LINGVISTIKA A INTERKULTURNÍ KOMUNIKACE

BASIC DEFINITIONS: SEMANTIC PRIMING FOR METAPHOR DICTIONARY SOFTWARE

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Abstract. The paper describes the method of basic definitions for emotion metaphors worked out on the basis of descriptor theory of metaphor and theory of semantic primes. The method allows to standardize and classify metaphors according to the user's query in MS Office Access. Assigning digital codes to metaphors allows to sort them according to source and target domains, as well as to find synonyms and equivalents in Belarusian and English. The query scheme and lists of basic definitions are provided. The method can be applied for metaphor dictionary software or other word processing systems linked to certain semantic or thematic groups within one ore more languages.

Keywords: metaphor; emotion metaphor; database; e-dictionary; metaphor dictionary; semantic primes; basic definition; descriptor theory of metaphor.

Contrastive study of emotion metaphors in Belarusian and English conducted by the author shows that while the number of words and word combinations that can be used metaphorically to describe feelings and mental acts is hardly limited, basic emotions, communicative behavioral patterns and human reactions can be described according to their type, duration and intensity by quite a short list of basic definitions representing a sort of natural semantic metalanguage.

Semantic primes or semantic primitives, as suggested by Anna Wierzbicka, are treated as concepts that are innately understood, but cannot be expressed in simpler terms [2]. Recent studies of metaphor in language [1] tend to analyse metaphors in syntactic framework mostly dealing with 'traditional collocation challenge' leading to metaphor identification. At the same time, for practical purpose, it is sometimes more important WHAT metaphors mean, not HOW they do it. That is why in this paper I will try to present an applied linguistics method of semantic priming implied for dictionary database compilation.

In the beginning of our practical research aimed at creation of a bilingual

dictionary of metaphors, we considered two basic theories that were thought to be useful for classification and sorting of metaphors, the first one by Anna Wierzbicka and the second one, the descriptor theory of metaphor by Anatoly Baranov. The theory of semantic primes was of no use for our practical purpose as primes like <bad> <feel> <a short time> were too general for describing different hues of emotion and their expression. Looking for a list of more precise semantic units for metaphor categorization, we turned to Baranov's theory.

According to Baranov's descriptor theory of metaphor, each metaphor was indexed with a number of significative (source domain) and denotative descriptors (target domain) [3], e. g., we assigned to metaphor *dart* (a sudden, intense pang of a particular emotion, unexpectedly strong surge certain emotions) denotative descriptors <intense>, <short>, <emotion> and significative descriptors <object>, <military and hunting>, <weapons and accessories>. Having assigned about 200 descriptors to more than a thousand metaphors we faced up with failure of our database to sort metaphors within one language and within the pair of languages according to their true semantic relations.

This failure made us look for a semantic unit for metaphors description that would be simple enough to be grouped with other units to build up the semantic structure, but at the same time it was expected to be something less general than semantic primes and more related to dictionary definitions, as the purpose of our research was to compile an electronic bilingual dictionary of metaphors (the structure and interface describes in [4]).

Thus we implemented the idea of semantic primes and metaphor descriptors to our material and worked out a set of so called 'basic definitions' based on dictionary definitions (semantic and connotative aspects) which were standardized. One basic definition is used to describe from 4 to 47 separate metaphorical meanings, such as 'bad mood, sadness' (47 entries), 'a large number of words, impressions, etc.' (41), 'affects' (38), 'a sudden unpleasant feeling' (30), 'unexpected actions that contradict the norms' (12), etc. With regard to the source domain we worked out about 60 descriptors in relation to four semantic spheres – Human, Nature, Object, Processes and Relations with thematic grouping within each sphere, e. g. 'nature', 'wildlife', 'plants and their parts' (our classification is described in detail in [5]).

