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COGNITIVE SEMANTICS OF THE ENGLISH VERBS OF SOUND

N.A. Gunina

Tambov State Technical University, Tambov

Represented by Doctor of Philology, Professor M.N. Makeeva

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Abstract: The paper is devoted to the relation between cognition and language in the framework of fast developing branch of linguistics, i.e. cognitive linguistics. It deals with the problem of conceptualization and categorization of the sound as the phenomenon of the external world; it focuses on the language representation of the events is illustrated by the semantics of the verbs of sound.

Categorization of events, facts and phenomena is determined by different ways of reality conceptualization. The latter as one of the most important processes in the cognitive activity of a human being is closely connected with the concept formation, conceptual structures and the conceptual system as a whole in the human mentality. The concepts development in the mind of an individual is based on the experience which is required to perceive certain types of information and design the conceptual system [1].

Conceptual system reflects the totality of human knowledge obtained in the course of the people's cognitive activity and shaped as separate concepts, which correlate with lexical items. Thus, any area of human activity is reflected in the conceptual structures. Similarly the English verbs of sound are semantic units which are language representations of a particular part of the human conceptual system. Studying of this part of the conceptual system is aimed at the detection of the minimal units (concepts) which form the basis for the categorization of these linguistic units (sound verbs) as language representations of the concepts.

In the course of the examination of conceptual structure and identification of the main principles of conceptualization of the reality one should bear in mind that categorization is a step-by-step process: first an individual's

Гунина Наталья Александровна – кандидат филологических наук, доцент кафедры «Иностранные языки», e-mail: natalya_gunina@mail.ru, ТамбГТУ, г. Тамбов.

perception of the world is conceptualized, and then this conceptual representation is revealed in the language. The sensitive perception is based on the reflection of reality objects and phenomena in the human mind shaped as different concepts in the lexical meaning of words. In other words, the semantics of linguistic units "grasps" a particular part of reality. Obviously the language and lexis in particular is a means of objective world reflection. Consequently the lexical meaning of word presents a specific part of human knowledge about the object or phenomenon and is related to the word use in typical situations and contexts [2, p. 48].

Basically, there are two approaches to the semantics of words used to describe different sounds. According to the first one, the meanings of words expressing sounds can be reflected through a variety of acoustic categories, such as volume of sound, pitch level, time-value, etc. as well as qualitative characteristics, like "resonant", "sharp", "repetitive", "reverberant" and others [3]. Another one was put forward by the Polish linguist, Professor A. Wierzbicka, who relates the semantic structure of sound words with the typical situation [4].

These two approaches seem to be incomplete as they do not encompass the ability of sound words to reveal the world around us. Obviously, the words which are used to describe sounds in general and the verbs of sound in particular are mans of language representation of the concept "Sound" which is supposed to have a complex, multi-layer structure. The notion concept involves all the knowledge about the object including both significant and insignificant features, which are required to describe and nominate the objects and phenomena. The concept reflects the object of reality in full, while the lexical meaning focuses on the features which are used for communicating this notion.

The present-day linguistics has a great variety of interpretations of the notion of "concept Yu.S. Stepanov believes that a concept is the "content of the notion", the essence of the word [5]. A.P. Babushkin considers the concept as a discrete mental unit which reflects the object of real or imaginative world and is kept in the national memory of native speakers in the verbalized form [6, p. 29]. In the Brief Dictionary of Cognitive Terms the concepts is defined as "operational meaningful unit of memory, mental lexicon, conceptual system, brain language, and the whole picture of the world reflected in the human mind" [7, p. 90]. In R. Jackendoff's opinion, in the description of the words' semantics concepts are associated with the structural elements of the semantic structure which is similar to the conceptual structure [8].

Although there are some contradictions in the interpretation of the term "concept", which justify the variety of approaches to its description and explanation, it is obvious that all these definitions have much in common. Representatives of different linguistic schools agree on one and the most important thing – a concept is a unit of mental activity. This fact helps to understand the essence of the categorization process. Take for instance the object of the given research, i.e. the verbs of sound. These words present not just a group of semantically related lexical items but a means of linguistic representation of the concept "Sound" with its structure reflecting the human experience obtained as a result of aural impression.

