary nomination in relation to a word. Thus, the term *begins* with the unambiguity, with the association of a certain lexical form to a specific special concept. Consequently, homonymy in terminology is nothing more than the use of one lexical form to designate different, although overlapping in some way concepts. While homonymy in a general literary language are always different semantic and polysemantic structures that do not contain common intersecting features. Therefore, when we are dealing with a sign term and need to fix and identify the relations between one form and different concepts, it is much more accurate to call these relations *homonymy* rather than *polysemy*.

It is necessary to emphasize that the phenomenon of terminological homonymy reflects the integrating scientific knowledge process. So, the term *NBICS* – nano-, bio-, info-, cogno-, socio-humanitarian disciplines and technologies – starkly illustrates the integrative character of modern terminology (Kovalchuk et al., 2013). Then the change in the scientific paradigm – from fragmentation and narrow specialization to the integral scientific and natural holistic view of the world brings terminological homonymy as a discursive category to the fore. In this regard, the discourse analysis of terminology, the development of the discursive model of the term and the communicative terminological competence modeling are of particular relevance today (Alekseeva & Mishlanova, 2020a; Tabanakova, 2018; Walston, 2016;).

## **5.2. The Problem of Differentiating Homonymy and Polysemy**

In the 70s and 80s of the last century, lexicographers were specifically interested in the problem of distinguishing homonymy and polysemy, since any dictionary faced with the task of describing and semantizing polysemantic and homonymous words. Lexicographers, following Robins (1987), usually applied four criteria for distinguishing homonymy and polysemy: *formal grammatical differences, etymology, semantic definiteness (expressiveness), and combinability* (p. 8). In this regard one of the most significant works is the study by Kachurin (2014) “The problem of differentiating homonymy and polysemy in relation to the practice of compiling explanatory dictionaries”, which develops the idea of the gradual scale *polysemy – homonymy* exemplified by the series of meanings, the semantic changes within which are caused by extralinguistic context.

The lexicographic practice in description of terminological homonymy proximately solves that problem and offers special ways to semantize polysemantic and homonymous terms. Furthermore, the presentation of the terminological ambiguity and homonymy in special dictionaries of different types

demonstrates the relative character and the blurred line between these two categories. Therefore, encyclopedic and explanatory terminological dictionaries describe homonymous terms in different ways. For example, the term *diamond* in the specialized encyclopedic dictionaries is monosemantic in physics and chemistry:

#### DIAMOND

Natural or synthetic carbon crystal (Prokhorov, 1998, p. 18);

Modification of carbon, crystallizing in a face-centered cubic system (Knunyants, 1998, p. 26).

In the Physical Encyclopedic Dictionary, Prokhorov (1983) defines DIAMOND as a “natural and synthetic carbon crystal” with a detailed encyclopedic description of all its parameters and properties.

Here are the following three definitions that illustrate the variability of the term “polysemy” and homonymy presentation:

DIAMOND, the crystalline form of carbon (C), is the hardest substance found in nature (Scientific and Technical Encyclopedic Dictionary, n.d.).

DIAMOND – Mineral, crystal modification of pure carbon (C) (Great Soviet Encyclopedia, n.d.).

1. A transparent gemstone, a mineral that is a modification of pure carbon and surpasses all other minerals and precious stones in brilliance and hardness (cut into a specific shape is called a diamond). 2. A tool for cutting glass in the form of a sharp piece of this stone embedded in the handle (Russian Dictionary, 1999).

The problem of differentiating polysemy and homonymy appears to be set in almost all the studies of terminological homonymy using certain methods to analyze the term. Traditionally, that is the definitional component analysis (Borisova, 2000; Gorokhova, 2015). The definitional analysis often lines up with the contextual analysis as the most reliable criterion for distinguishing homonymous and polysemantic terms (Chernyshova, 2009; Grosheva, 2015; Shetle, 2009). The successful integration of lexicographic and discourse analysis takes place as well (Tabanakova & Trifonova, 2018). In addition to the structural methods, there are the exact, the statistical ones and corpus studies (Utt & Pado, 2011).

Please note that functional terminology studies for more than half a century have generated many antinomic interpretations of polysemy, synonymy, homonymy, and variability in terminology. These concepts became the subject for the detail discussion in the article by Shelov (2014) “On variability and synonymy in terminology”. The author takes the regular shifts in the meanings of terms being units of a common language as a principle to distinguish polysemy and homonymy. Therefore, according to Shelov (2014),

the term is polysemantic if the interrelationship of different meanings of the same term form is the fact of a common language. And if the interrelationship of different meanings of the term is unique, we have homonymous terms different in meaning, each of them requiring special fixation of all the meanings (in definition, interpretation, or description).