For metaphors processing we created a database in the Microsoft Office Access 2007. As computer data processing involves the establishment of correlation between a linguistic sign (in this case, a basic definition) and a mathematical sign, we assigned certain numeric code to every definition. In addition to the basic definition codes (the set of assigned codes included those of source and target domain) we used the language code (Belarusian or English). Thus, metaphors with matching basic definitions and language codes were identified as synonyms (within one language) and metaphors with language mismatch – as equivalents. If one word had several different metaphorical meanings, we used numbers 1 to 4 (column 2: word sense

number) to differentiate metaphors. This is an excerpt from the main database (desfinition codes excluded):

WordID	WordSensNum	WordName	WordDefinition	WordExample	WordLang
693	1	TSUNAMI	a sudden increase in intensity (of an emotion, phenomenon, etc.).	[A voter revolution] sweeping all before it in a tsunami of voter rage. (M. Kelly).	1
799	1	АРЭЛІ*	1) пра ўзвышаныя, рамантычныя пачуцці.	Арэлі хмельнае радасці – Узлятаюць, Узлятаюць, Узлятаюць. (Т. Мушынская).	2
800	2	АРЭЛІ*	2) пра пераменлівыя, супярэчлівыя пачуцці.	Ўсё спакойней пачуццяў арэлі. Пастарэў сад, што быў малады. Неўпрыкметку, нябачна аселі Белым снегам на скроні гады. (Ул. Гетманчук).	2

For the database, we used the following denotative descriptors (translated from Belarusian): deceptive appearance; a sudden intense feeling; restraint; incomplete thoughts; the emergence of feelings, qualities; the return of consciousness, activity; something that hinders the development; eyes shine as a reflection of the state; enthusiasm; loneliness; friendliness; a subtle difference in the manifestation of feelings; a large number, the intensity of something; feigned courtesy; unpleasant memories; unexpected unpleasant feeling; active position in a dispute; insult; etc.

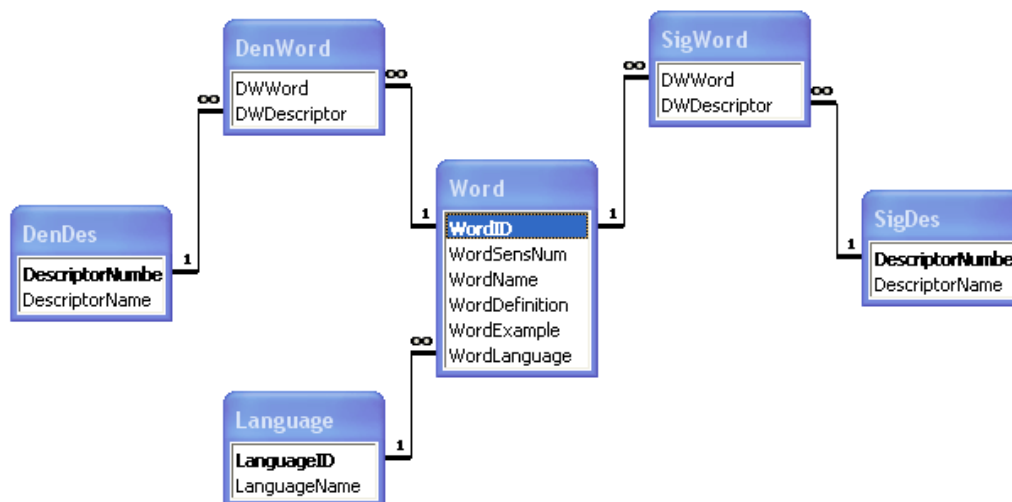The set of significant descriptors included: OBJECT: food, utensils, clothing, fabric, lighting devices, harnesses, mechanisms, ammunition, weapons and tools, structures and locally confined spaces, paths and roads, part of the subject matter; NATURE: nature objects: the celestial bodies, the elements of the earth's surface and landscape, natural formations, plants and their parts, animals, body parts and tissues, animals and their dwellings, sounds and actions produced by animals; weather: the atmosphere and the movement of air, clouds and precipitation, weather and natural phenomena; fire, water; HUMAN: tactile perception, thermal perception, taste perception, visual perception, auditory perception, illness and recovery, politics and war; PROCESSES AND RELATIONS: the processes occurring in materials or substances (objects), types of energy and physical phenomena,

interaction between the objects and the results of subjective action, spatial and parametric relationships.

The method of basic definitions as a type of semantic priming does not only help to categorize and classify emotion metaphors with reference to source or target domain, but also it can be used for simplifying the process of compiling dictionaries. The method enables multiple sorting based on correlation of semantic and connotation components of any set of words – be it one language (synonyms and antonyms) or two or more languages (equivalents).

