

# Polysemantic Property of Pharmaceutical Terms in the Material Uzbek-English and Russian Text

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## **Abstract**

*The article has devoted the study of polysemantic properties of pharmaceutical terminology the stage of development of the terminological system, as well as from the standpoint of the cognitive approach to studying the metaphorization of the terminological system of pharmaceuticals. There were revealed the semantic polysemantic features of pharmaceutical terms, structural features of these terms are described (methods of formation, syntactic construction models).*

**Keywords:** *term, terminology, terminological system, polysemy, structural and semantic features, terminological combination storm, pharmacy, pharmaceutical, lexicography, linguistic, word, functional-semantic.*

## **1. Introduction**

One of the branches of phenomenon for terminology is polysemy. The spheres of scientific and technical knowledge put forward certain requirements for the terms that function within them. One of these requirements is the lack of ambiguity. As in the case of synonymy, in practice, this requirement is not always met in view of the fact that for this it is necessary to provide each specific concept with its own sound complex. As a consequence, in scientific and technical texts, one often has to deal with the presence of several meanings, both widely known and special terms.

In modern linguistics, a word is called polysemic if it has “several interconnected meanings that usually arise as a result of the development of the original meaning of this word”.

## **2. Theoretical Basis**

However, there are other points of view on the definition of this concept. One of the researchers dealing with the issue of polysemy is S.P. Afanasyeva. She points out that “the phenomenon of word ambiguity or polysemy occurs when the asymmetry of a linguistic sign takes place when a word denoting one object or one phenomenon begins to refer to many objects or phenomena”.

In the "Experience of the general theory of lexicography" L.V. Shcherba wrote that it is wrong to think that words have several meanings: this is essentially a formal and even typographical point of view there are as many words as a given phonetic word has meanings.

Polysemy in the works of foreign linguists, such as G. Paul, K. Erdman and P. Stern is considered as a kind of anomaly, a violation of laws that do not deserve theoretical consideration. At the same time, scientists proceed from the fact that the “normal” case is

the removal of the linguistic polysemy of a word by the context, and deviations from this norm are either too rare to deserve special consideration, or are explained by special, not general special reasons and therefore cannot be considered as a regularity. This approach is quite consistent with the idea of the "normality" of removing the polysemy of a word in speech, in particular, due to the sign character of the word.

S. D. Katsnelson, referring to G. Paul's argues that in speech, as a rule, the word actualizes only one of its meanings and, therefore, ceases to be polysemy.

There is still no single point of view on the phenomenon of polysemy. However, recently in the linguistic literature, there is a different understanding of speech polysemy, namely, polysemy is considered as a linguistic phenomenon that is part of the system of speech activity and thus is a "legitimate" linguistic object. As for the phenomenon of polysemy in terminology, it is viewed as highly undesirable, and this generates disagreement among various linguistic schools.

There are opposite points of view regarding the polysemy of the term in modern linguistics. Some scientists believe that in terminology such a phenomenon as polysemy is definitely ruled out, at the same time, other linguists, on the contrary, admit the presence of polysemy. Nevertheless, it has recently been recognized that polysemantic is inherent in terms of no less than general literary words.

S.P. Afanasyeva when analyzing the semantic structure of polysemantic nouns with the meaning of the process, on the basis of construction terminology, comes to the conclusion that "polysemy is a phenomenon characteristic of the terminology". However, the author points out the difference between scientific and technical terminology and literary language, which is manifested, first of all, at the level of the ratio of lexical and semantic meanings in the structure of the term.

I.V. Arnold believes that the ambiguity of terms is declared to be the main flaw in the terminology. However, polysemy does not interfere with understanding if different meanings of a word refer to different specialities and therefore cannot complicate understanding in the same context. Comprehension of the term can be complicated if the term is polysemy within any one branch of science.

However, there is also an opinion that polysemy is inevitable in any, even the most formalized language subsystems. From the point of view of R.A. Budagov, "the polysemy of the word exists and quite objectively, as a property of the lexical "matter," and also "such external phenomena as the polysemy of the word does not lend themselves to formalization".

Their interconnected and cumulative nature reveals more deeply the nature of terminological polysemy, the ways and mechanisms of expanding the semantic boundaries of terms.

The polysemicity of terms is supported by the operation of the linguistic resources` law of economy (signs and meanings) and several conditions:

- 1) The use of a term-word as a component of terminological combinations;
- 2) Idiomatic terminological combinations;
- 3) Elliptical transformation of terms-phrases into terms-words by transferring the whole to one of the components, which increases the semantic capacity of the latter;
- 4) The presence of synonyms corresponding to different meanings of the term (cf. the law of redundancy of language resources).

Thus, we can conclude that, despite the normative requirement for the unambiguity and out of context of terms, the phenomenon of polysemy is quite common in terminology and requires study and description.