Thus, we are moving on to the semantic aspect of the phenomenon *term homonymy*, which is closely related to the semantic categories of the word, but itself, by analogy with the common language, acts rather as a formal criterion for differentiating the uniqueness and ambiguity of the term. *Formal* –

because it begins with the identity of the form. However, this identity is of a different nature – behind the form of homonymous terms, there can be special concepts overlapping in their meanings.

### 5.3. Types of Terminological Homonymy

We distinguish two levels of terminological homonymy. The first level implies one lexical form for a non-special and special concept because of metaphorical or metonymic transfer. It is the level of the semantic term derivation observed and actively studied this present time (Alekseeva & Mishlanova, 2020b; Fan, 2016). The second level is the relationship between special concepts attached to one form. At that level, different types of homonymy are distinguished. Let us dwell in more detail on the varieties of terminological homonymy.

For the first time the term “homonymy” becomes the subject of the linguistic research in the thesis of Borisova (2000) “Homonymy of Medical Science Terms” in 2000. Until that time, in the author's opinion, homonymy seemed to be a secondary, non-issue phenomenon. She subdivides homonymy into intratermsystem (between units of the same term system), intertermsystem (between units of different term systems), and intersystem (between units of the term system and the general literary system) homonymy (Borisova, 2000). Later on, these types of homonymy are visible in different termsystems, but their names may vary. Thus, in the article by Grosheva (2015) “Terminological homonymy in the language of medicine” those three types of homonymy are named as follows: 1) intersystem or macrosystem – homonymy – between units of terminological and general literary systems; 2) intertermsystem or interscientific – between units of different term systems; 3) intrasystem or intrascientific – between units of one terminology system (p. 981).

The overwhelming majority of researches is carried out on the terms of one area of knowledge – medicine (Borisova, 2000; Grosheva, 2015), banking (Shetle, 2009), railway transport (Chernyshova, 2009), pipeline transport (Gorokhova, 2015), oil refining (Tikhonova, 2008), tourism (Bodnar, 2014).

Voloshina (2016) carried out the first system study of interscientific homonymy in her Ph. D. thesis. The linguastatistical analysis allowed the author to trace the variants of the semantic relations of identical in form terms on physics, chemistry, and biology and thereby establish the types of homonymy. Therefore, the semantic analysis of the homonymous term definitions identified the common and differential meaning components. For example, the definitions of the chemical-biological term BIOSYNTHESIS contain three general common components and six differential components (the general common components are highlighted in bold in the examples below): “1) the synthesis of **substances** in **living organisms** under the action of **enzymes**; 2) the formation of organic **substances** from simpler compounds that occurs in **living organisms** under the action of biocatalysts – **enzymes**”. Then the complex analysis of all the pairs of physical-chemical and chemical-biological one-word homonymous terms resulted into three types of relations within a homonymous pair – **intersection, inclusion, and externality**.

A kind of response to that study was the work of Komarova (2017), who, to verify these unexpected data on the homonymy of terms, undertook a kind of “experiment”: relying on the new terminological dictionaries. The materials of these dictionaries convincingly proved, firstly, the presence of internal homonymy in many terminological systems and,

secondly, the dominance of overlapping homonyms, while included and absolute homonyms were few (pp. 48-49).

Finally, the vivid example of intersystem and interscientific homonymy represents the modern term *knowledge transfer*, being the title of the monographic study “Knowledge Transfer” (Alekseeva & Mishlanova, 2019). The monograph examines in detail the term *knowledge transfer* designating concepts that intersect in content and have definitions in information technologies, in cognitive science, in communication theory, in the system of higher education, philosophy, sociology, and in thought theory.

Summarizing all the varieties of terms, we can identify three types of terminological homonymy – branch, intersystem, and interscientific, as well as three types of relations between homonymous terms – intersection, inclusion, and externality.

## 6. Findings

1. The nature of terminological homonymy results from the linguasemiotic peculiarities of the term, which is initially monosemantic – the lexical form designates one special concept. Thus, homonymy in terminology is the use of one form to denote different, but intersected concepts.

2. The problem of differentiating the semantic categories of polysemy and homonymy is resolved both within the framework of the term theory and in the lexicographic practice, which has accumulated a rich store of means to describe polysemantic and homonymous terms in different dictionary types.

3. We have determined three types of terminological homonymy – branch, intersystem, and interscientific and three types of relations between homonymous terms – intersection, inclusion, and externality.

## 7. Conclusion

Thus, we have managed to trace a certain dynamics of the concept terminological homonymy from a formal category to the semantic one. In conclusion, we note that the system study of the term homonymy as a semantic category forms the basis to create a discursive model of the term, develop the mechanism for disambiguation in discourse analysis and solve the applied problems of terminology – terminological homonymy in different types of dictionaries; automatic recognition of homonymous terms in the text; disambiguation in language learning and translation.

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