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Philological Readings

**CATEGORICAL CHARACTERISTICS OF PROFESSIONAL
COMPUTER DISCOURSE**

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Abstract

The increasing role of computer technologies and the Internet in every man's life has led to the formation of a new practice of interaction among which professional computer discourse is of particular relevance. Still, there is not much knowledge about this communicative practice. The aim of this study was to define the concept “professional computer discourse”, to investigate the communicative models of professional computer discourse and to describe its categorical characteristics. As a result the issues of object definition and its terminology were identified. The term “professional computer discourse” was introduced, its position among other communicative practices was described. The analysis of system-forming and system-acquired categories implemented on the basis of texts of different genres helped to reveal dominant categorical characteristics of professional computer discourse. The analysis of linguistic representations of the categories has revealed the linguistic specificity of professional computer discourse and picked out a set of linguistic means at the lexical morphological and syntactic level. The results help to formulate a hypothesis according to which professional computer discourse has meta-discursive status in relation to other communication practices, in particular, in relation to the electronic Internet environment.

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Keywords: Categorical characteristics, electronic discourse, professional computer discourse, style, system-acquired categories, system-forming categories.



1. Introduction

In the last few years there has been a growing interest in computer discourse. The result of frequency of PC application has led to the expansion of each person's thesaurus of the required vocabulary. This vocabulary is widely used in such genres as scientific and educational literature as well as popular science journals. This is due to the purpose of describing and systematizing knowledge in the field of computer technology, as well as the increased interest of people in this sphere. These texts with the thematic focus on "computer technology" in their variety of genres act as a representation of professional computer discourse.

Being a relatively new field of knowledge professional computer discourse is a communicative practice which has been little explored, its categories and specific features need detailed study and description. However, as our analysis has shown, and on the issues of object definition and its terminology substantial differences still remain.

The actual problem is the creation of the typology of the studied practice taking into account its communicative and pragmatic characteristics.

The paper is structured as follows. In sections 2.1 and 2.2 we state the problem connected with the identification of the research object and its boundaries in order to identify the texts of this discursive practice for the following survey of the categorical characteristics by means of a systematic approach which is focused on considering the basic levels of organization of speech products. In section 3 we represent the questions which define subsequent analysis. In section 4 the purpose of the study is grounded. In section 5 an integrated methods approach to reveal linguistic and pragmatic characteristics of communication process is proved. In sections 6.1 and 6.2 we present the results of the research devoted to defining the concept "professional computer discourse" and identifying its system-forming and system-acquired categories. In section 7 a conclusion is provided.

2. Problem Statement

The increasing role of the computer and the Internet in the life of every person, the emergence of a virtual environment as a new kind of human environment have led to the formation of new communication practices, among which computer discourse occupies a special place.

This phenomenon currently attracts attention not only of linguists, but also of representatives in such fields as humanities, science, and technology, they are sociologists, culturologists, philosophers, programmers, etc. Studies in recent years have shown an explosion of interest in investigating this type of discourse, but scientists haven't reached a consensus on the issue of its definition as an object and the description of categorical features specific to this type of practice.

2.1. The problem of nomination and interpretation

The problem of denotation of the studied discourse is both in Russian and English linguistics. There is a variety of terms which is used to refer to the considered undifferentiated communicative practices related to computer technology. In English they represent a combination of the noun "discourse"

with adjectives “electronic”, “computer-mediated”, “Internet”, “Online”. In Russian the noun “discourse” is combined with adjectives “computer”, “computer-mediated”, “electronic”, “virtual” and “network”.

Such terminological uncertainty in both Russian and English languages, in our view, can be explained by such reasons as a relatively short period of existence of this discourse, its rapid development and the absence of generally accepted terms. As a result, this leads to a confusion of terms and explains the necessity to explore the existing definitions of this phenomenon in modern science.

2.2. The problem of categorical analysis

The complications of the detailed analysis of any text are mainly related to the fact that it is hardly effective to take into consideration only one level (semantic, lexical, syntactic), as if the description of the same phenomenon is focused on the most accurate fixation of some characteristics, other characteristics, additionally associated with the first, become more uncertain (Karasik, 2002). A systematic approach in the study is a possible solution of this problem. For this purpose it is necessary to consider the basic levels of organization of speech products, one of them is discursive, which reflects the peculiarities of the organization of communication of participants of professional communicative acts, the other one is the level of language, which is focused on the research of certain language tools most suitable for the success of communication.

