SEMANTIC RELATION OF MERONYMY IN LANGUAGES OF DIFFERENT STRUCTURE (CASE STUDY OF SEMANTICS OF BODY PART NAMES)

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The present paper investigates semantics of human body part names (BPN) in languages of different structure. The lexemes under study are characterised by a high level of polysemy, frequent occurrence and primary role in the processes of world perception and categorisation. The empirical data comprise 438 lexemes (expressing 1438 meanings), which were analysed in seven languages of different structure (related and unrelated) from two language families: Indo-European (featuring such language groups as Germanic (English and German), Romance (Spanish), Balto-Slavonic (Latvian, Ukrainian and Russian)) and Japanese-Ryukyuan (featuring Japanese). The data are analysed within the framework of meronymy relation and highlight the universal features of semantic change in the compared languages, thus presenting a model for more extensive and complex studies of the semantic potential of basic lexical units. The research is based upon the methodology of classical semantics and typology as well as contrastive lexical studies, and is aimed at revealing the nature of semantic universals and regularities in the process of BPN semantic development. The lexical units under analysis are generalised and systematically investigated using contrastive analysis and linguistic description, whilst their semantic structure is thoroughly described with the help of componential analysis. The paper focuses on the classification of their regular semantic change mechanisms and juxtaposes the cross-linguistic similarities as well as differences in semantics of body part names. The relation of meronymy reveals interdependence with that of polysemy. The introduced index of polysemy helps to compare the potential for polysemy development in the languages under analysis. The conducted research enables the formulation of semantic universals and regularities within BPN polysemy development in languages of different structure as well as the creation of a semantic typology of BPN in related and unrelated languages. The analysis is supplemented with the statistical data allowing for the verification of the results. The main principles of this research may be applied to different thematic groups of lexis, contributing to further development of semantic language typology worldwide.

Keywords: meronymy; meronym; BPN (body part names); semantic change; polysemy; anthropomorphic metaphor; metonymy; semantic universals and regularities.

Introduction

One of the fundamental types of semantic hierarchical relations in the lexical system of the language is the meronymic or Part-Whole relation (Goddard, 2001, p. 1190; Heydrich, 1995, p. 51-52), which can be treated as a language universal. The meronymic relation can be expressed by the semantic formula *X is a part of Y*, for example: Germ. *Ohr* 'ear', Engl. *ear*; Germ. *Teil* 'part', *Stück* 'piece', Engl. *part*, *piece*. Traditionally remaining in the spotlight of formal logic, mathematics and philosophy, it had been of no interest and irrelevant to linguistics for a fairly long time. The axiomatic characteristics of this type of logical and philosophic relations were introduced by Plato and Aristotle (Aristotle, 2009; Platon, 1987) and the formal and ontological premises were formulated later on in the works of E. Husserl (Husserl, 2009) and L. Ridder (Ridder, 2002). This research supports the assumption that the meronymic type of relations should be treated separately from the hypo-hyperonymic (Cruse, 1979, p. 30; Gorska, 2003, p. 110; Erdeljac & Sekulić Sović, 2018, p. 25) as well as possessive (Heine, 1997, p. 19) relations. Since the 1980-1990s meronymic lexis has been used as a testing material in the studies of semantic universals (Andersen, 1978) as well as in the psycholinguistic and cognitive scientific paradigms (Heydrich, 1995; Gerstl & Pribbenow, 1995; Iris, 1988; Lutz, 1996; Tversky, 1990; Winston et al., 1987). Thus, the undertaken analysis of the theoretical framework has shown that meronyms deserve a separate systematic approach to their study, which is equally substantiated by Vohidova (Vohidova, 2016, p. 88). The theoretical insights into this problem are equally complemented by works highlighting innovation tendencies in the lexical system of the language (Arndt-Lappe, 2018; Birner, 2018; Gansel, 2017; Ivantsiv, 2018; Hagemann, 2017; Nikitina, 2017; Sander, 2018).

