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LIGHT and DARK:
oppositional metaphor as the interaction of cognitive mechanisms

Cognitive Linguistics, which primarily deals with the conceptual structures of human mind via their language manifestation, opens new prospects in studying binary oppositions. Despite numerous researches of this phenomenon, lots of questions raised here do not have exhaustive answers. What we need is not only inquiry oriented toward ascertainment of the universality (or the degree of universality) of some binary oppositions, but studies of their system in a certain linguaculture within a given time period. The precise study of interrelations among various symbolic domains in this sphere is another important problem. Furthermore, binary oppositions should not be seen as stable and unchangeable structures presented within human consciousness but they must be regarded as the external manifestation of specific cognitive mechanisms. This paper presents an empirical investigation of the binary opposition LIGHT-DARK based on the method of an associative experiment. The analysis of the responses clearly reveals binary oppositions which are deep-rooted in the speakers' consciousness and which closely interact. These oppositions build a rich background for the metaphorical interchange between corresponding domains which create a whole system where the correlating parts are used for the metaphoric designation of each other. The main focus of this study is the interaction of cognitive mechanisms of contradistinction with conceptual metaphor and further analysis of the result of this process in a language.

Key words: associative experiment; binary opposition; conceptual metaphor; evaluation; vision; knowledge.

1. Introduction

It is difficult to establish unequivocally when humanity started exploring binary oppositions. At least, in Europe, they were repeatedly addressed in different periods: by ancient philosophers, by medieval alchemists or by linguists, psychologists, and ethnologists in the recent centuries.

On the one hand, the concept of opposition was used in their research by many prominent linguists like Jan Baudouin de Courtenay (see 1894/1972), who expressed the idea that the sum of oppositions experienced by a specific unit plays a decisive role in its identification, or Ferdinand de Saussure, who believed that "language is characterized as a system based entirely on the opposition of its concrete units" (Saussure 1966: 107). These ideas had a definite impact on the members of the Prague Linguistic Circle. In particular, the concept of opposition played a central role in the phonological theory developed by N. Trubetskoy and R. Jacobson in the 1930s, where the concept of a phoneme derived from the phonological opposition.

On the other hand, C.G. Jung wrote about "certain well-defined themes and formal elements, which repeated themselves in identical or analogous form with the most varied individuals", among which he distinguished "duality; the opposition of light and dark, upper and lower, right and left; the union of opposites in a third" etc. (Jung 2008 (1954): 134).

These ideas greatly influenced Claude Lévi-Strauss (1958/1968), who transferred binary oppositions into the sphere of ethnology and applied them as a powerful tool for identifying and interpreting the fundamental structures of human consciousness and culture.

Conversely, in the writings by Jacques Derrida (esp. in 1977), the method of binary opposition was subject to considerable criticism. The main aim of Derrida's deconstruction is to transform the traditional binary oppositions of Western discourse and to disclose their asymmetry, changes in the hierarchy of their members, and the transference of a member in the opposition, often in the form of a new and expanded definition. This was why he introduced the complex concept of *différance*, which, due to the changed spelling of the word *différence*, denotes not just a certain difference, but what can be called the source of differences, the process of their creation, differences between differences, the game of differences.

Comparing poststructuralists' views with those of their predecessors, George Lakoff and Mark Johnson note:

> Where Frege sought absolute, timeless universals of meaning, the poststructuralists correctly perceived that conceptual systems have changed in important ways over time and vary in important ways across cultures. But they went to the opposite extreme, assuming that any account of meaning that was not timeless and universal had to be arbitrary and ever subject to change. They found in Saussurean linguistics as popularly portrayed a view of meaning that could fit that account. This too was a view that ignored the role of the embodiment of meaning. It also ignored the possibility that metaphors might also be grounded in the body and constrained by experience. Because they rejected science as merely an arbitrary narrative, they could not bring empirical studies of mind and language to bear critically on their own a priori philosophical assumptions". (1999: 468)

It is Cognitive Linguistics, which starts "with an empirically responsible philosophy" and considers "the embodied and imaginative character of mind" (Lakoff & Johnson 1999: 468) as well as explores the forms of knowledge representation and cognitive mechanisms via language, enables a new approach to the study of binary oppositions.

The questions that this paper attempts to answer is, first, about the connections among the opposition LIGHT-DARK with other oppositions in the minds of representatives of certain linguacultures, and, second, about the interaction of cognitive mechanisms of contradistinction and conceptual metaphors, which creates the basis for the complex metaphorical system that can be called oppositional.

2. Justification of the associative experiment method

Not long ago, researchers warned that Cognitive Linguistics lacked its own methodology (Newman 2010: xi). Most conclusions in cognitive researches were based mainly on a researcher's linguistic introspection. Although it is undoubtedly a productive method (moreover, the application of any method cannot be exempt from a conscious or unconscious act of introspection), Leonard Talmy (2000: 5) emphasized the need for empirical and/or experimental confirmation of "the findings resulting from introspection".