Since the concept formation is based on individual's personal experience and involves both empirical and mental work the concept itself has a complex multi-layer structure. The concept has no rigid structure and sequence of layers; their interaction is individual and is based on the person's experience [9]. However the content of the concept should include the characteristics, reflecting a set of associations which people have about particular mental units being a part of the common knowledge and available to the perception of other people. Let's move on to the description of the structure of the concept "Sound".

Concept "Sound" and its Structure

In order to describe the concept "Sound" it is necessary to analyze the essence of the notion "sound". The American Heritage® Dictionary of the English Language: explains the sound as "vibrations transmitted through an elastic solid or a liquid or gas, with frequencies in the approximate range of 20 to 20,000 hertz, capable of being detected by human organs of hearing" [10]. Britannica gives a similar definition of the notion "sound", i.e. "mechanical disturbance that propagates as a longitudinal wave through a solid, liquid, or gas" [11]. The comparative analysis of the definitions of this notion suggests that "sound" presents both a physical phenomenon and the result of aural impression. What is more, these two aspects of the notion have cause and effect relation. It implies the need for the examination of both objective and subjective factors which are reflected in all the layers of the concept "Sound". Obviously, the structure of the concept contains the characteristics of these two levels of representation – the objective and subjective. Conceptual characteristics of the first level reveal the content of the concept at the natural or physical angle, while those of the second level depend on individual's perception of sound as a natural phenomenon.

Sound as a physical phenomenon possesses a particular combination of acoustic characteristics, such as pitch, volume and height. These parameters play a significant role in the perception of various sounds. It is known that sounds of different acoustic types do not exist all by themselves but accompany a great variety processes and phenomena of the natural world. The sounds which inform about the coming danger (like volcano eruption, predators' attack, thunderstorm, etc) trigger negative feelings. Actually, the sounds of this type are usually low, loud, strong, sharp and noisy. The sounds of another acoustic type (like birds' singing, music, etc) make people feel good. In fact, these sounds are not loud, they are pleasant to hear.

The present-day research into psychoacoustics shows that the negative feelings caused by one group of sounds and positive feelings caused by another group can be explained by the sensitivity of the human ear to the sounds of different pitch and volume level. The high frequency sounds are more favorable to the human perception. Besides, it is experimentally proved, that a very loud sound can be painful and even damage the hearing perception of the human ear [12]. Another important physical characteristic of sound is the sound duration The temporal component can't be neglected since the sound waves exist only in the real time. Thus, the most significant for the human perception of the sound

are the following characteristics: pitch, volume and duration. These parameters are reflected in the semantics of the verbs of sound. It should be noted that human perception of sound is a kind of assessment of what a person hears with a set of characteristics. When someone describes the sound as loud or quiet they mean how well it can be heard by an individual. The ability of human ear to distinguish different levels of volume makes this characteristic really meaningful for the semantic structure of the examined verbs.

It is universally accepted that all verbs represent the concept of event or situation. In other words, the interpretation of the verb as the whole event involving some dynamic changes and certain participants is closely related to the concept of motion. While the motion suggests some relocation of the objects in the space, the sound itself comes from the motion and can't be generated without it. Sounds do not exist all by themselves but accompany different natural phenomena and changes. Basically, there can be 4 types of motion which cause the sound: 1) hits and collisions; 2) friction; 3) breaking of the object integrity; 4) vibration. The connection between the motion and the object of sound is also revealed in the human voice, which is generated by the vibration of the vocal cords and the motion of the speech organs in the individual's mouth.

The semantics of the examined verbs reflects not only the acoustic characteristics of the sound but its dependence on the movement. By the source of the sound these verbs can be divided into two groups: the first group includes the verbs which are defined through the source of the sound and the motion causing it (thunder, crash, slam, etc) while the second group consists of the verbs which are used to express the sounds made by people and animals (bark, shout, laugh).

As the concept "Sound" is a physical notion it is based on an individual's perception of the sounds. Supposedly it reveals not only the acoustic characteristics of the sound and its connection with the motion but some properties which are related to the hearing perception. Basically, there exist three main functions of hearing perception – cognitive, communicative and regulative.

Cognitive function is based on the ability of the human ear to perceive the physical stimuli, which trigger different sensations. According to present-day psychologists, sensation together with the perception is the starting point for cognition. The differences between sensation and perception have varied according to how the terms are defined. A common distinction is that sensations are simple sensory experiences, while percepts are complex constructions of simple elements joined through association. Another is that perception is more subject to the influence of learning. Both sensations and percepts form the basis of the experience which is required for the cognitive activity of an individual.