Being formed by lexical units belonging to the old basic lexicon of any language, meronyms are of utter importance for typological semantic research into the lexical systems of languages of different structure (Bowern, 2017, p. 3). This study aims at highlighting the similarities and differences of semantic processes in the lexical system of diverse languages and presents a case study of meronymic lexis (exemplified by body part names, further referred to as BPN), which reveals the universals as well as the regularities of their semantic change, tracing the basic mechanisms and models of their polysemy development, and formulating the main principles of meronymic interrelations. They can be treated as a model for highlighting the main semantic regularities of the polysemy development of meronyms, outlining their cultural value and

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peculiarities of their logical segmentation by the speakers of different languages, searching for universal mechanisms and models of semantic change (Materynska, 2012).

Semantics of BPN within typological and contrastive studies is investigated in a wide range of languages: mostly on the material of Indo-European languages (Blanco, 1999; Filar & Głaz, 1996; Goschler, 2008; Hübler, 2001; Wildgen, 1999); of German and Indonesian (Siahaan, 2008); of the English, French, Russian and Tatar languages (Shafikof, 1998, 2000), Chinese (Yu, 2009). Cross-cultural research of body representation in language and culture is an indispensable element of intercultural communication (Heringer, 2017, p. 188; Yu, 2008, p. 140, 2009, p. 4; Sharifian, 2017, p. 25). The data collected in the present research corroborates the idea that our world perception is based upon the anthropocentric way of thinking. Metaphor in general and anthropomorphic metaphor (as a widespread representative of conceptual metaphor) in particular are viewed not only as a part of a human cognition mechanism (Goschler, 2008, p. 31; Lakoff & Johnson, 2008, p. 51), but also as an element of common social experience and system of traditional beliefs (Bilyk & Pyliachyk, 2018, p. 119). The anthropocentric model of world perception has evidently influenced the dynamics of lexical system development. The role of a human being in the process of world categorisation from the philosophic viewpoint is now seen as predominant (Scheler, 2018, p. 60). The examined data provides a fertile testing ground for anthropomorphic metaphor.

The importance of this research is explained by a lack of systematic research on meronymic relations in languages of different structure. A complex investigation of semantic regularities and semantic universals in diverse languages points to the fact that one of the most typical thematic groups – BPN – is united not only by the meronymic (Part-Whole) but also by the polysemic relations.

The objectives of this paper are: to determine how the fundamental nature of the Part-Whole relation correlates with semantic universals and generates regularities in the process of BPN polysemy development; to establish the similarities and differences of semantic processes in the languages under analysis; to model the basic principles of the semantic development of meronyms; to identify the interrelations between meronymy and polysemy as the basic semantic relation types in the lexical system of language.

Methodology

In accordance with the key focus of the article, the main units under analysis are lexemes denoting BPN and belonging to the most ancient layer of basic vocabulary in almost all the languages of the world (Brown, 2001, p. 1179). The language sample comprises seven languages (related and unrelated) from two language families: Indo-European (featuring such language groups as Germanic (English and German), Romance (Spanish), Balto-Slavonic (Latvian, Ukrainian and Russian)) and Japanese-Ryukyuan (featuring Japanese). The total number of the lexemes under analysis is 438 (expressing 1483 meanings). (For the distribution of the lexical units under analysis across the compared languages, see Tab.1). The empirical data were extracted from a wide range of lexicographical sources.

The achievement of the above-mentioned goals presupposes the realisation of the following procedures: cataloguing the lexical units under analysis, revealing their basic semantic characteristics and describing the models as well as establishing the level of their polysemy development. Based on the observations of the similarities and the differences of meaning change in the BPN, a range of semantic regularities as well as implicit statistical universals are introduced and highlighted. The elaborated metaphorical and metonymical models of their polysemy development are indicative of the existence of the shared notions and stereotypes in the process of world perception and categorisation by the speakers of both related and unrelated languages.