In recent years, these ideas have been getting more widely-spread in cognitive linguistics. There are two opposite trends: on the one hand, a significant number of researchers consider introspection as the best method or even the only acceptable one for studying meaning, and on the other, there is a growing tendency to apply empirical methods used in other cognitive sciences (see Geeraerts & Cuyckens

2007: 18).

The main achievement of the latter stream is the combination of the powerful theoretical base of Cognitive Linguistics and the corresponding empirical methods of analysis (see Heylen et al. 2008: 92). The development of the methodology of cognitive linguistics goes in two directions: there are corpus-based studies and those based on information from language users (see Luodonpää-Manni et al. 2017).

This paper presents an empirical investigation of the binary opposition LIGHT-DARK based on the method of an associative experiment (AE). The traditional way to conduct such an experiment is to show or say a word (stimulus) to respondents, and then ask them to write or say what other word (response) comes first to their minds after receiving the stimulus. The time elapsed between the representing of the stimulus word and occurrence of the responsive word is restricted.

The research is based on the data of the experiments recorded in the associative thesauri of Bulgarian (Gerganov 1984), Polish (Kurcz 1976, PSA), Russian (TANRL, RAT), Ukrainian (Butenko 1979; UAT 2007), and English (Kent-Rosanoff, EAT). As Polish associative thesauri only record the stimuli *ciemny* 'dark$_{adj}$' and *światło* 'light$_{n}$' (Kurcz 1976) as well as *światło* 'light$_{n}$' (PSA), an additional associative experiment with Polish native speakers was conducted. The experiment (PAE) involved 200 respondents of different age (from 18 to 60 years old) and of both sexes in equal quantities who provided associative responses to the stimulus *jasny* 'light$_{adj}$'.

Since all the associative thesauri log the responses received from the unequal number of respondents (from 100 to 1000), the responses from different thesauri were recalculated according to their percentages to allow the comparison of the results obtained from the speakers of different languages.

It was James Deese (1965), who used distributions of associative responses as a powerful tool for the study of word meaning but avoided attempts to classify them directly. In my opinion, it is impossible to provide the exhaustive classification of associative responses. This can be explained by the very fact that associative responses to a word reveal the corresponding fragment of complex conceptual structure with its specific features, associated emotions and evaluations in the speakers' minds. This means that the complete classification of associative responses should reflect the entire set of human knowledge. What we can do is to find out what motivates the appearance of a response, to discover the connections between the correlative conceptual structures in the speaker's mind, to establish the characteristic

features of certain concepts, and the emotions they cause among the native speakers of a certain language. This is far from the exhaustive list of what can be achieved via to the application of the associative experiment, but this is the attempt this article focuses on.

3. LIGHT-DARK in the system of binary oppositions

The significance of the LIGHT-DARK opposition has been indicated by numerous researchers. Robert Hertz, whose speciality was the sociology of religion, wrote:

> All the oppositions presented by nature exhibit this fundamental dualism. Light and dark, day and night, east and south in opposition to west and north, represent in imagery and localise in space the two contrary classes of supernatural powers: on one side life shines forth and rises, on the other it descends and is extinguished. The same with the contrast between high and low, sky and earth: on high, the sacred residence of the gods and the stars which know no death; here below, the profane region of mortals whom the earth engulfs; and, lower still, the dark places where lurk serpents and the host of demons (Hertz 2004 (1907): 96)

Uriel Weinreich (1963: 151) mentioned this opposition in his list of linguistic universals: 'generation', 'sex', 'light' vs. 'dark', 'dry' vs. 'wet', 'young' vs. 'old', 'alive' vs. 'dead', 'incipiency' vs. 'steady state'. In recent years, Carita Paradis (2016: 131) singles out this opposition among other "strongly opposable lexical semantic pairings in all languages, whose meanings are central to human existence".

In order to adequately assess the significance of the *light – dark* contrast for humans, it should be viewed in the whole system of oppositions. For instance, the old Slavonic semiotic system reconstructed by Ivanov and Toporov contains several basic oppositions, which create a particular symbolization of one main opposition – "differentiating the positive and the negative concerning community and a human being" (Ivanov & Toporov 1965: 63). These oppositions may be divided into several groups: 1) the most general and abstract attributes, not localized in space, time and social scales (*happiness – unhappiness*, or *fortune – fate*; *life – death*; *even – odd* and *right – left*, regarding the latter within the estimation scale); 2) spatial relations (*right – left*; *up – down*, specified in the oppositions *heaven – earth* or *earth – hell*; *south – north*; *east – west*; *sea – land* or *land – sea* depending on certain conditions); 3) specific time, colour or elements attributes (*day – night*; *sun – moon*; *light – dark*, specified in the oppositions *white – black, red – black*; *fire – moisture, dry – wet, ground – water*); 4) *native, us – alien, their* sometimes imple-

mented in the oppositions *here, close – there, far* and *home – forest*; the oppositions *masculine – feminine*; *older – younger*; *main – non-main*; *ancestor – descendant*. All the above-mentioned oppositions can be regarded as parts of the generalising opposition *sacred – profane* (see Ivanov & Toporov 1965: 63).