### 3. Materials and methods

Polysemy is a fairly common phenomenon in various terminological systems, especially if these are higher-order terminological systems, that is, macroterminosystems. So, for example, the macro-thermal system of medicine includes cardiac, anatomical, histological, gynaecological, dermatological, physiotherapeutic, pharmaceutical and other micro-thermal systems. In addition, the medical terminology system includes terms from related sciences, for example, chemistry, psychology, physics, microbiology, radiology, biology, genetics, anthropology, cybernetics. Thus, for the medical terminology system, both intradisciplinary and external disciplinary types of polysemy are characteristic, that is, medical terms are linked by relations both within this terminology system and outside it.

In contrast to macrotherminosystems, in microtherminosystems, the connections between terms are not developed so deeply, therefore, situations, where the same sound complex has several meanings, are much less common.

During the study has shown that the phenomenon of polysemia is practically uncharacteristic in pharmaceutical terminology. There were studied more than 500 terminological units, only 22 have several meanings and can be called polysemous, for example:

**Adsorption** in pharmaceuticals is called "absorption (concentration) of gases or solutes on the surface of a solid or liquid", and in *virology* this term means "attachment of a bacteriophage to the surface of a bacterial cell, which occurs when they have specific receptors" or "the initial stage viral infection, which consists in the attachment of the virus to the cell surface".

**Accommodation** in pharmaceuticals means "the process of adaptation of an excitable tissue to the constantly growing strength of the stimulus, manifested by a gradual decrease in its excitability", and in *ophthalmology*, it is "the physiological process of changing the refractive power of the eye during the visual perception of objects at different distances from it".

**Antagonism** in pharmaceuticals is a phenomenon in which the effect of the combined action of substances is less than the effect of each of them acting separately, and in microbiology, it is "a type of relationship between microorganisms, characterized by the fact that when living together, microorganisms of one type inhibit the vital activity of other microorganisms".

**Capsule** in pharmacy is "a shell of dosed medicines taken orally, often with an unpleasant taste or odour," and in *bacteriology* "a layer of a substance (polysaccharides or polypeptides) synthesized by some bacteria, covering their surface and preventing phagocytosis".

**Abstinence** in pharmaceuticals means "a condition resulting from a sudden cessation of the intake (administration) of substances that have caused drug addiction, or after the introduction of their antagonists", and in physiology, "a forced or conscious decrease in the sexual activity below the individual (constitutional-age) need".

These examples can be ranked as an interdisciplinary polysemy, which arises due to the fact that there are microtherminosystems, where the same sound complexes are used to express different concepts.

In addition, there is an intradisciplinary polysemy, which arises due to the fact that, as a concept develops, it is divided into two more independent concepts, and the same sound complex is used to express them within the same microtherminosystem. Examples of this kind of polysemy are the following polysemantic terminological units:

**antivitamins** - 1) structural analogues of vitamins that block their biological effect; 2) substances that prevent the assimilation of vitamins in the body

In the pharmaceutical terminology system of the English language, the situation is radically different.

**anticonvulsants** - medicines used to relieve seizures of various origins (for example, with tetanus, eclampsia, poisoning); earlier the term meant mainly antiepileptic drugs;

**inhalation** - 1) ingress of any gaseous substances or aerosols into the respiratory system by the drain of inhaled air; 2) the method of introducing drugs or biologically active substances into the body for therapeutic and prophylactic purposes, based on the I. process;

**lipotropic substances** - 1) substances that reduce fatty liver infiltration (choline, methionine, calcium pangamate, lipoamide, etc.); 2) chemicals that selectively interact with lipids;

**microflora** - 1) a stable set of various types of microorganisms formed in the process of evolution, characteristic of a given species of animal or plant, for a specific ecological niche; 2) a set of types of microorganisms found on the surface or in the depths of some environmental object, in the body cavity, in a wound, etc;

**signature** - 1) a copy of the prescription given to the patient at the pharmacy instead of the original; 2) a part of the prescription, which indicates the method of taking the medicinal product;

**pharmacomania** - 1) the patient's desire to use various drugs or unreasonably prolonged use of a particular drug; 2) massive use of medicines by the population, as tranquilizers and hypnotics;

Due to the lack of alternatives to certain concepts in the system of Uzbek terminology, the possibility of expressing them in a single word is limited. It is contrary to the requirements of terminology to interpret or describe an incoming concept in a few words. In such cases, Latin, English, Russian-international terms are readily accepted into the Uzbek language in the same form as in the donor language.

**Extractum** *lat.*– extraction *eng.* – экстракт *узб.* – экстракт *рус.*

**Linimentum** *lat.*– liniment *eng.* – линимент *узб.* – линимент *рус.*

**Vaccinum** *lat.*– vaccine *eng.* – вакцина *узб.* – вакцина *рус.*

During the study, five terminological units were found that can be classified as polysemantic:

**blacklist** - 1) a list compiled by the US Food and Drug Administration, including the names of researchers who are not eligible to receive drugs for study; 2) a list of drugs that are prohibited from prescribing both under an international proprietary name and under an international non-proprietary name;

**drug-monitoring** - 1) monitoring the concentration of a drug in blood and tissues; 2) a list of patients receiving specific treatment;

**withdrawals** - 1) termination of the drug's participation in a clinical trial due to any reason; 2) withdrawal of a medicinal product from sale;

**high-tech medicinal products** - 1) a medicinal product obtained in one of the following ways:

- a) by DNA recombination;
- b) controlled gene expression, etc.