The typological investigation of body part appellations is based upon the methodology of classical semantics and typology (Croft, 1990; Comrie, 1981; Brown, 2002; Goddard, 2001, 2008), contrastive lexical studies, especially those aimed at delimiting the universals of semantic change (Brown, 2002; Österreicher, 2004). Contrastive analysis and linguistic description are used to generalise and systematically investigate the lexical units under analysis, which enables the language comparison. The semantic structure of the BPN is thoroughly described with the help of componential analysis. Establishing the semantic structure of the lexical items contrasted is based upon the investigation of concrete constellations of semes within separate lexical meanings, which allows for distinguishing the similar and distinct components of meaning of the BPN and contributes to outlining the direction of the metaphorical and metonymical transferences in the process of polysemy development.

The validity of the results obtained is substantiated by supplying the statistical data and examining not only the qualitative but also the quantitative characteristics of the semantic productivity of the body part names.

Results and Discussion

This paper asserts that the meronymic type of semantic relations is fundamental for the organisation of the lexical system of the language. Furthermore, it reflects the basic cognitive mechanism of humans, which is based upon the processes of segmentation and synthesis of the real world, i.e. of material objects and abstract notions. The semantic and logical Part-Whole relations in this sense are not only a way of taxonomic organisation of different systems but also a mode of thinking as well as of receiving and processing any information.

The thematic group of body part names as a miniature reflection of linguistic and extralinguistic mechanisms is a model that allows penetrating into the process of metaphorical and metonymical organisation of a human's world, exemplifying the semantic regularities which, due to their fundamental nature, do not depend on the genetic relations between languages. Apparently, closely related languages reveal more features in common than unrelated ones, but only the universal character of the meronymic relation can explain the identified similarities in the languages of different structure. This fact strongly correlates with other findings concerning primes and universals in the languages of the world (Goddard, 2001, p. 1191; Wierzbicka, 1999, p. 32).

As the generalising criterion applied to quantify the polysemy level of the lexical units under analysis, *the index of polysemy level* was introduced (Tab.1). It serves to establish the correspondence of the total number of the lexemes in the languages under investigation with the total number of their meanings (Materynska, 2012, p. 79; Shafikov, 1998, p. 145). The following table contains the statistical data about the polysemy level as well as the number of the lexical units investigated alongside their meanings.

Table 1. Statistical data reflecting the polysemy level of body part names in the language samples under analysis

Language	Number of lexemes under analysis	Number of meanings under analysis	Index of polysemy of body part names
English	63	345	5,48
Spanish	62	336	5,41
German	69	205	2,97
Russian	59	175	2,97
Ukrainian	60	168	2,8
Japanese	61	134	2,19
Latvian	64	120	1,87

An inspection of the data in the table reveals that the highest level of BPN polysemy is characteristic of English (5,48), while the smallest is recorded in Latvian (1,87). The difference between the levels of BPN polysemy of the extracted lexical units across the Slavonic languages is not so great. In the meantime, the inconsistencies are remarkable between German and English; Germanic, Romance and Balto-Slavonic languages. Latvian and Japanese are characterised by the lowest polysemy level. The discrepancies in the number of the lexemes in this language sample are explained by the differences in their nomination process. A simplex in one of the languages under analysis often corresponds to a compound in another language (e.g. Engl. *jaw*, Germ. *Kinnlade* 'jaw'; Engl. *iris*, Germ. *Regenbogenhaut* 'iris'; Engl. *thigh*, Germ. *Oberschenkel* 'thigh'); a derivative noun can correspond to a compound noun (Engl. *deltoid*, Germ. *Deltamuskel* 'deltoid', Ukr. *homilka* 'shank', Latv. *apakšstilbs* 'shank'); a simplex or a compound can correspond to a descriptional word combination consisting of an attribute expressed by an adjective and a noun (e.g. Germ. *Bauchdecke*, Engl. *abdominal wall*) or to a combination of a noun with the preposition *of* (Germ. *Nasenspitze*, Engl. *tip of the nose*; Germ. *Oberlippe*, Engl. *upper lip*; Germ. *Handrücken*, Engl. *back of the hand*; Engl. *palm*, Japanese *te-no-hira* 'palm'). Word combinations consisting of a noun with the preposition *of* belong to the so-called *ad hoc* forms which can be built in immense quantities and, for that reason, are not relevant to the present study. In the Indo-European languages, the body part names are mostly represented by simplicia.