However, despite the large number of studies devoted to binary oppositions and their systems in various languages and cultures, a lot of issues are still unexplored. These were Ivanov and Toporov (1965: 216 217) who emphasized the need to establish how the mutual correlation of pair contradictions operates within the very system (see also Tolstoy 1987: 170) and to detect the extent to which the oppositions of ancient semiotic systems are preserved in newer ones.

The results obtained via AE answer both questions. Firstly, they show which paired oppositions within the system are interconnected in the minds of the speakers, and secondly, the corresponding responses testify that these oppositions are relevant for contemporary users of these languages and cultures.

Primarily, the correlative member of the binary opposition is one of the most frequent responses. So, the concept LIGHT is related to DARKNESS (1):

(1) Bulg. *svetŭl* 'light$_{adj}$' – *tŭmen* 'dark$_{adj}$' 17.3%, *tŭmno* 'dark$_{adv}$' 0.1% (Gerganov 1984: 164);

Pol. *jasny* 'light$_{adj}$' – *ciemny* 'dark$_{adj}$' 21.4% (PAE); *światło* 'light$_{n}$' – *ciemnoto*(*ość*) 'darkness' 6.5%, *ciemność* 'darkness' 0,2% (Kurcz 1967: 201-202); *ciemność* 'darkness' 5.3%, *ciemno* 'dark$_{adv}$' 1.4% (PSA 83–84);

Rus. *svetlyi* 'light$_{adj}$' – *temnyi* 'dark$_{adj}$' 8.9% (RAT 1: 572); *svet* 'light$_{n}$' – *t'ma* 'darkness' 17.8% (TANRL: 157);

Ukr. *svitlyi* 'light$_{adj}$' – *temnyi* 'dark$_{adj}$' 6,5%, *temnota* 'darkness' 0,5% (UAT 1: 280); *svitlo* 'light$_{n}$' - *temnyi* 'dark$_{adj}$' 4,3%, *temryava* 'darkness' 4,3%, (Butenko 1979: 75);

Eng. *light – dark* 23.1%, *darkness* 9.3% (KR: 76); *dark* 41% (EAT).

Similarly, the concept DARK (2) is closely linked with its opposite in the speakers' minds:

(2) Bulg. *tŭmen* 'dark$_{adj}$' - *svetŭl* 'light$_{adj}$' 24,3% (Gerganov 1984: 187–188);

Pol. *ciemny* 'dark$_{adj}$' - *jasny* 'light$_{adj}$' 31.1% (Kurcz 1967: 134);

Rus. *temnyi* 'dark$_{adj}$' - *svetlyi* 'light$_{adj}$' 10% (RAT 1: 653);

Ukr. *temnyi* 'dark~adj~' – *svitlyi* 'light~adj~' 12.3% (Butenko 1979: 75), *temnyi* 'dark~adj~' – *svitlyi* 'light~adj~' 4.7% (Martinek 1: 315);

Eng. *dark – light* 42.7% (KR: 48); *light* 41% (EAT).

Secondly, the responses evoked by the stimuli *light* and *dark* have also revealed the links with correlative members of other binary oppositions both for the opposite LIGHT (3), and DARK (4):

(3) Bulg. *svetŭl* 'light~adj~' – *den* 'day' 18.8%*, slŭntse* 'sun' 2.4%, *byal* 'white' 1.7%*, zhivot* 'life' 1.1%, *nebe* 'sky' 0.7%*, dom* 'home, house' 0.5%, *mŭzh* 'man' 0.4%, *vrŭkh* 'top, height', *luna* 'moon', *plamŭk* 'flame', *shtastie* 'happiness' – 0.1% each (Gerganov 1984: 164–165);

Pol. *jasny* 'light~adj~' – *słońce* 'sun' 11,4%, *dzień* 'day' 4,8%, *biały*(*a*) 'white' 4,1%, *niebo* 'sky' 1,8%, *ciepły* 'warm' 1,1%, *dom* 'home, house' 0,7%, *ciepło* '(it is) warm', *księżyc* 'moon'*, las* 'forest', *lato* 'summer'*, szczęście* 'happiness', *zimny* 'cold' – 0,4% each (PAE); *światło* 'light~n~' – *ciepłe*(o) 'warm' 7%, *słonce* (*a, słoneczne*) 'sun; sunny' – 3,9%, *dzień* (*dnia, we dnie*) 'day; of day' 3,8%, *dzienne* 'diurnal, of day' 2% (Kurcz 1967: 201-202); *słońce* 'sun' 7,94%; *dzień* 'day' 2,7%, *ciepło* '(it is) warm' 2.4%, *dzienne* 'diurnal, of day' 0,6% (PSA: 83-84);