In cognitive psychology perception is interpreted as a process of transmission and elaboration of information [13]. The object and its property are atomized and reconstructed by means of a flow of information in the mind, conceived as computer software. And the process of perception is more like an action, while the mind is more or less a representational device.

The main function of the perception consists in the ability of the human being to categorize objects and classify them according to the object's properties. The perception of sounds is unique as it involves not only hearing but visual and tactual sensing. The information resulting from the individual experience plays a significant role. The experiments show, that most people perceive low pitched sounds as "big" and "thick", while high pitched ones are perceived as "small" and "thin" [14]. Time and space parameters are vital for the construction of the representation of the sound. It is explained by the fact that the function of perception is to represent objects, properties, and facts. The objects of perception are supposed to be localized and identified. Identification of the object of perception involves the mental representation of its source, in other words most types of noises and sounds are associated with the particular references.

On the other hand the "image" of a sound, its mental representation tends to be vague and trigger multitude of associations as there is hardly a single sound or noise which is referred to a single object of perception [14]. Take for instance the verb "to hum", which typically describes the noises made by insects, but metaphorically it can be used to characterize the human speech or the movement of vehicles. E.g., "I felt like a fly buzzing among mammoths as our tiny *plane hummed* over the dramatic mountainous landscape" [15]. In the given example the ability of a fly to produce a buzzing noise is referred to the plane. The acoustic characteristics of the sounds (noises) form the basis of the sound images which are basically mental representations of some information about the world.

Thus, the cognitive function of the perception is closely connected with the categorization of objects of perception as the sources of a particular sound and the information contained in the sound itself and about the possible configuration of the external world as a whole.

The communicative function of the hearing perception depends on the conceptualization of sounds by their information content. In fact, the sounds and noises of the external world are supposed to inform the people about the changes and events of our everyday life. They provide information about the localization of objects and help to adapt organisms to their environment. Besides, they are necessary for the adequate understanding of the world and space orientation. On the other hand, sounds including human speech, music and technical signals are means of communication. It is worth noting, that sounds always combine two functions – communicative and cognitive as they contain the data on the environment and the source of the sound. The importance of the communicative potential of the sound is explained by the significance of the communication itself for the human being, and the prior role of acoustic channel.

The regulative function of the hearing perception involves the ability of a human being to evaluate the changes happening in the external world and anticipate the results of the interaction with the environment [14]. Regulative function depends on the previous experience of an individual in perceiving the objects similar to the ones perceived at the given time. Apparently the human being is able to hear and conceptualize the sounds which are associated with a

particular sensor image. Lack of the experience can lead to inadequate assessment of the events and inability of human beings to regulate their activity.

The regulative function of the hearing perception influences the way people perceive the objects and results in the emotional characteristics attributed to some sounds. The sounds and noises trigger both senses and judgments about the events accompanied by these sounds. The ability to evaluate sounds is proved by the semantics of the sound verbs. Most verbs are defined in the dictionaries both through acoustic and emotional characteristics. Take for instance, the verb "to roar", which is defined as follows: To utter a loud, deep, prolonged sound, especially in distress, rage, or excitement [16]. As it is clearly seen in the given example, the meaning of the verb comprises both qualitative (loud, deep, prolonged) and emotional (in distress, rage or excitement) characteristics.

To sum up, the concept "Sound" is a complicated mental representation which is formed under the influence of a multitude of factors, including physical (acoustic characteristics of the sound), spacial (movement and localization of the objects in the space), cognitive (information potential of the sound), communicative (sounds as means of communication) and regulative (emotional evaluation of sounds). All these are factors provide the integrity of the concept and the basis for the conceptualization and categorization of the events of the external world.

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Семантика английских глаголов звучания в когнитивном аспекте

Н.А. Гунина

ГОУ ВПО «Тамбовский государственный технический университет», г. Тамбов

Ключевые слова и фразы: когниция; концепт; категоризация; концептуальная структура; концептуализация; семантика; язык.

Аннотация: Рассмотрены вопросы взаимодействия языка и мышления в рамках развивающегося направления когнитивной лингвистики. Изучается проблема концептуализации и категоризации звуковых событий окружающего мира и их репрезентации в языке на материале глагольной лексики.