Although compounding is productive in German, most of the compounds are built following a partitive semantic type (the names of the whole and its part are expressed explicitly – in accordance with the scheme "B belongs to A", "A has a B", "B is a part of A" whereby the B-component as a motivational stem belongs to the A-component describing the whole (sometimes also the bigger body part, e.g. Germ. *Augenbraue* 'eyebrow') or an attributive type (when the A-component describes the main quality of a body part, e.g. Germ. *Rundrücken* 'round back').

In Japanese, it is also possible to delimit the model where the part belongs explicitly to its whole (e.g. *ashi* 'leg', *ashiura* 'foot of a leg', *yubi* 'finger, toe', *oyayubi* 'thumb, *(literally)* big + finger/toe'). Therefore, simplicia develop the highest level of polysemy, while compounds due to their meaning complexity are characterised by a lower level of polysemy.

Furthermore, Japanese reveals *lexical syncretism*, with one lexeme being capable of denoting two or more formally associated body parts (e.g. *ashikoshi* 'legs and back', *bimoku* 'eyebrows and eyes', *goshi* 'five fingers', *honemi* 'bones and flesh', *kōfuku* 'mouth and stomach', *mehana* 'eyes and nose', *ryōude* 'both hands').

Another reason accounting for such differences between the compared languages is the culture-specific nature of the process of logical body part segmentation, for example, the Germ. *Busen*, Engl. *bosom*, Span. *pecho*, Jap. *chibusa* 'bosom', Germ. *Brust*, Engl. *breast*, Span. *tórax*, Jap. *mune* 'breast, thorax' correspond to such Balto-Slavonic lexemes as the Ukr. *hrud*, Russ. *grud* and Latv. *krūtis*, which express both of the meanings, 'bosom' and 'breast'. The Ukr. *palets* and Russ. *palets* denote a finger or a toe indiscriminately, whereas in English these are two distinct lexemes. Similarly, the Ukr. *ruka* corresponds to the Engl. *hand* and *arm*, or to the Germ. *Hand* and *Arm*.

Of great importance for the contrastive analysis of the languages in question is the naive segmentation of body parts by human mind, or the so-called ***naive anatomy***, which is based upon the associative connections with body parts as organs of the body, displaying their functions in the emotional world of humans, for example *heart* can be a set of abstract feelings such as love or hatred (e.g. Ukr. *dobre sertse*; Germ. *gutes Herz* 'kind heart'; Engl. *with a heavy heart*; Span. *corazón* as 'heart' and 'bravery'; Jap. *shinzō* as 'heart' and 'inner thoughts, mood'). In Spanish, *pecho*, which literally means 'bosom', is also the repository of bravery, kindness and soul. In Ukrainian, the expression *u hrudiakh shchemyt* describes mental anguish. Body parts can be similarly associated with physical abilities (e.g. Engl. *to have a good ear* 'to possess good hearing', *to have a good eye* 'to possess good sight').

The soul and other virtual essences are seated not only in the upper part of the human body but, for example, in the abdomen: in Japanese, *hara* is a container of the soul and emotions. It is noteworthy that in Old Slavonic the lexeme *zhyvot* 'abdomen' meant 'life'; nowadays, however, this meaning is archaic, being preserved only in such old-fashioned expressions as the Russ. *ne shchiadia zhyvota svoego* 'being ready to sacrifice one's life for a great purpose'. The German lexeme *Gesicht* 'face' can be used in the meaning 'image, look, appearance' (e.g. *das Gesicht der Stadt* 'the general look of the city' (Ivantsiv, 2018, p. 86; Lakoff & Johnson, 2008, p. 48)). Body part names extensively reflect *naive anatomy* (Brown, 2001, p. 1187-1188; Uryson, 1995, p. 3) as an element of the anthropocentric way of thinking, especially through idioms; the latter should be considered separately and, therefore, are not addressed in this article.