Rus. *svetlyi* 'light~adj~' – *den'* 'day' 24.1%, *dom* 'home, house' 2%, *solntse* 'sun' 1.7%, *belyi* 'white' 1.1%, *nebo* 'sky' 1.1%, *chernyi* 'black' 0.6%, *les* 'forest' 0.4%, *noch'* 'night' 0.4%, *kholodnyi* 'cold' 0.4%, *zhizn'* 'life', *mesyats* 'moon; month', *teplyi* 'warm' – 0.2% each (RAT 1: 572);

Ukr. *svitlyi* 'light~adj~' – *den'* 'day' 23.4%, *bilyi* 'white' 2.5%, *sontse* 'sun' 1,5%, *dim* 'home, house', *molodist'* 'youth', nebo 'sky', *chornyi* 'black', *shchaslyvyi* 'happy' – 0,5% each (UAT 1: 280);

Eng. *light – sun* 8.5%, *day* 8.1%, *moon* 1%, *good* 0.8%, *heat* 0.8%, *night* 0.8%, *sky* 0.8%, *white* 0.8%, *life* 0.7%, *fire* 0.6%, *happiness* 0.4%, *warmth* 0.2%, *heaven*, *red* – 0.1% each (KR: 76); *house* 4%, *day* 3%, *Earth*, *fire*, *Sun* – 1% each (EAT).

(4) Bulg. *tŭmen* 'dark~adj~' – *nosht* 'night' 8.6%, *cheren* 'black' 7.4%, *byal* 'white' 1.2%, *mŭzh* 'man' 0.7%, *den* 'day' 0.6%, *grob* 'grave, tomb' 0.2%, *zhivot* 'life' 0.2%, *cherven* 'red' 0.2%, *luna* 'moon', *nebe* 'sky', *studeno* 'cold' – 0.1% each (Gerganov 1984: 187–188);

Pol. *ciemny* 'dark~adj~' – *noc (nocny)* 'night (nightly)' 6.7%, *czarny* 'black' 2.7%, *las* 'forest' 2.6%, *biały* 'white' 2.2%, *dom* 'home, house' 0.5%, *dzień*

'day' 0.5%, *zimny* 'cold' 0.3%, *mężczyzna* 'man' 0.2%, *czerwony* 'red', *grób* 'grave, tomb', *negacja* 'negation', *niebo* 'sky', *niesccześliwy* 'unhappy', *słońce* 'sun', *zły* 'bad, evil' – 0.1% each (Kurcz 1967: 134);

Rus. *temnyi* 'dark_adj' – *les* 'forest' 20.1%, *noch'* 'night' 2.3%, *den'* 'day' 2.1%, *chernyy* 'black' 1.7%, *dom* 'home, house' 0.4%, *teplo* '(it is) warm', *kholodnyi* 'cold' – 0.2% (RAT 1: 653); *les* 'forest' 20.6%, *noch'* 'night' 4.8%, *den'* 'day' 2%, *chernyy* 'black' 1.5%, *muzhchina* 'man', *nebo* 'sky', *khoroshiy* 'good'– 0.2% each (TANRL: 174);

Ukr. *temnyi* 'dark_adj' – *lis* 'forest' 8.5%, *nich* 'night' 5.7%, *chornyi* 'black' 4.2%, *den'* 'day' 2.8%, *pohanyy* 'bad' 1.4%, *cholovik* 'man' 1.4%, *bilyi* 'white', *hore* 'sorrow', *misyats'* 'moon', *pohano* 'bad' – 0.5% each (UAT 1: 315);

Eng. *dark* – *night* 22.1%, *black* 7.8%, *white* 0.9%, *moon* 0.6%, *red* 0.6%, *man* 0.4%, *cold* 0.2%, *house* 0.2%, *bad*, *day, dead, ground, sky* – 0.1% each (KR: 48); *night* 16%, *black* 3%, *ground, man, sky, winter* – 1% each (EAT).

Thus, the opposition LIGHT-DARK is related to the following oppositions in speakers' minds: DAY-NIGHT; SUN-MOON; WHITE-BLACK, RED-BLACK; SUMMER-WINTER, WARM-COLD, FIRE-(WATER); GROUND-(WATER), HOME-FOREST; LIFE-DEATH; HEAVEN-EARTH; HAPPINESS-UNHAPPINESS, (OLD)-YOUNG and the general axiological opposition GOOD-BAD.