In the database, the data processing is carried out by queries that reflect the links between sets of different basic definitions. According to the query, the user can get a list of metaphors relating to fire or mental illness, as well as to compare metaphors of the two languages referring to any source and target domain.

DenWord
DWWord
DWDescriptor

SigWord
DWWord
DWDescriptor

DenDes
DescriptorNumbe
DescriptorName

Word
WordID
WordSensNum
WordName
WordDefinition
WordExample
WordLanguage

SigDes
DescriptorNumbe
DescriptorName

Language
LanguageID
LanguageName

In the result of the described method application, we obtained quite a relevant metaphors processing outcomes, though proofreading and minor changes were still necessary as sometimes complete basic definitions match does not mean the match of words valence – collocations.

The possibility to work out a set of basic definitions for a certain semantic group and further sorting of the words according to the user's query provides a good base for an easier definitions processing for dictionary compilation. We consider the described method of basic definitions based on semantic priming theory to be of use for computational linguistics, dictionary software management, as well as for the theo-

retical study of metaphorical universals in different languages.

Библиографический список

1. Spärck Jones Karen. Semantic primitives: the tip of the iceberg // Words and intelligence: Part II: Essays in honour of Yorick Wilks. URL: http://www.cl.cam.ac.uk/archive/ksj21/ksjdigipapers/wilksbook07.pdf (date of access: 15.06.2016).
2. Wierzbicka Anna. Semantics: Primes And Universals. – Oxford University Press, 1996. – 512 p.
3. Баранов А. Н. Дескрипторная теория метафоры и типология метафорических моделей // Научно-образовательный портал «Лингвистика в России»: ресурсы для исследователей. URL: http://www.uisrussia.msu.ru/linguist/_A1_2_4_1_metaphor.jsp (дата обращения: 29.05.2008).
4. Шиманская О. Ю. Использование метода базовых определений и семантических оппозиций при составлении электронного двуязычного словаря метафор // Компьютерная лингвистика : научное направление и учебная дисциплина : сб. науч. ст. – Вып. 1. / редкол.: В. И. Коваль [и др.]; М-во образования РБ, ГГУ им. Ф. Скорины. – Гомель : ГГУ им. Ф. Скорины, 2010. – 236 с. – С. 166 – 170.
5. Шыманская В. Ю. Метафарычная рэпрэзентацыя псіхалагічнай сферы чалавека ў беларускай і англійскай мовах (на матэрыяле субстантываў) (з электронным дадаткам). – Мінск : РІВШ, 2016. – 124 с.

Bibliograficheskij spisok

1. Spärck Jones Karen. Semantic primitives: the tip of the iceberg // Words and intelligence: Part II: Essays in honour of Yorick Wilks. URL: http://www.cl.cam.ac.uk/archive/ksj21/ksjdigipapers/wilksbook07.pdf (date of access: 15.06.2016).
2. Wierzbicka Anna. Semantics: Primes And Universals. – Oxford University Press, 1996. – 512 p.
3. Baranov A. N. Deskriptornaja teorija metafory i tipologija metaforicheskih modelej // Nauchno-obrazovatel'nyj portal «Lingvistika v Rossii»: resursy dlja issledovatelej. URL: http://www.uisrussia.msu.ru/ linguist/_A1_2_4_1_metaphor.jsp (data obrashhenija: 29.05.2008).
4. Shimanskaja O. Ju. Ispol'zovanie metoda bazovyh opredelenij i semanticheskih oppozicij pri sostavlenii jelektronnogo dvujazychnogo slovarja metafor // Komp'juternaja lingvistika : nauchnoe napravlenie i uchebnaja disciplina : sb. nauch. st. – Vyp. 1. / redkol.: V.I. Koval' [i dr.]; M-vo obrazovanija RB, GGU im. F. Skoriny. – Gomel' : GGU im. F. Skoriny, 2010. – 236 s. – S. 166 – 170.
5. Shymanskaja V. Ju. Metafarychnaja rjeprjezentacyja psihalagichnaj sfery chalaveka ў belaruskaj i anglijskaj movah (na matjeryjale substantyvaў) (z jelektronnym dadatkam). – Minsk : RIVSh, 2016. – 124 s.

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