

**SECTION 3**  
**LANGUAGE, CULTURE AND COMMUNICATION**  
**IN COGNITIVE PERSPECTIVE**

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**CONGITIVE-ONOMASIOLOGICAL ASPECT**  
**OF ENGLISH CARDIOVASCULAR TERMINOLOGY**

The present work deals with the cognitive-onomasiological aspect of English cardiological terminology. The purpose of the study is to determine the general principles of conceptualizing information about human circulatory system in the English language worldview. The material for the study is represented by 300 terms, selected from lexicographic sources (Dzul' & Zimen'kovskiy 2003; MD 2003-2019).

English cardiovascular terminology includes names of organs and their parts (*artery, vein, vessel*), diseases and pathological conditions (*heart failure, heart block, ischemic stroke*), instruments / methods of investigation (*left ventricular assist device, balloon catheter*) and treatment (*thrombolytic therapy*). The terms are represented by native words (*heart, heartbeat*) and borrowings, mainly from Latin and Greek (*cardialgia, cor triloculare biventricula*). Considering the morphological structure, cardiovascular terms can be subdivided into simple words (*aorta, atrium*), derivatives (*cardiac, dysrhythmia*) and compounds (*single ventricle, pulmonary vein*).

In this research, we follow the principles of basic frame methodology developed by S. Zhabotynska (Zhabotynska 2010), according to which all conceptual structures exposed in forms and meanings of linguistic units are organized in 5 operational frames: The Thing, the Possession, the Action, the Identification and the Comparison frame. The analysis of our material showed, that onomasiological structures of English cardiovascular terminology follow complex conceptual models created mainly by means of frame integration. This enables to reflect in the term the most essential information about the concept relevant for the professional sphere. The choice of a conceptual model by naming correlates with the type of designatum (organ/ disease/ device etc.).

The Identification Frame and the Thing Frame schemas are activated mainly by naming organs, their physiological and pathological conditions. The classification schema of the Identification Frame together with qualitative schema of the Thing Frame [X (concept) is Y-classifier; Y is such Z – quality] represent in the name of an object both the class this object belongs to and its specific quality: *chaotic heart* “uncoordinated cardiac action” [X is heart; the heart is such – chaotic]. The integration of the classification schema with mode of being schema [X is Y- classifier; Y exists so Z] depicts abnormal conditions of organs (*horizontal heart* “description of the heart's

electrical position... when the electrical axis lies between -30 and +30 degrees” [X is heart; the heart exists so – horizontally], also *vertical heart* [X-heart exists so – vertically]).

Possession Frame is represented mainly by the part and whole schema, which imprints in the form of the lexical unit information about malformation in an organ. For this purpose, the part and whole schema integrates with the qualitative (the Thing Frame) and the likeness schemas (the Comparison Frame) to convey information about the abnormal/ affected part of an organ and its specific characteristics, such as:

- quantity [X has Y; Y is that many Z] - *three-chambered heart* [X-heart has Y-chambers; Y- chambers are that many - three], also *triatrial heart*, *double-inlet ventricle*;
- likeness of the part to another object [X has Y; Y is as if Z-correlate] – *hairy heart* “acute pericarditis with fibrinous exudate” [X- heart has Y-exudate; Y is as if Z - hair].

The Action Frame is used both by naming diseases and instruments/ devices used in cardiology. The schemas of this frame bear information about:

- disturbances in the activity of the system – state/process schema [X-agent acts] – *atrial flutter* “a type of arrhythmia in which the atria beat very fast” [X – atria act – flutter];

- cause of disease – contact schema [X-agent acts upon Y-patient/affected] – *beer heart* “alcoholic cardiomyopathy” [X-beer acts upon Y-heart]; causative schema - *viral pericarditis* [X – pericarditis is caused by Y- virus];

- the action of the device used in cardiology – contact schema [X-agent acts upon Y-patient/affected] *heart assist device* “mechanical device that is surgically implanted to ease the workload of the heart” [X-device assists Y-heart].

The Comparison frame is represented predominantly by likeness schema (metaphor) [X-compared is as if Y-correlate], which integrates with classification schema by naming of heart conditions: *bread-and-butter pericardium* [X is pericardium; pericardium is as if bread-and-butter]. The integration of likeness schema with causative schema is used in naming manipulations to indicate the result of a medical procedure and similarity of this result to another object (*maze surgery* “a type of heart surgery that is used to treat chronic atrial fibrillation by creating a surgical “maze” of new electrical pathways ...” [X-surgery creates Y -pathways; Y – pathways are like Z - maze]).

The likeness schema turned out to be the most productive one and participated in the formation of 25 % of analyzed terms. The correlate slots of the schema are filled in with names of house-hold objects (*boat-shaped heart*, *sabot heart*, *flask-shaped heart*, *water-bottle heart*), natural objects and phenomena (*stone heart*, *spider burst*), food (*icing heart*, *bread-and-butter pericardium*) etc.

The results of the analysis let us draw the following conclusion. The onomasiological models of English cardiological terms reflect the conceptual models activated by naming of this fragment of world view. These conceptual models are predominantly complex and result from integration of various schemas of different frames. Frame Integration enables the speaker to represent in the onomasiological structure of the term the nature of the concept (the class of an object / phenomenon named) as well as those features that are the most relevant for profession communication (state, affected parts, likeness to another object). The frame integration makes the terms more precise, and, respectively, provides a better understanding of medical concepts.

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**ORIENTATIONAL METAPHORS  
IN ENGLISH IDIOMS**

Worldview formation, means employed by speakers to encode their experience, knowledge and impressions about the environment are among most actual issues of modern linguistics. The universal and specific features of ethnic culture are mirrored in various layers of lexicon, particularly in phraseology that combines the properties of verbal and cultural codes.

It is obvious that the process of phraseological interpretation of the world is grounded in the associative nature of thinking. According to G. Lakoff and M. Johnson (Lakoff & Johnson 2003), human thinking is all metaphorical. Therefore, cognitive (conceptual) metaphors guide our consciousness, define our experiences and behaviors. They are an instrument of knowledge of the world and enable the accumulation of new knowledge on the basis of previous experience. That is how abstract concepts are updated in terms of specific concepts.

The purpose of this study is to analyze the role of the orientational metaphors in formatting the English-language worldview, find out what kind of knowledge about the environment is encoded in phrasemes with the spatial component; to establish cognitive domains for spatial relationships.

The material includes 85 set expressions which structurally incorporate lexemes with spacial (locative or directional) meanings. First, phraseological units were selected from five dictionaries of modern English. Then, the meanings of the selected idioms were verified by means of contextual analysis in 45 text fragments. After that the selected phrasemes were subjected to conceptual analysis to find out about the cognitive domains associated with 'space'.

The most productive domains are as follows:

HUMAN EMOTIONS (POSITIVE EMOTIONS = UP as in *Chin up!* "telling someone to be brave and happy even though they are in a difficult situation", *over the moon* "be very happy about something", *on top of the world* "happy and elated";