The paper presents the study of the categorical characteristics of this modern discursive practice, which has become an integral part of the vital for modern human social interaction and information exchange. The study of the functioning of the language mechanisms involved in the implementation of the author's communicative goal-settings and the program planned by him in order to influence on the audience is necessary for understanding the communicative processes in the modern social environment.

3. Research Questions

What is professional computer discourse?

What are the dominant categorical characteristics of professional computer discourse (on the basis of the English-language texts)?

What characteristics do the communicative models of professional computer discourse have?

4. Purpose of the Study

The purpose of this article is to present research findings dealing with the identification and systematization of professional computer practice characteristics which are represented in a set of means used to form the language aspect of texts within this sphere of communication.

The research aim is to define the concept “professional computer discourse”, to examine two basic levels of speech products organization: the discursive level, which reflects the peculiarities of the organization of communication of participants of professional communicative acts, and the language level, in the focus of the study of this level there is a choice of the language means preferable for the success of communication.

5. Research Methods

Specific character of the research subject as well as the diversity of the goals involves the application of an integrated methods approach. The study follows the structural-semantic analysis method, methods of contextual and pragmalinguistic analysis, taking account of linguistic and pragmatic characteristics of communication process, methods of comparative and categorical analysis. The necessity of this integrated approach is caused by the fact that formal linguistic analysis has the least explanatory power in relation to the causes and purposes that determine the nature of the text, and it cannot fully characterize the text as a communicative product. So called system-acquired properties which a text as a system acquires in the process of its subsequent development have particular importance (Mikhailova, 1999). These properties include linguistic as well as extralinguistic characteristics of the text.

The first stage of the study is aimed at studying the categorical composition that determines the communicative specificity of professional computer discourse. In the categorical approach, the research focuses on the qualities of the communicative activity and the situation of communication, which allows us to turn to the analysis of text representations, taking into account the factors that determine their selection and their use in the communicative sphere being studied.

6. Findings

6.1. Professional computer discourse in the system of modern communicative practices

The terms “computer-mediated discourse” and “electronic discourse” in the English language are often treated as synonymic. Herring and Androutsopoulos (2015) in their article ascribe the role of the medium for communication to some computer device. They define computer-mediated discourse as the communication produced when human beings interact with one another by transmitting messages via networked or mobile computers, where “computers” are defined broadly to include any digital communication device. In the article it’s mentioned that the same phenomenon can be described by such terms as digital discourse and electronic discourse (Herring & Androutsopoulos, 2015).

There is another definition of e-discourse by Yates (1996), the determining feature of which is the Internet, which of course cannot exist without some communication device. In his works e-discourse is defined as the language used to communicate in cyberspace, the “imaginary space created by the Internet, in which people interact and form social relationships”.

The definition of AbuSa’aleek (2015) is more determined as in his definition the term e-discourse is restricted by written form of the language used by youngsters in the electronic communication. In the article of Davis and Brewer (1997) the distinctive feature which determines e-discourse is the usage of a keyboard for communication.

Thus the review of these definitions shows that a prerequisite for electronic discourse or computer-mediated discourse is some technical device without which communication cannot be carried out and the properties of this device determine the nature of this communication (e-mail communication, Internet-relay chats and so on).

In the Russian language some linguists also consider electronic and computer discourse to be synonymic. Galichkina (2015) in her study treats computer discourse as “communication by means of

computers". The same approach is represented in the survey of Kotovskaya (2016). Kondrashov (2014) considers computer discourse from communicative perspective, defining it as a speech behavior of communicants in the conditions of computer communication or "near-computer" communication, where computer communication is defined as "speech communication between interlocutors who send messages to each other in natural language through computers connected to the network" (p. 3). Prokofieva (2017) defines relations between electronic and computer discourses as hyperonymic, where hyperonym is computer (electronic) discourse, and the communicative environment can be defined as a communication channel.

