THE CONCEPT OF THE LINGUISTIC DATABASE
“FUNDAMENTAL HUMAN EMOTIONS IN ENGLISH PHRASEOLOGY”

The article deals with the concept of the linguistic database “Fundamental Human Emotions in English Phraseology” based on the study of the emotional picture of the world. Successful implementation of the goal requires the following tasks: 1) to characterize the qualifications of the database and outline its advantages over other file systems; 2) to get acquainted with the experience of creating factual linguistic databases in domestic and foreign phraseology; 3) to determine the theoretical and applied principles of LDB “Fundamental Human Emotions in English Phraseology”.

The object of research is a database as an ordered set of data intended for storage, accumulation and processing using computer technology. The subject of research is the linguistic database “Fundamental Human Emotions in English Phraseology”. In the development of the linguistic database used the method of conceptual design; continuous sampling; method of semantic fields; methodological method of correlating the components of the phraseological unit (PhU) with the signs of different semiotic branches of culture. The qualification features of the database are characterized and its advantages in comparison with other file systems are outlined. The experience of creating factual linguistic databases in domestic and foreign phraseology is outlined. Theoretical and applied principles of compiling the specified linguistic database are determined. The strategy of creating the linguistic database is aimed at multiple and multifaceted use. The format of presentation of phraseographic data in the form of the linguistic database allows to implement a new approach to the study of the emotional picture of the world.

Key words: database, linguistic database, phraseological emotiology, phraseological unit, fundamental emotion.

1. Introduction. Computer technologies for presenting linguistic data make it possible to re-examine the relationships of linguistic units, to identify previously unknown patterns. The use of formalized, well-ordered linguistic units has given impetus to new research, as evidenced by modern linguistic explorations, which increasingly use text corpora (see [Kalymon]) and linguistic databases (see [Bihdai; Kulchytksyi, Kostyrko; Makovetska-Hudz]). The latter are positioned as an effective way of organizing language units used to ensure the functioning of various automated systems related to word processing (machine translation) and speech (information, training systems for human speech analysis), are created to store data as lexicographic products [Karpilovska; Mishankina].

Modern computer technologies make it possible to simplify the process of collecting and storing lexicographic information by using a database instead of a regular card index, the records of which are an analogue of a traditional catalog card [Baranov : 82]. However, terminological, lexical and phraseological databases are used not only when creating new dictionaries, but are also used in various linguistic studies, since, according to K. Kochergina, the linguistic database (LDB) as an independent format for presenting lexicographic information has a number of advantages over dictionaries: allows you to accumulate, store, systematize linguistic information and carry out a quick search within it, and also has an open structure for making changes that continuously occur in the language system [Kochergina].

The urgency of the study is motivated by the lack of a linguistic database of phraseological units to denote the fundamental human emotions in English.

The purpose of the article: to develop the concept of the linguistic database “Fundamental Human Emotions in English Phraseology” based on the study of the emotional picture of the world. Successful implementation of the goal requires the following tasks: 1) to characterize the qualifications of the database and outline its advantages over other file systems; 2) to get acquainted with the experience of creating factual linguistic databases in domestic and foreign phraseology; 3) to
determine the theoretical and applied principles of LDB “Fundamental Human Emotions in English Phraseology”.

The object of research is a database (DB) as an ordered set of data intended for storage, accumulation and processing using computer technology. The subject of research is the linguistic database “Fundamental Human Emotions in English Phraseology”.

In the development of LDB used the method of conceptual design (to determine the parameters of the description of units of information and the relationships between them in accordance with the tasks for which the information and reference resource is created); continuous sampling method (for forming the source body of the LDB); method of semantic fields (for elaboration of phraseoideographic paradigm); methodological method of correlating the components of the phraseological unit (PhU) with the signs of different semiotic branches of culture (to determine the code of culture, which represents the PhU).

2. The functioning of the term ‘database’ in applied linguistics. M. Sviridova interprets the database as “a file in which information is stored in a special format, data” [Sviridova : 6]. The author emphasizes that the database allows you to perform four operations: add records to the table; delete records from the table; update field values in records; use the query mechanism (queries to the database are formed in the language of structured queries (SQL)). The main functions of the database, the researcher includes: a) storage of large data sets in a certain format; b) data processing and presentation in a user-friendly form; c) data management, which protects data from unauthorized access, supports multi-user data management and data integrity and consistency.