It should be mentioned that the upper part of the body tends to have a more positive evaluative meaning than the lower one, following the cognitive metaphor template 'up is good, bottom is bad' (Lakoff & Johnson, 2008, p. 25). Human body part names are equally used to denote animal body parts through metaphorical transference, although there are also lexemes denoting exclusively animal body parts, such as *beak*, *fin* or *forewing*. This article focuses exclusively on the names of human body parts.

Elaborating a systematic perspective on the semantic structure of meronyms requires the identification of their meaning components, or semes. The following list of ***semantic features*** constitutes their semantic volume:

– *qualificational seme*: belonging to a concrete notion, material object, being a part within a whole (body);

– *belonging to a particular Whole / to any kind of Whole* (e.g. *fingers* are part of a *hand*, but *blood vessels* are present in any part of the body);

– *homogeneous / nonhomogeneous structure / substance*;

– *transitive / intransitive relation*: if A is a part of B, and B is a part of C, then A is also a part of C (Cruse, 1979, p. 30). This seme is crucial for denoting the meronymic type of relations in comparison with the hypo-hyperonymic ones. For example, a finger is a part of a hand; however, it can hardly be treated as a part of the upper body because of its functional features restricted by the hand as a Whole. Alan Cruse performed a profound analysis of the violation of the transitivity principle in meronyms, explained by the functionality of parts within a whole (Cruse, 2004, p. 153);

– *asymmetry*: if A is a part of B, then B cannot be a part of A, as B is its whole (Gerstl & Pribbenow, 1995, p. 31);

– *separable / nonseparable* notion: human body part names are meant to be inseparable since the stereotypic notion of wholeness as a perfect state of any notion or substance (Cruse, 2004, p. 151) is vital for humans, whilst animal body parts serving human needs are viewed as separable (for example, food

ingredients, such as the Germ. *Rippenstück* ‘entrecote, steak’ which literally means ‘rib + piece’). Generally, separated parts are considered to be deformed and they lose their value. Human body parts belong to animated nature, that is why, when separated, they are bound to be treated as deformed and non-autonomous (compare with abstract notions such as the Germ. *Auszug* ‘extract’: the whole in this case is not destroyed by the extraction of its part, and the part can be used separately);

– *dichotomous seme*: body parts can be paired or not paired (as *eyes* or *nose*, for example);

– *limited or unlimited quantity seme* (the quantity of eyes in humans is limited to a pair of them, whilst the quantity of cells or blood vessels cannot be strictly numbered (at least in the linguistic categorisation of the world);

– *functional seme*: there exist organs of hearing and sight (*ears* and *eyes* respectively); of smell (*nose*); of motion (*legs*); tactile ones (*fingertips*); instrumental ones (*hands, arms* and so on); this very seme plays a restrictive role for the transitivity feature of body part names;

– *locative seme*: humans live in the anthropocentric system of spatial coordinates (which does not necessarily correlate with the scientifically recognised one), denoting the left / right side, the location of an object in space, the location of human body parts, which is also important for modelling of their meaning transferences;

– *evaluative seme*: for instance, the upper part of the body tends to be associated with more positive connotations (beginning with the *head* and *brain* as the containers of a person's mind);

– *differential semes*, including the semes of *shape*, *size*, *colour* and others.