Some of these connections are more stable and regular, especially when they are fixed in idioms, like the Russian idiom *temnyy les* 'dark forest; complete confusion', others appear asymmetrically,[1] but the responses received convincingly show the existence of connections between certain oppositions in the consciousness of contemporary speakers of the languages considered.

The composition of the identified binary oppositions that are topical but, perhaps, unconscious among contemporary bearers of various languages and cultures, may differ. For example, in the mind of Ukrainian, Bulgarian and Russian speakers, there are the preserved connections between LIGHT and HOLY (5a), on the one hand, and DARK and SINFUL (5b), on the other.

Back in 1865-1869, Afanasyev (1995 1: 50) noticed that the words *svet* 'light' and *svyat* 'holy' "are philologically identical since the element of light is a deity by

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[1] If one of the members of a particular binary opposition was not found in the AE, it is shown in parentheses.

itself, which does not endure anything dark, unclean, and – in the later sense – sinful. The notions of light, good deity and holiness are inseparable, and the latter is a direct conclusion from the former". In view of the etymology, the indisputable connection between HOLINESS and LIGHT was also declared by Toporov (1987: 190-191, 208, etc.), who claimed the Indo-European stem -*k'u̯en-(to) is present in Baltic, Germanic, Indian, Iranian, Slavonic, and Tocharian languages. But it is only in Baltic, Slavonic and Iranian languages, this stem designates holy, sacred attributes. The other languages did not elaborate this sense.

(5a) Bulg. *svetŭl* 'light$_{adj}$'– *svetets* 'holy, saint', *sveti* 'saint; saints' - 0.1% each (Gerganov 1984: 164-165);

Rus. *svetlyi* 'light$_{adj}$' – *ray* 'paradise' 0.4 (RAT 1: 572);

Ukr. *svitlyi* 'light$_{adj}$' – *anhel* 'Angel', *svyatyy* 'holy, saint' – 0,5% each (UAT 1: 280).

(5b) Bulg. *tŭmen* 'dark$_{adj}$' – *ad* 'hell' 0.2% (Gerganov 1984: 187–188);

Rus. *temnyi* 'dark$_{adj}$' – *d'yavol* 'devil' 0.2% (RAT 1: 653);

Ukr. *temnyi* 'dark$_{adj}$' – *hrikh* 'sin', *hrishnyk* 'sinner', *chort* 'devil' – 0.5% each (UAT 1: 315).

Unlike in the abovementioned languages, in the modern Polish lexeme *światły$_{adj}$* has developed the sense 'enlightened, intelligent, smart,' "which certifies someone's intelligence" (MSJP 1011). Meanwhile, since the 15th century, the sense of 'light' has been encoded in the word *jasny$_{adj}$*, which derives Proto-Slavonic **ěsnъ(jь)* 'shining, shiny; full of light, visible, cloudless; undark, similar to white, transparent', formed after the earlier form **ěsk-nъ* that is connected with Proto-Slavonic **ěsk-rъ* 'very bright, glaring, very shining', originating from Proto-Indo-European **aisk-* 'bright, shining' (EDUL 1982: 557–558). The contemporary English word *light* also comes from another root, namely Proto-Indo-European **leuk-* 'light, brightness' (see OED).

Therefore, among contemporary Polish and English speakers, the stimuli *jasny* 'light$_{adj}$' and *light* do not elicit responses revealing connection with holiness (6a). Instead, the Polish stimulus *światło* 'light$_n$', which is etymologically linked to the stem **svęt-*, evoked responses (6a) which testify that this type of connection is still valid for this stimulus.

(6a) Pol. *jasny* 'light$_{adj}$' – 0 (PAE); cf. *światło* 'light$_n$' - *Bóg* 'God' 0.6% (PSA: 83–84);

Eng. *light* – 0 (KR: 76); 0 (EAT)

In addition, the English stimulus *dark* caused single responses (6b) that reveal the connections of this type, while the Polish stimulus *ciemny* 'dark_{adj}' did not evoke responses similar to those recorded in the AE with the Ukrainian, Bulgarian, and Russian speakers (see 5b above).

(6b)   *ciemny* 'dark_{adj}' – 0 (Kurcz 1967: 134);

　　　dark – *hell* 0.1% (KR: 48); *God* 1% (EAT).

The quoted examples confirm Sweetser's view that "we cannot rigidly separate synchronic from diachronic analysis" (Sweetser 1996: 9; for the importance of panchronic analysis, see also Shmiher 2011). So, the AE results demonstrate clearly that processes occurring in languages can lead to a change in links between different oppositions and to a decrease in their significance or even their disappearance in the minds of contemporary representatives of certain languages and cultures.

4. Shedding light on the murky question: duality and metaphor

4.1. *The problem of the universality of the LIGHT-DARK opposition*

Wheelwright (1962: 111) attributed *light* to an archetypal class of symbols having the same or similar meaning for most people or even humanity, which, in his opinion, was caused by the natural resemblance of the human's physical and (mainly) psychic structure.