It should be mentioned, that originally the term "computer-mediated discourse" was not widely-spread among Russian linguists, but for the last five years it has become popular. Barkovich (2015) defines computer-mediated discourse is a type of discourse mediated by technical computer tools, characterized by the information format of content translation and its representation by language data. This definition is similar to the one represented by Herring and Androutsopoulos (2015). Goroshko (2015) uses her survey the definition represented by S. C. Herring. At the same time Butorina (2016) restricts the channel for communication excluding mobile devices.

Popovskaya (2016), Kozyreva (2017) and Zhirkov (2016) define computer discourse as "communication on the Internet", which of course can't appear without some computer device, but there are no restrictions on the case of the channel for communication in their treatment. Lutovinova (2009) also prescribes the computer the role of some device with which communication is performed. She also narrows the scope of computer discourse, adding the term "virtual discourse", which is described as "the text immersed in the situation of communication in virtual reality, which has the basic properties of virtual reality (generality, relevance, autonomy, interactivity, immersiveness) and is a kind of symbolic reality created on the basis of computer and non-computer technology and implementing the principle of feedback" (Lutovinova, 2009, p. 5). On the one hand virtual discourse is narrower in meaning, on the other hand virtual discourse can be construed much more broadly than computer discourse, since Internet is not the only source used for communication in virtual reality, there are some other means of communication which are applied to create this reality as a mobile phone with a system of SMS messages (Zelenovskaja, 2014).

This analysis indicates the existence of the problem relating to the lack of differentiation between the scientific sphere, in which modern computer technologies are actively formed and developed, and the electronic media environment, the participants of which are the users of electronic means of communication. In this regard, there is a problem of determining the actual object of our research, professional computer discourse, associated with its consecutive separation from electronic practice.

The necessity of this is considered by a number of researchers. Raspopina (2010) differentiates the concepts of computer and electronic discourses. From her point of view electronic discourse is determined by the nature of those devices that provide a communication channel and includes any of the discourses that have such a channel: communication through high-speed mobile networks of 3G format (mobile phone discourse), communication through intercom, communication through computer (Raspopina, 2010, p. 126). Thus, the concept of "electronic discourse" covers all the variety of forms of communication peculiar to the electronic media environment infinitely changing its configuration.

Computer discourse, the main feature of which is an electronic signal, however, cannot be identified with electronic discourse, since its nature is determined by such an electronic device as a computer. Depending on the communication channel computer discourse is divided into Internet discourse and local networks discourse (Raspopina, 2010, pp.125-132). The terms "network" and "Internet" refer to the communication channel. The meaning of the term "Internet" is narrower in comparison with "network", which indicates any network, including local. Both terms can be used to refer to a communication channel and hence specify an electronic form of communication.

As can be seen the leading role of this approach seems to be played by technical features of the discourse, as they determine the features of communication, as well as make it possible to form special styles and genres of these discourses.

The obligatory condition for the formation of computer discourse in the approaches of the authors represented above is an electronic channel of communication, depending on which computer discourse is divided on Internet discourse, network discourse, etc. To denote this phenomenon such terms as "computer discourse" and "electronic discourse" were used, and in our view it led to a certain dislocation of the concept of reality (Elagina, 2015).

In Russian linguistics, there is another point of view regarding the interpretation of computer discourse. A number of Russian linguists consider that computer discourse is determined not by the channel of communication, but directly by the content of communication, so the conversation about computers can be referred to computer discourse. One of those linguists is Samaricheva (2001), she studies the influence of the English language on German computer discourse. The author defines "computer discourse" as the whole set of texts united by a common theme related to modern information technologies (Samaricheva, 2001). The same approach is represented in the surveys of Orlov (2013), Dorokhova and Zakharova (2016) (it should be noted that the search for English-language works with a similar interpretation of computer discourse failed to yield results).

Thus, there is a certain tendency in the works of Russian linguists: in the definitions of computer discourse the computer is defined either as a means of communication or as its content. In the works represented in English the computer is considered only as a channel of communication. In our opinion, such a mixture of different interpretations of one concept is unreasonable, besides it is necessary to differentiate the terms to mark the boundaries of the object under study.

In this survey electronic discourse is not synonymous with computer discourse, it means a system implemented in conditions of electronic (computer) communication. Depending on the means of communication, which determines the created communicative environment, electronic discourse is divided into Internet discourse and network discourse (on a local network) (Elagina & Oparina, 2017).