The fundamental nature of meronymic relations in the lexical system of the language manifests itself in their ability to develop a rather high level of polysemy. The anthropocentric way of thinking underlies the formation of a great number of metaphorical models of meaning transference, built upon the associations with the form, function and localisation of parts of a human body as well as of miscellaneous material objects. The tendency of the whole to preserve its unity accounts for the existence of various types of metonymical transference, especially in accordance with the *pars pro toto* model, or synecdoche (Lakoff & Johnson, 2008, p. 47). Whilst metaphor is solidly grounded in the human ability to draw parallels between similar objects, metonymy reflects the contiguity of semantic relations, organising them into a semantic net with the hierarchical type of interconnections. Thus meronymy can be treated and modelled equally in terms of polysemy relations. Such semantic development is dynamic and continuous.

During the formation of the direct meaning of body part names, the metaphorical and less productive metonymical transference from artifact (part) names to body part names was not uncommon. For example, in Old High German, the lexeme *Kopf* meant ‘a glass, beaker’; in the 13th century the meaning ‘something visually resembling the head’ was added, which, by means of metaphorical transference, eventually generated the meaning ‘cranium, nape of the head, head’; since the 16th century, *Kopf* was used exclusively to designate the head (Bluhme, 2005, p. 323; Kluge, 1999, p. 477; Materynska, 2012, p. 70). Nowadays the opposite direction of transference, i.e. from a human body part name to an artifact (part) name, is productive: based on its shape and functions, the human body part name *head* is used to denote different parts of objects, e.g. the Germ. *Kopf*, Engl. *head*, Span. *cabeza*, Latv. *galva* and Russ. *golova* all bear the meaning ‘the head of a plant’; also the Germ. *Kopf* ‘headlines’, Engl. *head* ‘the head of a line’, ‘the head of a pin’, etc. By virtue of metonymical transference, this lexeme can also denote such abilities of a person as intellect and ratio, which in naive anatomy are “contained” in the head. As a result, the meaning ‘brain, ratio, intellect’ can be found in all the languages of the sample: the Germ. *Kopf*, Engl. *head*, Span. *cabeza*, Latv. *galva*, Jap. *atama*, Ukr. *holova*, Russ. *golova*. The model whereby a part replaces the whole also results from the interplay between the meronymic and polysemy relations in the language, as can be seen in the use of *head* taken to mean ‘wise person, leader’ (Engl. *head*, Germ. *Kopf*, Span. *cabeza*, Latv. *galva*, Jap. *atama*, Ukr. *holova*, Russ. *golova* (compare with other BPN with secondary meanings formed according to this model: the Engl. *a big mouth* ‘a talkative person’; the Ukr. *holodnyi rot*, Russ. *golodnyi rot* ‘a person in somebody’s charge, whose living and sustenance depend on others’)).

Due to such metaphorical and metonymical transferences, other thematic domains are enriched. The principal body part names are also very productive in compounding, synthesising absolutely new notions designating a whole, for example the Engl. *bonnethead* ‘a small hammerhead shark’, *blockhead* ‘a stupid person’, Germ. *Goldhaar* ‘a kind of aster’. This is how a cycle of semantic development from a *WHOLE* to *a PART* and from a *PART* to a *WHOLE* is fulfilled, contributing greatly to the enrichment of the vocabulary with the help of semantic change.

The most productive **metaphorical models** of transferences (embracing overall 993 meanings) in the compared languages are based on analogy with the human body parts denoting: **parts of objects, analogous to human body parts by shape and function** (438 meanings, e.g. Germ. *Hals*, Engl. *neck*, Span. *cuello*,