In their classical 1969 work on the study of colour names, Berlin and Kay (1991 (1969): 4–5 etc.) argued that all languages have a universal system of basic colours, which developed according to a certain order in most languages. At the beginning of forming this system, the entire colour continuum is divided into two categories, which Berlin and Kay did not quite accurately designate as *black* and *white*, meaning *black* along with all dark colours and *white* along with most of the light colours (see Berlin & Kay 1991 (1969): 17).

In later research, Kay and McDaniel (1978) argue that semantic universals in the colour system are determined by the structure and functions of the human eyesight system. Since these universals are the results of neurophysiological processes, they shape the basis of universal patterns for the meaning of the main colour terms in all languages, and therefore, at least in this case, language does not define perception

(as it is claimed by the adherents of the "hard" version of linguistic relativism), but perception determines language (see Kay & McDaniel 1978: 610–611, etc.).

Wierzbicka (1996: 290–294) sharply disagrees with this opinion, since, despite the fact that colour perception seems to be the same for all groups of people, linguistic conceptualization is different in different cultures, even in spite of the striking elements of similarity. Therefore, Wierzbicka states that extreme universalism in the study of language and thinking is just as unreasonable and dangerous as extreme relativism in the study of culture. Language reflects what happens not in the brain, but in our consciousness formed under the influence of the cultural environment.

Another idea proposed by Kay and McDaniel is the application of the theory of fuzzy sets to modelling the structures of individual colour categories and elucidating relations between different universal colour categories due to the development and expansion of the basic colour vocabulary (Kay & McDaniel 1978: 612, etc.). According to George Lakoff (1987: 29-30) it provided them with an opportunity to draw conclusions which were not possible to get by using the neurophysiological approach only, in particular to offer an intuitive, satisfactory explanation of the ability of the basic colours categories to contain more than one central colour. Perhaps, this clarifies the possibility of dividing the entire colour continuum between dark and light in the languages, which stay at the first stage of developing the colour system according to the theory of Berlin and Kay.

However, in some cases, the presence of the main contradistinction between *dark* (macro-black) and *light* (macro-white) causes doubts among researchers. For instance, in the Martu Wangka language, which unites several dialects in the Western Desert in the northwest of Australia, the contrasting colours are *maru-maru* 'macro-black' and *miji-miji* 'red' (*miji* means 'blood') (Hargrave 1982: 210). That is how Hargrave (1982: 212) concludes that tribes traditionally inhabiting the desert do not distinguish white as a separate feature of natural phenomena, and thus, *white* is not a basic colour term in their language. On the other hand, the researcher supposes that the colour samples offered to respondents did not match their perception of the main macro-white colour (Hargrave 1982: 212). Good case in point is the colour term *gungaltja* 'light, white' in the Anbarra language of the aborigines in Arnhem Land, whose meaning additionally requires "a touch of brilliance or 'animation' as well as a high degree of brightness" (Jones & Meehan 1978: 27).

This example is also of a great interest because it clearly demonstrates the dependence of the colour system, which is formed in a certain language and culture, on the environment. Wierzbicka (1996: 289) remarks the universal or near-

universal role of the typical features of the landscape as a fundamental element of reference in describing visual perception in general and colour perception particularly. So, the above situation is motivated by the important role of comparing or – more precisely – the universal concept SIMILARITY in transmitting visual sensations.

However, Wierzbicka (1996: 288) claims that the focus of research must shift from the search of "colour universals" to the search for "universal of seeing." In her view, "[w]hat does seem universal, or near-universal, in the domain of seeing is, first of all, the distinction between times when people can see ("day") and times when people cannot see ("night")" (Wierzbicka 1996: 288). The AE results with the speakers of the languages analysed confirm this opinion by Wierzbicka, since they reveal the close connection of the opposition LIGHT-DARK with the opposition DAY-NIGHT (see examples 3 and 4 above). In addition, the AE results clearly show the significance of the connection between light and day and the prototype source of light, i.e. *the sun* (3).

These basic strategies for the conceptualization of light and dark, through the appeal to visual perception, or by comparison with the typical features of the landscape or prototype reference element, are observed even in the protonames of colours in the Pirahã language:

> …the 'word' *kopaíai* 'black' was *ko* 'eye' plus *opaí* 'unclear/opaque' plus *ai* 'tobe' – 'an unclear eye'. The phrase *koobiai* 'white' breaks down into *ko* 'eye' plus *obi* 'clear' and *ain* 'to be', or 'to be clear and transparent. ...

> A dark night is described as *xooi* 'jungle/environment', *tii* 'excrement', *o* 'become', *aa* 'be', *bá* 'remain' – which literally means 'the jungle is shitty' (Everett 2012: 257).

