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ABOUT THE CONCEPT OF COMPUTER LEXICOGRAPHY

Abstract: *This article discusses the definition of the concepts of computer lexicography, electronic dictionary. It also provides information about the composition of the dictionary entry, the prospects of computer lexicography, the advantages and types of electronic dictionaries.*

Key words: *applied linguistics, computer lexicography, automatic, computer, electronic dictionary, dictionary entry, database.*
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Introduction

Computer lexicography is a branch of applied linguistics aimed at creating computer dictionaries, linguistic databases and developing programs for supporting lexicographic works.

The main tasks of traditional and computer lexicography are to determine the structure of the dictionary and zones of a dictionary entry, as well as to develop principles for compiling various types of dictionaries.

The main part

A dictionary is traditionally defined as an organized collection of words with comments describing the features of the structure and / or functioning of these words [1 , 55]. An electronic (automatic, computer) dictionary is a collection of words in a special computer format intended for human use or as part of more complex computer programs (for example, machine translation systems). Accordingly, a distinction is made between automatic human end-user dictionaries and automatic dictionaries for word processing programs [1 , 86].

End-user automated dictionaries are most often computer versions of well-known conventional dictionaries, for example:

- Oxford English Dictionary (www.oed.com),
- Collins' automatic English explanatory dictionary (www.mycobuild.com),
- automatic version of the "New large English-Russian dictionary" ed. Yu.D. Apresyan and E.M. Mednikova (http: // eng-rus.slovaronline. Com),
- Ozhegov dictionary online (http://slovarozhegova.ru).

Automatic dictionaries of this type practically repeat the structure of a dictionary entry of ordinary dictionaries, however, they have functions that are inaccessible to their prototypes, for example, they sort data by fields of a dictionary entry (compare selection of all adjectives), automatically search for all vocables that have a certain semantic component in interpretation, etc. [1 , 86].

Automatic dictionaries for machine translation systems, automatic summarization, information retrieval, etc. the interface and the structure of the entry differ significantly from auto th vocabulary I end a human user . The peculiarities of their structure, the scope of the vocabulary material are set by the programs that interact with them. Such a dictionary can contain from one to a hundred zones of a dictionary entry. The areas of lexicographic description are extremely diverse : morphological, lexical, syntactic, semantic, etc. [1 , 86].

The structure of a traditional vocabulary usually includes the following components:

- an introduction explaining the principles of using the dictionary and giving information about the structure of the dictionary entry;
- vocabulary, including vocabulary units: morphemes, lexemes, word form or word combinations; each such unit with a corresponding comment is a dictionary entry;
- pointers (indexes);
- list of sources;
- abbreviations list and alphabet [1 , 75-76].

In electronic dictionaries, of the named components, perhaps only a dictionary is mandatory; in online dictionaries, there is often also an alphabet with hyperlinks behind each letter leading to the text of the dictionary entry. Almost every electronic dictionary offered on disk (offline dictionary) or on the Internet (online dictionary) has an automatic search function, which significantly saves the user's efforts when working with the dictionary.

The difference between electronic dictionaries and “paper” dictionaries also concerns their multimedia and hypertextuality: these properties are expressed in electronic dictionaries to a much greater extent than in printed ones. Thus, hyperlinks can be placed behind any element of a dictionary entry or an item in the program menu of the dictionary. This gives the user additional search capabilities and quick transition to the necessary dictionary information, allowing him to find synonyms and antonyms for a given word, words of the same semantic group, declension and conjugation paradigms, etc.

Hyperlinks also make it easy to link different dictionaries to each other, so that online or offline dictionaries end up as collections or portals of dictionaries. Having received the necessary information, for example, about the meaning of a word, with one click of the link, the user can go to the comments of this word in other dictionaries and learn the peculiarities of its interpretation in special branches of knowledge (terminological dictionaries) or obtain additional linguistic information about its form.

Separate electronic dictionaries also have additional capabilities, for example, the electronic multilingual dictionary ABBYY Lingvo x3 (© 2008 ABBYY) provides a learning function (ABBYY Lingvo Tutor) that allows you to memorize words selected on a specific topic and presented in pairs: Russian and foreign words, compose new dictionaries and vocabulary cards, save learning results to a file, etc.

As a result, the structure of an electronic dictionary differs significantly from the structure of a printed dictionary, although the main part of the dictionary - a vocabulary with dictionary entries - continues to form the core of the dictionary in both cases.