V. Pasichnyk and V. Reznichenko emphasize the following advantages of databases (compared to file systems) [Pasichnyk, Reznichenko : 16]:

a) data interconnectedness (localization of a certain data group of the program generally facilitates access to other data groups of the same application);

b) minimum redundancy (the DB must keep a minimum number of copies of the same data);

c) independence of data from programs (the ability to change the data structure without changing the programs that use it);

d) data integrity and protection against unauthorized access (data consistency, compliance with certain conditions);

e) integrated data storage (the set of data is considered as a whole, regardless of the nature of use and methods of storage, the DB is an information model of the entire subject area);

f) centralized management (provides for the administration of the database, which allows to ensure effective data storage, eliminate their inconsistencies, maintain a common policy in the use of data and the required level of security, balancing conflicting requirements of different users);

g) effective data access control (the DBMS provides effective data access control mechanisms, despite the complexity of the structures in which they are stored);

h) reducing the time of software development (if there are tools for creating and processing data provided by the DBMS, all the efforts of software developers are focused on solving application problems);

i) data sharing (provides simultaneous access to information of many users and efficient allocation of resources);

j) database recovery (no unforeseen situation can disable the DB);

k) compliance with standards (the DB is concluded taking into account the uniform standards of the enterprise or other regulations).

The database management system (DBMS) is a program that provides the ability to create and use databases and perform various operations with data stored in it. A. Baranov notes that there are no special DBMS intended for linguistic purposes, but D-Base, ACCESS, FOX-Base, PARADOX are suitable for them [Baranov : 82].

The DBMS interpretation assumes that several DBMS functions can be distinguished: data definition functions (to determine the data structure in the database (external, internal and conceptual schemes), and the DBMS must process data description language instructions to describe the conceptual scheme, data description subtext to describe external schemes and languages for describing stored data to describe the internal scheme) and data manipulation functions (related to the operation of their data, the database must accept, interpret and process user requests to select, update and delete existing data or add new data to
the database). In addition, the DBMS allows you to store data in its entirety for a long time, protecting them from malicious and unintentional distortions, to perform the function of data preservation.

The issue of database architecture is also relevant. The main idea of the database specification, by V. Pasichnyk and V. Reznichenko, is to distinguish three architectural levels of the database, namely: external, conceptual and internal:

a) at the conceptual level, an integrated description of the subject area for which the database will be developed, regardless of its perception by individual users and methods of implementation in a computer system. The conceptual model is defined by the following features: 1) common and unambiguous interpretation of the subject area by all stakeholders; 2) the conceptual scheme reflects only conceptually important aspects, excluding any aspects of external or internal data display; 3) determining the allowable limits of database evolution; 4) display of external schemes on internal; 5) ensuring data independence; 6) centralized administration; 7) stability;

b) through the external level, users and applications gain access to the database. The purpose of the external layer is to provide the user / application with only the data he needs. This is an individual user level. External model is a means of depicting a conceptual model of software, taking into account the interests of specific users or applications. Each external model is submitted to the DBMS in the form of an external circuit. The external level performs the following functions: 1) provides an image of the data in a convenient human or application way. The degree of independence of the external image from the conceptual level is determined by the power of the means of describing the reflection “conceptual-external”; 2) contributes to solving the problem of data security (protection). By providing the user with only the data of interest to him, we leave out of his access the rest of the data; 3) contributes to solving the problem of logical independence of data. This is achieved through the reflection of “conceptual-external”. The power of its tools determines the degree of logical independence of applications from data;

c) the internal model is a reflection of the conceptual model, taking into account the methods of data storage and methods of access to them. The internal model is displayed in the DBMS as an internal diagram. The internal model is described as an infinite abstract linear memory that can be structured using other abstract concepts such as blocks, clusters, indexes, and so on. The internal level performs the following functions: 1) provides database configuration to improve data processing performance, description and maintenance of planned redundancy; 2) allows to describe and maintain storage structures and access methods; 3) contributes to solving the problem of physical independence of data: changes in the internal scheme should not lead to changes in the external scheme; 4) contributes to solving the problem of data security (protection); 5) solves the problem of displaying data on the structures of the OS in which the data is stored (such structures include files in particular).