So, on the one hand, as B. Heine notes (1997: 14), "[t]he human species, irrespective of whether it is located in Siberia or the Kalahari Desert, has essentially the same pool of options for conceptualization". On the other hand, Nicholas Evans and Stephen C. Levinson point out that language is one of the best examples of co-evolution, which "evolved biological underpinnings for culturally variable practices, where the biology constrains and canalizes but does not dictate linguistic structures" (Evans & Levinson 2009: 447). In addition to biological (namely the embodiment) and cultural and historical factors, it can be noticed that conceptualization of the opposition LIGHT and DARK is also impacted on by the environment where a certain ethnic group lives.

Thus, we observe two basic strategies for naming colours. The first one is directly related to the embodiment, because it is based on the ability of a human to visual perception, and therefore it is universal or near-universal. The second one is based on the universal cognitive mechanism of comparison, the establishment of similarity, but the implementation of this way of naming colours is culturally and linguistically bound, since it depends on the environment and/or prototype referents specific to the particular culture.

4.2. *The opposition LIGHT-DARK and its correlation with vision and mind*

The opinion that the concepts LIGHT i DARK are motivated by the ability to vision is proven by the obtained responses (7a, b). They compose a relatively small group, but it should be noted that the number of responses obtained via AE is not an absolute indicator. This is due to the fact that respondents can rarely provide responses which reveal the so-called core element of meaning, since it seems excessively informative and tautological.

Besides, the interpretation of the AE results is complicated by the fact that the respondent's intentions remain "behind the scenes" for the researcher, who can only guess by using their own experience and empathy, why the respondent gave the very response. For example, Polish and Russian speakers provided the opposite responses to the same stimuli. This definitely means that the responses reveal different strategies of reacting: Pol. *ciemny* 'dark_{adj}' evoked responses *widny* 'full of light or sun; *old*. visible' 0.9% and *brak widoku* 'no view' 0.1%; *niewidomy* 'blind' 0.1% (Kurcz 1967: 134); as well as Rus. *temnyy* 'dark_{adj}' caused responses *nichego ne vidno* 'nothing can be seen' 0.2% (RAT 1: 653) and *vidnyy* 'visible, prominent' 0.16% (TANRL). In general, there are quite a lot of examples where the stimuli designating light and darkness cause antonymic responses (see examples above). Presumably, this is evidence of the (unconscious) application of different strategies, namely answering with similarities or opposites.

(7a)   Bulg. *svetŭl* 'light_{adj}' – *pogled* 'look' 0.2%; *oko* 'eye' 0.1% (Gerganov 1984: 164–165);

Pol. *jasny* 'light_{adj}' – *pogląd* 'look' 0.7%; (PAE); *światło* 'light_{n}' – *widno* 'visible' 1.4%, *oczy* 'eyes' 0.3%; (Kurcz 1967: 134); *światło* 'light_{n}' – *widno* 'visible' 2% (PSA: 83-84);

Rus. *svetlyi* 'light_{adj}' – *glaza* 'eyes' 0.4% (RAT 1: 572);

Ukr. *svitlyi* 'light_{adj}' – *pohlyad* 'look' 2.5% (UAT 1: 280);

Eng. *light - see* 2.4%, *seeing* 0.3%, *sight* 0.3%, *vision* 0.2%, *eyes*, *look*, *seen* 0.1% (KR: 76); *glare* 0.1% (EAT).

(7b) Bulg. *tŭmen* 'dark$_{adj}$' – *trudno se vizhda* 'hard to see' 0.1% (Gerganov 1984: 187–188);

Pol. *ciemny* 'dark$_{adj}$' - *widny* 'full of light or sun; *old*. visible' 0.9%; *oczy* 'eyes' 0.2% *brak widoku* 'no view' 0.1%; *niewidomy* 'blind' 0.1% (Kurcz 1967: 134);

Rus. *temnyi* 'dark$_{adj}$ ' - *nichego ne vidno* 'nothing is visible', *slepoy* 'blind' – 0.2% each (RAT 1: 653); *glaz* 'eye', *glaza* 'eyes', *slepoy* 'blind', *vidnyy* 'visible, prominent' – 0.16% each (TANRL: 174);

Eng. *dark– blind* 0.2%, *blindness* 0.2%, *eyes* 0.2%, *invisible* 0.2%, *eye, unseen* – 0.1% each (KR: 48); *see* 0.1% (EAT).

On the other hand, the verbs of visual perception are characterized with a semantic shift from perception to mental ability. John Taylor (2003: 33) supposes that this extension "is plausibly motivated by the fact that much—perhaps most—of our knowledge of the outside world (for sighted people!) comes from vision".