The structure of a dictionary entry is quite typical and usually includes the following zones of a dictionary entry that are relevant for both traditional and computer lexicography:

- lexical entry (vocabulary, lemma);
- zone of grammatical information;
- zone of stylistic droppings;
- value zone;
- zone of phraseological units;
- zone of etymology;
- example area and example source.

True, it is possible to distinguish zones of a dictionary entry, which are mandatory for all vocabulary units, and optional zones. The obligatory zone of a dictionary entry for different types of dictionaries is only the lexical entry, all other zones depend on the type of the dictionary: for example, a meaning zone is required for an explanatory dictionary, but it is optional for an orthoepic. The phraseology zone is absent in the comments of words that are not used in stable combinations, and the presence of the example zone and its source depends on the principles underlying the creation of the dictionary.

The number of zones of a dictionary entry in a computer dictionary usually exceeds the number of zones in a dictionary entry in a "paper" dictionary, which is due to the significant resources of memory and the high speed of processing digital information by modern computers. But the volume of the offered dictionary information should correspond to the type of the dictionary: if the reader needs pronunciation, then the "extra" information about the translation of the checked word or its contextual meanings will only interfere with the user.

The classification of computer dictionaries can be carried out on the same principles as the classification of ordinary dictionaries. Linguistic, encyclopedic and intermediate (linguistic and cultural and terminological) dictionaries are traditionally distinguished. Linguistic dictionaries describe the words themselves - their meanings, features of use, structural properties, compatibility, correlation with lexical systems of other languages, etc. Encyclopedic dictionaries describe concepts, facts and realities of the surrounding world, i.e. extralinguistic information. The intermediate type of dictionaries includes information of both linguistic and extralinguistic genders [1 , 59-60].

There are several types of linguistic dictionaries [1 , 59-74]:

- explanatory, aimed at the interpretation (explanation) of the meanings of words and their use in speech, including descriptive and normative dictionaries, which, in addition, can be general and private, among the latter stand out, for example, phraseological dictionaries, dictionaries of foreign words, etc. ;
- dictionaries-thesauri differing in the location of the dictionary entry, which is subordinated

not to the alphabetical, but to the thematic principle, for example, the thesaurus of Russian idioms includes the semantic field "LEAVE, LEAVE, Escape", which is placed in the category "MOVEMENT", the semantic field "LONG" is placed in category "TIME", etc. [1 , 65];

- bilingual (translation) dictionaries, for example, "English-Russian Dictionary" by V.K. Müller (1st edition appeared in 1943), "French-Russian dictionary of active type", ed. V.G. Gack and J. Triomph and others;
- associative dictionaries, the object of which is the sphere of associative relations in vocabulary; the dictionary entry of such a dictionary includes a stimulus lexeme and a list of reactions sorted by frequency and alphabet (indicating the frequency) obtained in a psycholinguistic experiment, for example: "The associative thesaurus of the modern Russian language" [39];
- historical and etymological dictionaries that provide information about the history of words, starting from a certain date over a certain period, indicating the emergence of new words and meanings, their withering away and modification, or explaining the origin of words;
- dictionaries of linguistic forms that fix the features of the form of words and in which the interpretation of meanings is absent or play an auxiliary role, for example, spelling and orthoepic, derivational and morphemic (show how words are composed of morphemes and inventory them), grammatical (information on each word, allowing build any grammatically correct form), reverse dictionaries;
- dictionaries of speech use: dictionaries of difficulties and word combinations ;
- onomasticons: anthroponymic dictionaries and toponymic dictionaries;
- non-traditional, subjecting dictionary description to atypical linguistic objects, for example, "Dictionary of Russian Political Metaphors" by A.N. Baranova and Yu.N. Karaulov [2], dictionaries of poetic metaphors, epithets, author's dictionaries and dictionaries of concordances.

For example, such electronic encyclopedias as the Encyclopedia Britannica (www.britannica.com), the Great Encyclopedia of Cyril and Methodius (www.megabook.ru) and the Krugosvet encyclopedia (www.krugosvet.ru) are known.

Examples of translated electronic dictionaries are ABBYY Lingvo (www.lingvo.ru), Translatelt! (www.translateit.ru) and Multitran (www.multitran.ru). Electronic dictionaries - it is, in particular, Dictionary Merriam Webster (www.merriam-webster.com) and dictionary of the French language «Tresor de la langue francaise» (http: // atilf atilf.fr.). Formal electronic dictionaries are spelling dictionaries of Russian (http://slovari.yandex.ru) and English (www .spellcheckonline .com) languages.