3. Experience in creating factual LBD in phraseology. Several projects of factual LBD of different types have been tested in domestic and foreign phraseology.

I. Harbera [Harbera] for the first time in domestic dialect phraseology to structure, systematize and formalize the representatives of the concept human uses LDB “Concept human in the phraseology of East Steppe Ukrainian dialects”, which contains 706 areal phraseological units. The design of this linguistic database has been performed in two stages. During the first stage – infological – there has been: 1) formed the frame of APhU of East Steppe Ukrainian dialects with archiseme ‘human’; 2) identified classification types of APhU according to ideographic, axiological, structural parameters; 3) developed the list of codes of culture and intercode passages of analysed concept; 4) formed a vocabulary entry of APhU; 5) developed the project table LDB. During the second – datalogical – stage there has been created the linguistic database using Microsoft Office Access with the unified data table which is alphabetical vocabulary of analyzed APhU with an indicator of belonging to specified phrase and semantic group; inquiries responsible for selection of data in the table according to proper parameters; forms which are pages in the menu; macroses which provide navigation actions in the menu items of linguistic database. The main menu is represented by chapters “Areal phraseological units”, “Codes of culture”, “Axiological characteris-
tics” that corresponds to structural components of the concept human in the phraseology of East Steppe Ukrainian dialects.

Ge Tszinsh·en’ and I. Kupriyeva [Ge Tszinsh·en’, Kupriyeva] use database technology to create a multilingual parallel corpus of phraseological units. The algorithm for working with multilingual factual material is carried out according to the following principle according to the language group: ranking according to thematic affiliation, lexicographic, contextual and conceptual analysis of the semantics of each phraseological unit. The results of such a linguistic procedure are placed in tables of the appropriate type. Subsequently, the data in the tables form the basis of the databases for each language group. Taking into account the fact that lexicographic sources are included in the process of work as a bibliographic base, each table is supplied with a list of sources of the literature used. When organizing a corpus, this will allow the search engine to provide information about cited sources.

Zh. Krasnobayeva-Chernaya [Krasnobayeva-Chernaya] positions the terminological database “Classification parameters of phraseological units” as an electronic terminographic product created for storing information, optimizing and intensifying system research on fundamental issues of phraseology and phraseography, works devoted to the problems of comprehensive analysis and parameterization of phraseological units. The first stage of designing such a database is associated with the formation and solution of information tasks aimed at creating an information resource: a) determining the principle of ordering phraseological terms; b) selection of terms with the archiseme ‘phrase-classification type’ from scientific literature in order to form an alphabetical register; c) establishing the composition of the selected terminological subsystems; d) description of terminological subsystems; e) creation of an electronic catalog of terms for further computer processing of the collected information. The structuring of the subject area ‘phrase classification’, which is displayed in the database, and the organization of its infological scheme depend on this system of tasks. The next stage in creating a database is the development of a datalogical scheme, which is a system of tables, the fields of which display information about the described objects-terms: number, term, terminological subsystem, scientific source, definition, illustration, paradigmatic relations of the term. The modeled DB is a special terminological dictionary that has 113 terms for designating the types of phraseological units, covers 17 classifications of phraseological units and can be used for educational purposes by students of philological faculties of higher educational institutions.

4. LDB “Fundamental Human Emotions in English Phraseology”: structure and function. Factographic LDB “Fundamental Human Emotions in English Phraseology” is being developed within the framework of the basic provisions of psychology of emotion (E. Izard [Izard]), emotiology (N. Krasavskiy [Krasavskiy], V. Shakhovskiy [Shakhovskiy]), linguoculturology (A. Wierzbicka [Wierzbicka], E. Piirainen [Piirainen]), phraseology of the English language (A. Kunin [Kunin], R. Moon [Moon], S. Fiedler [Fiedler]) and is characterized by the following features:

1) type of linguistic units of description: phraseological (contains phraseological units);
2) the aspect of describing phraseological semantics: phraseological emotiology based on the principles of ideographic articulation, which made it possible to distinguish the phraseosemantic field “Emotion”, positioned as a set of PhU, united by one archetype ‘emotion’, which reflects the common categorical properties and characteristics of all components of the field. The main issues of emotiology – the science of verbalization, expression and communication of emotions, include: typology of emotional signs; influence of emotional type (mind style) on the formation of the linguistic picture of the world, the concept of emotional linguistic picture of the world; correlation of lexicons of emotions in different languages of the world; national and cultural specifics of expression of emotions; criteria of emotionality of language and its signs; the relationship between linguistics and paralinguistics of emotions as two semiotic systems; lexicography of emotionality [Shakhovskiy : 33–34] etc.;
3) linguistic tasks: to model the emotional picture of the world in English phraseology based on fundamental human emotions. Emotions are positioned in the study as complex processes that have neurophysiological (emotion as a function of the somatic nervous system), neuromuscular (facial activity) and sensory (emotion is repre-
sented by experience) aspects. To the criteria for the selection of fundamental emotions E. Izard includes: 1) specific nerve substrates; 2) manifestation by means of a clear configuration of muscular movements of the face (facial expressions); 3) clear and specific experience, perceived by human; 4) the emergence of evolutionary and biological processes; 5) organizational and motivational influence on the person (promotes its adaptation). Emotions of interest, joy, surprise, sadness, anger, disgust, contempt and fear meet these criteria. If interpreted as facial expressions of eye and head movements, the emotion of shame can be added to this list. If pantomime manifestations are also considered as an expressive component, then fundamental emotions include embarrassment (shyness). The emotion of guilt is also referred to as basic emotions, although it does not have a clear facial expression or pantomime expression. The question of distinguishing between emotions of shame, shyness and guilt, as well as the possibility of their attribution to fundamental emotions is a separate problem in psychology. Following N. Krasavsky, we define the emotional picture of the world as “a certain number of emotionally "processed" by human on the basis of sensory, tactile, in general – perceptual images emanating from the environment, ideas, perceptions, feelings of spoken concepts, which are a projection of our inner, mental world” [Krasavsky : 29];

4) data source: contains data of two types: a) dictionary data, i.e. data of phraseological dictionaries of the English language; b) information on phraseo-semantic groups determined on their basis (‘interest’, ‘satisfaction’, ‘surprise’, ‘sadness’, ‘anger’, ‘disgust’, ‘contempt’, ‘fear’, ‘embarrassment’, ‘shame’, ‘guilt’), about the indicator of the cultural code and the belonging of the phraseological unit to a specific cultural code (anthropic, somatic, zoomorphic, phytomorphic) etc.;

5) scope of application: designed for a) securing the program competencies of the educational and professional and educational and scientific programs of specialty 035 “Philology” (03 “Humanitarian sciences”); b) use for various research purposes and phraseographic practice; c) in translation activities;

6) is executed in the relational database management system Microsoft Access, which is part of the Microsoft Office package. The choice of this program is due to its convenient graphical interface and the presence of a wide range of possibilities. LDB consists of several interconnected tables, which contain data distributed over rows (records) and columns (fields). Each record is a collection of the values of several fields, which, depending on their function, contain data of different types, for example, text, numeric, hyperlinks, attachments.

When filling in the main data tables, the following data are extracted from the dictionary entries of phraseographic sources: phraseological unit, stylistic mark to it, if any; phraseological meaning, context, if available. The LDB contains information about the phraseological-semantic group, which includes the phraseological unit, the indicator of the culture code and the culture code to which the phraseological unit belongs. As an example, consider the PhU record:

PhU_
Stylistic Litter_
Phraseological Meaning_
Phraseosemantic Group_
Culture Code Index_
Culture Code_
Context_

6. Conclusions and prospects. The strategy of creating LDB is aimed at their multiple multifaceted use, i.e. processing of language objects that are presented in such databases, according to different parameters and types of information. As a result of the study, phraseological units were selected, recorded, systematized for the meaning of fundamental people in the English language and a conceptual structure for describing such units was developed, which was reflected in the LBD format.

LBD “Fundamental Human Emotions in English Phraseology” provides information of both linguistic and auxiliary nature about fundamental human emotions, allows them to search, sort and select according to selected criteria (parameters), as well as compare information from several sources. The format of presentation of phraseographic data in the form of LDB allows for a new approach to the study of the emotional picture of the world.

As a research perspective, we will designate the replenishment of the LDB “Fundamental Human Emotions in English Phraseology” with new units, the possibility of attracting the national corpus of the English language.
REFERENCES