Computer discourse as a concept has a narrower connotation in comparison with electronic discourse, and it is determined not by electronic communication channel, but by its content, which has the thematic focus of "computer technologies". In our view "computer discourse" is a very broad term, that's why we propose to use two terms "professional computer discourse" and "electronic discourse", which will distinguish the object area of professional computer technologies from the electronic environment, whose technical and technological characteristics act as a kind of restrictors of communication.

We define professional computer discourse as a communicative practice which gets its explication in texts with the thematic focus of “computer technology” and implemented in a variety of genres. This kind of discourse belongs to the sphere of human activity, the purpose of which is to describe actions or events in the field of computer technology, for some genres there is such a characteristic as systematization of knowledge in this area.

Professional computer discourse is a special discursive practice which combines the qualities inherent in both traditional scientific communication and modern communication environments with a high degree of mobility and presupposing search activity of all participants in communication.

6.2. Categorical characteristics of professional computer discourse

The study of the system-forming categories reveals a set of features peculiar to all the studied texts and functioning as the basic characteristics for the compared texts of the professional computer sphere of communication. They are: 1) factuality, 2) neutral evaluativity, 3) formal logic of facts’ representation 4) frequent use of terms, 5) algorithmic character, 6) theorized character, 7) structuredness, 8) systematic and deliberate nature of information capacity, 9) the compression of textual information through the use of tables, 10) prevalence of nominative and informative functions in the texts.

In addition, the analysis of the system-forming categories allows to determine one more peculiar feature which is the texts of professional computer discourse contain the knowledge necessary for successful work in the electronic environment. Findings indicate that there are relations of determination between professional computer discourse and electronic discourse. The description of the algorithm of behavior for the addressees which is necessary for the participants of electronic discourse for successful communication illustrates an example and at the same time evidence of such dependence.

If the system-forming categories are the main determinants of all types of discourse, in the case of system-acquired categories each type of discourse has its own set of categories of this level inherent only to it, which in the discourse of another type can be transformed into system-neutral categories which have insignificant character.

The analysis of system-acquired categories of professional computer discourse revealed the following set of characteristics: 1) computer subject area and technical orientation of texts, 2) a similar set of sub-themes, 3) strict logic and compositional structure with obligatory sections and fixed position, 4) detailed description of the structure of the object, 5) terminological system common to all the texts, 6) blurred boundaries of status-role characteristics, 7) lack of clear time and territorial framework of chronotope.

One more professional computer discourse peculiarity in the English language is the authenticity of the conceptual and terminological system, since most of the terms have English origin. They are transformed in different styles and implemented in their own contexts, forming messages of different types.

According to the analysis the interaction of communicants in the sphere of genres of professional computer discourse has institutional character. Another peculiarity of this type of discourse is variation of status-role characteristics.

The analysis of linguistic representations of the categories has revealed the linguistic specificity of professional computer discourse and picked out a set of linguistic means. At the lexical level it’s typical

for professional computer discourse to use basic computer terms, general terms, abbreviations, proper names (surnames), symbols, digital data, and units of measurement.

At the morphological level, the following features are distinguished: the use of imperative and non-personal forms of verbs, as well as adjectives in the comparative degree. The syntactic level of professional computer discourse is determined by the use of simple as well as complex sentences; impersonal sentences with the subject represented by the pronoun “it”; subjects, the function of which is performed by inanimate nouns; passive constructions.

7. Conclusion

Thus, professional computer discourse is a communicative practice, the categorical features of which are realized in a set of functional complexes that determine the way of expression of texts in different genres with the “computer technology” content.

The profound connection of system-forming and system-acquired characteristics makes it possible to distinguish parametric features of the text structure of scientific articles with computer topics. These features are: objective and informative manner of material presentation gained by generic terms, terms, passive voice and explicated logic of material presentation. The manner of material presentation is defined even more by the prescriptive nature of the selected language actions with the stress on strict succession of thought lines and the evidence of its logic. These goals are served by both syndesis and repeated significant elements of the syntactic structure.

These characteristics lead to the conclusion that professional computer discourse has meta-discursive status in relation to other communication practices, in particular, in relation to the electronic Internet environment.

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