A large collection of dictionaries of various types on disc and on the Internet is provided by the publishing house Duden (German, www.duden.de) and Larousse (French, www.larousse.fr).

Computer dictionaries are usually created on the basis of text corpora with the use of automatic processing and retrieval of vocabulary units. For this purpose, special programs are involved - databases, computer filing cabinets, word processing programs that automatically generate dictionary entries, store dictionary information and process it. So, the creation of an electronic dictionary, according to A.N. Baranov, includes the following stages [1, 84]:

1) formation of a text corpus and, in parallel, creation of a vocabulary;

2) automatic formation of the corpus of examples;

3) writing dictionary entries;

4) input of dictionary entries into the database;

5) edit entries in the database e data ;

6) proof-text databases e data ;

7) generation of the dictionary text and the formation of the original layout;

8) printing a dictionary.

Of course, the above description of the process of creating an electronic dictionary can be adjusted depending on its type, research principles and other factors, cf. comments of the creators of the electronic historical dictionary of the Russian language [4]. But in any case, the use of computers and ready-made text corpora in computer lexicography can reduce the number of stages in the process of creating an electronic dictionary and save time on almost every one of them.

So, instead of creating a vocabulary card in computer lexicography, databases are used. Database records make it possible to automatically sort the array according to the selected parameters, select the necessary examples, combine them into groups, etc. There are practically no specialized software shells for lexicographic purposes on the market. For these purposes, modern databases such as ACCESS or PARADOX are quite suitable. Dictionary makers can use computerized concordance programs such as DIALEX to find examples. To create the original layout (layout) of dictionaries, publishing systems such as Page-Maker or WinWord are used, which allow you to assign styles to zones of dictionary entries, alphabetization, creating indexes, etc. [1, 82-85].

Perhaps the only example of a specialized computer program designed for computer lexicographic work is the "Program for the automated compilation and processing of vocabularies" (authors: MV Litus, EV Litus). This program is actively used in philological research and is presented in detail in the

textbook by A.T. Khrolenko and A.V. Denisov [5, 52-63].

Electronic dictionaries have positive aspects not only in the process of their creation, but also in the process of use. In particular, the following advantages are highlighted in the use of electronic dictionaries [3]:

1) electronic dictionaries allow different ways to present the content of a dictionary entry (various "projections" of the dictionary), including with the help of a variety of graphic and multimedia tools that are not used in ordinary dictionaries;

2) the information displayed reflects various technologies of computational linguistics, for example, morphological and syntactic analysis, full-text search, sound recognition and synthesis, etc .;

3) it becomes possible to quickly obtain information that is contained somewhere in the depths of the dictionary and directly responds to the request formulated by the user in a form convenient for him;

4) the electronic dictionary allows you to quickly respond to changes in the language and the world, and the release of each subsequent version of it or making changes to the online version does not take much time and effort.

Despite the presence of a significant number of advantages of using electronic dictionaries, some problems remain unresolved, which are relevant for both traditional and computer lexicography.

The dictionary should reflect the concept of lexical functions, allowing systematically describe the non-free combinability of words, illustrated by the following examples of the Russian language: "the war are", and "test - hold", "theory put forward" and "thoughts are served," etc.

The problem of describing semantics and the practical implementation of grammatical inflection and word formation has not been reflected in mass lexicographic practice. Each language has its own ways of grammatical coding of meaning, which are not systematically described in mainstream dictionaries. For example, how to convey the meaning of “show off” in English, even if you know how to convey “show off”?

In dictionaries, there is not even a system of concepts with the help of which syntactic information could be brought to the ordinary reader. The solution to this problem could be integral vocabulary descriptions based on formal models, taking into account progressive lexicographic ideas. The same models should be used to organize technologies for accessing the vocabulary content [3].

These problems can be solved with the cooperation of lexicographers-theorists and practitioners, and computer tools will undoubtedly facilitate the routine work of performing monotonous lexicographic operations.

Conclusion

In general, we state that computer lexicography aimed at creating electronic dictionaries is a very promising and necessary direction of computational linguistics, since the products it creates - electronic dictionaries - are multifaceted, multimedia, integrate the latest technological solutions, the relevance of the material and meet the needs of the user in organizing access to the necessary information.

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