2) other high-tech medicinal products: a) other biotechnological processes that the competent authority regards as innovative; b) medicinal products that are dispensed using delivery systems that the competent authority considers to be innovative; c) medicinal

products containing a new component or having completely new indications that the competent authority considers to be of interest to medicine, etc.;

**drug** - 1) a drug; 2) drug.

In addition, it should be noted that polysemy resulting from the use of an abbreviated form of the term is a distinctive feature of the English language, in which it is very common. The following terminological units can be cited as an example:

**Ab:-** 1) **antibody** – қарши танача - антитело; 2) *abortus* – олиб ташланган хомила-абортированный плод;

**AV:** -1) *Atrio-Ventricular* - предсердно-желудочковый; 2) *Audio-Visual* - аудио-визуал- аудио-визуальный;

**BP:** - 1) *British Pharmacopoeia* – Британи фармакопеяси - фармакопея Великобритании; 2) *Blood Pressure* – қон босими- кровное давление; 3) *Birth Place* – туғилган жойи - место рождения;

#### 4. Results and discussion

Modern pharmaceutical terminology is one of the most extensive and complex systems of terms in conceptual and content terms. Being a rather complex and insufficiently studied material, the terminology fund of pharmaceuticals is the subject of discussion and controversy of many researchers due to its originality and uniqueness, which requires careful research.

The term is a complex, linguistically, phenomenon. Since the terms are an integral part of the scientific style, it is customary to impose special requirements on them, such as unambiguity, capacity, lack of synonyms, brevity, motivation, simplicity and clarity, etc.

In the course of the study, 1500 terminological units in three languages Uzbek, English and Russian belonging to pharmaceutical terminology were selected, systematized and studied. These terms and terminological combinations were considered from two points of view: structural organization and semantic content.

The results of the study of pharmaceutical terminology showed that pharmaceutical terms are heterogeneous and have their own characteristics depending on the language in which they are operated. By using the method of quantitative calculation, it was found that in the Russian language most of the pharmaceutical terms are one-word, in English - two-word, and in Uzbek, these two types of terms are in relative equilibrium.

It was found that the morphological way of forming new one-word terms, and in particular the suffixation, is one of the most productive ways of replenishing pharmaceutical terminology. In addition, syntactic models for constructing verbose terms were identified, generalized and described, most of which have a noun as a nuclear element. Also, a study of pharmaceutical terminology showed that in all three languages, one of the most common ways of creating new terminological units is an abbreviation. The use of a large number of abbreviations is explained by the presence of long, cumbersome attributive groups, which is characteristic, in particular, of the English language, as well as the language's striving for conciseness and economy of linguistic means.

Also, in pharmaceutical terminology in all languages, word composition is widely represented, whose productivity is also due to the language's striving for brevity. Due to the fact that pharmaceutical terminology, like medicine in general, goes back to the times of Ancient Greece and Ancient Rome, Greek and Latin bases of terms are widely used in it.

In addition to the above, the study showed that a distinctive feature of the English pharmaceutical terminology system is the use of conversion to replenish this terminology, which is practically not characteristic of the Uzbek and is completely absent in Russian.

From a semantic point of view, it was found that, despite the requirement that terms do not have units with the same meaning, the phenomenon of synonymy is characteristic of a rather large layer of terminology in this area. Due to the development of pharmaceutical terminology in three languages, each of them is characterized by the predominance of some type of synonym terms. So, in Russian synonyms-doublets prevail, in English - synonyms-variants, and for the Uzbek the presence of conditional synonyms is characteristic.

Another of the pressing, but at the same time, long-known and discussed problems of terminology, according to linguists around the world, is the phenomenon of polysemy, that is, the presence of a term of two or more meanings. Research has shown that pharmaceutical terminology is much less susceptible to polysemy than synonymy. The absence of a large number of polysemantic terms is explained by the fact that this sphere is quite specific, which, as a result, leads to the impossibility of using the same sound complexes to name different concepts. The data presented in the work make it possible to declare the prospects for further study of pharmaceutical terminology in the diachronic aspect in order to identify differences in the structural and semantic composition of the term depending on the stage of development of the terminological system, as well as from the standpoint of the cognitive approach to study the metaphorization of the terminological system of pharmaceuticals.

## 5. Conclusion

According to the above information, it can be concluded that pharmaceutical terminology is not affected by polysemy on any significant scale. If we do not take into account the polysemy of abbreviations, then the number of polysemantic terms in the volume of the studied vocabulary in three languages does not even reach two dozen. This provision can be explained by the fact that the pharmaceutical industry is a rather specific area in which terms are used, most of which cannot have multiple meanings due to the fact that the term system itself does not allow the separation of meanings and the use of one sound complex to name several concepts.

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