Latv. *kakls*, Ukr. *shyia*, Jap. *kubi* ‘a narrow part of something, resembling the neck in shape; the part of a bottle or other container near the mouth; the parts of a guitar’); **parts of objects, analogous to human body parts by location** (128 meanings, e.g. Germ. *Rücken*, Engl. *back*, Span. *espalda*, Ukr. *spyna*, Russ. *spina*, Jap. *haibu* ‘back side, a part placed at the back of something’); **animal body parts, similar to human body parts** (215 meanings, e.g. Jap. *tsume* ‘a nail, claw’, Latv. *nags* ‘a nail, claw, a hoof’); **parts of plants, visually similar to human body parts** (53 meanings, e.g. Engl. *tooth* ‘a notched part of a plant’s blade’); **parts of natural objects, similar to human body parts** (43 meanings, e.g. Germ. *Nase (des Felsens)* ‘ledge of a rock’). The most productive **metonymical models** of polysemy development (embracing overall 446 meanings) in the compared languages are based on the hierarchical relations and contiguity of notions. Therefore, amongst the productive models of metonymy in the process of BPN polysemy development are the transferences of **a human body part name to the name of**: **another body part adjacent to it** (83 meanings, e.g. Jap. *koshi* with its direct meaning ‘loins’ extending to ‘waist, hips’); **a person or a group of people** (80 meanings, e.g. Engl. *back* ‘a player in a field game whose initial position is behind the front line’; Span. *espalda* with its direct meaning ‘back’ extending to ‘security, escort’); **the result of its functioning as an instrument** (76 meanings, e.g. Engl. *hand*, Germ. *Hand*, Jap. *te* ‘handwriting’); **an item of clothing** (67 meanings, e.g. Germ. *Rücken*, Engl. *back*, Span. *espalda*, Latv. *mugura*, Ukr. *spyna*, Russ. *spina* ‘the part of a garment that covers a person's back’); **a metrical notion** (40 meanings, e.g. Germ. *Ellbogen*, Engl. *elbow*, Ukr. *likot*, Russ. *lokot* ‘an ancient measure of material’); **a sports notion** (35 meanings, e.g. Germ. *Hand* ‘an exclamation of a referee in football when the player touches the ball by the hand’).

In solitary examples, however, body part names may designate money (Jap. *ashi* with its direct meaning ‘leg’ extending to ‘money, rate of interest’) or diseases (Span. *pelo* with its direct meaning ‘hair’ extending to ‘mastitis’). Since English and Spanish are characterised by a higher level of polysemy development, their body part names also contain a greater number of figurative meanings.

The empirical findings resulting from this research enable the formulation of *the implicit statistical universals* and *semantic regularities* in the selected language sample. As *implicit statistical universals* (Croft, 1990, p. 47; Dirven & Pörings, 2003, p. 17; Materynska, 2012, p. 135) are treated the models of regular semantic transferences which are presented in all the languages of the sample or are statistically evidenced in more than 50 % of the compared languages. As *semantic regularities* are treated the models of meaning transferences in less than 50 % of the compared languages (such regularities are defined by S. Shafikov as marginal (Shafikov, 1998, p. 148)).

More than 43 implicit statistical universals and 60 semantic regularities are registered and united in a catalogue of 103 regular metaphorical and metonymical transferences in the process of the BPN polysemy development. Among them are such semantic universals as: *foot → shoe sole / base of an object*; *human leg → animal (hind) leg*; *nose → front part of an object*; *head → upper part of an object*; *leg → supporting member of a piece of furniture / bearing of a technical device*; *tooth → part of a tool or other instrument*; *heart → central place*; *face → expression on the face; side of a body → side of an object* and others (see the full list of these patterns in (Materynska, 2012, pp. 136-139, 141-144)). The research demonstrates that secondary meanings of body part names appear to result from the common associations between the human body and the surrounding world. Therefore, the common and distinct features of such semantic derivation are explained not only by the genetic, anthropological and mental factors but much more by the commonness of the cognition process. Thus BPN are a valuable source of *anthropomorphic metaphor*, based upon the similarity between human body parts, on the one hand, and the form, function and position of different objects, on the other (Blanco, 1999, p. 252; Dirven & Pörings, 2003, p. 32; Materynska, 2014, p. 362). For example, the Germ. *Fuß (des Berges)* and the Engl. *foot (of a mountain)* represent the realisation of the regular metaphorical transference *foot → base of an object*, being among the semantic universals registered in all the languages of the sample.

The tendency to anthropocentric spatial orientation (as opposed to landscape spatial orientation) is confirmed to exist in all the compared languages. The frontal position in space is connected with the *(top of the) head, nose* and *face*. The central position correlates with the *heart* and *bosom / breast*. The *hands, arms* and *sides of the body* represent the left / right direction. The semantics of real body part names is always combined with that of imaginary, virtual reflections of abilities associated with the body part in question, whence such semantic universals as *brain / head → ratio / intellect* and *heart → repository of feelings.* The development of the basic meanings of BPN determines the regularities in their polysemy to a greater extent. The more similar semes are found in the basic meaning of the equivalent BPN, the more alike are the models of the development of their secondary meanings within the limits of one of the analysed languages as well as of all the languages under consideration. This statement reveals the universal regularity of the BPN semantic

development. The associations on which polysemy of body part names is based do not often fit into the scientific taxonomy of the real world but rather into the naive worldview.

Conclusions

The similarity in the semantic development of the BPN in the languages under study is explained not only by their common origin, but also by the shared cultural areas where they evolved. This is confirmed by the fact that the largest number of semantic similarities is found between genetically closer languages: English and German, Ukrainian and Russian, etc.

The predominance of the metaphorical transference models corroborates the idea concerning the anthropocentrism of human thinking, especially its ability to draw different analogies between objects of the surrounding world and the human body. This, in its turn, contributes to the development of the parallel semantic transference models in different languages and, at the same time, accounts for the existence of considerable semantic differences, determined by the national and cultural peculiarities of each language as well as by the discrepancies in the cognition processes of different nations. Naive anatomy contributes to polysemy development and constitutes a fertile source for the enrichment of language lexicon.

Being a part of the basic lexicon in different languages of the world, BPN reveal enormous potential in word-formation, replenishing almost all thematic groups of lexis, designating both animate and inanimate as well as concrete and abstract notions.

The incorporation of semes within the meaning of meronyms, namely BPN, supports the idea of their regular nature, i.e. a seme describing a separable / inseparable notion that reveals the stereotypic principle of wholeness as a perfect state of any notion is combined with an evaluative seme (positive if an object preserves its wholeness and negative if it loses the latter). It is one of the factors allowing the cataloguing of semantic universals and regularities in languages of different structure which are not related genetically or structurally.

The more structurally complicated derivative BPN are, the lower their polysemy level is. On the other hand, the simpler their formal structure is, the higher the polysemy level will be. Correspondingly, the explicit way of representing the information of the whole in the name of its part restricts polysemy development, whereas the implicit one, on the contrary, boosts it.

Therefore, polylexical BPN are usually monosemantic; yet, a high level of the polysemy of their components allows them to integrate into the category of exocentric compounds possessing the meaning which does not constitute the simple sum of their components' meanings. It is also the case when compounds denoting Parts can designate Wholes and vice versa. The cycle of such a semantic change is really a catalyst for the semantic development of any language (including different functional registers).

The universal character of the Part-Whole relation in language accounts for the fact that the meronymic semantic relation is one of the dominant hierarchical lexicon organisation principles, which combines with the polysemy relation and forms the ground for semantic development of lexical units. The universal nature of the highlighted metaphorical and metonymical models of meaning transferences has evidenced this hypothesis.

The suggested model of systematic typological research could be used for a complex study of semantic interrelations in languages of different structure. This, in its turn, would be a major factor in the delineation of the most productive cross-linguistic semantic patterns, universal for lexicon and based on the common cognition principles correlating with the anthropocentric model of world perception and categorisation.

The cataloguing of semantic universals and regularities in languages of different structure poses a stern challenge to typology because of the huge amount of empirical data that has to be analysed according to certain unified parameters. Therefore, the modelling of semantic change in languages of different structure, as exemplified by the present study of human body parts, contributes to further development of semantic typology.

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