It is therefore natural that the conceptualization of 'light' and 'dark', 'vision' and various aspects of mental activity are closely interrelated. George Lakoff and Mark Johnson describe this in the following way:

> Someone who is ignorant is in the dark, while someone who is incapable of knowing is blind. To enable people to know something is to shed light on the matter. Something that enables you to know something is enlightening; it is something that enables you to see. New facts that have come to light are facts that have become known (to those who are looking) (1999: 239).

The obtained responses (8a) clearly reveal the interaction of the LIGHT-DARK opposition with the conceptualization of visual perception and mental activity, which leads to the emergence of complex metaphors KNOWIING IS SEEING and KNOWIING IS LIGHT, where the latter concerns mental processes and means logical mind and clear thoughts, education and civilization, etc. Vice versa, IGNORANCE, UNCERTAINTY is INVISIBILITY, BLINDNESS and also DARKNESS, where dark means 'unknown', 'unclear', and also 'uncultured', 'uneducated', 'illiterate', sometimes due to the distance from the centres of education and culture (8b).

(8a) Bulg. *svetŭl* 'light$_{adj}$' – *um* 'mind', *umen* 'smart' – 0.1% each (Gerganov 1984: 164–165);

Pol. *jasny* 'light$_{adj}$' – *umysł* ' mind' 3.3%, *dokładny* 'exact', *oczywisty* 'obvious' – 0.4% each (PAE); *światło* 'light$_n$' – *nauka(i)* 'science, of science' 0.5%, *wiedza* 'knowledge' 0.4%, *oświata* 'education' 0.3%, *cywilizacja* 'civilization', *mądrość* 'wisdom' – 0.1% each (Kurcz 1967: 201-202); *mądrość* 'wisdom' 0.2% (PSA: 83–84);

Rus. *svetlyi* 'light$_{adj}$' – *um* 'mind' 2%, *razum* 'mind' 0.6%, *golova* 'head', *lob* 'forehead', *rassudok* 'reason' – 0.2% each (RAT 1: 572) *znaniye(ya)* 'knowledge' 1.49%, *ucheniye(ya)* 'doctrine, learning' 1.49%, *korotko i yasno* 'short and clear', *mneniye* 'opinion', *razum* 'mind' – 0.5% each (TANRL: 157);

Ukr. *svitlyi* 'light$_{adj}$' – *rozum* 'mind' 7%, *holova* 'head' 0.5% (UAT 1: 280);

Eng. *light* - *education*, *knowledge* – 0.1% each (KR: 76); *knowledge* 0.1% (EAT).

(8b) Bulg. *tŭmen* 'dark$_{adj}$' – *zagadŭchen* 'mysterious' 0.2%, *uchilishte* 'school' 0.2%, *algebra* 'algebra', *nepoznat* 'unknown', *sŭmnitelen* 'suspicious', *taen* 'secret' – 0.1% each (Gerganov 1984: 187–188);

Pol. *ciemny* 'dark$_{adj}$' - *chłop* 'peasant' 0.2%; *analfabeta* 'illiterate, ignorant'; *dureń* 'fool'; *głupi* 'stupid'; *góral* 'highlander'; *umysł* 'mind' – 0.1% each (Kurcz 1967: 134);

Rus. *temnyi* 'dark$_{adj}$' - *neponyatnyy* 'not clear, obscure' 0.4%, *tupoy* 'blunt' 0.4%, *zabityy yakut* 'oppressed Yakut', *neponyatnost'* 'incomprehensibility', *neuch* 'ignoramus', *neuchenyy* 'unlearned', *rassudok* 'mind, intellect', *um* 'mind', *ucheniye* 'doctrine; teaching' – 0.2% each (RAT 1: 653); *neponyatnyy* 'obscure' 0.33%, *neyasnost'* 'obscurity' 0.33%, *golova* 'head', *zagadochnyy* 'mysterious', *mysl'* 'thought', *negramotnyy* 'illiterate' – 0.16% each (TANRL: 174);

Ukr. *temnyi* 'dark$_{adj}$' – *durnyy* 'silly', *ne zrozumity zhyttya* 'do not understand life', *nevidomist'* 'uncertainty', *nenachytanyy* 'unbookish', *nepiznavanyy* 'unknowable', *nerozumnyy* 'unreasonable', *rozum* 'mind', *tupyy* 'dull', *uchen'* 'pupil' – 0.5% each (UAT 1: 315);

Eng. dark– *mysterious, oblivion, obscure* – 0.1% each (KR: 48).

Thus, the results of AE give possibility to trace the ways, in which LIGHT – ABILITY OF SEEING – KNOWLEDGE/REASONING*,* on the one hand, and DARK – INABILITY TO SEE – ABSENCE OF KNOWLEDGE/EDUCATION*,*

on the other hand, are closely interconnected and together generate metaphors in a systematic way.

5. Binary oppositions and category of evaluation

Afanasyev (1995 1: 48) wrote that dualism was "emanated not from the moral demands of the human spirit, but from solely physical conditions and their different influence on living organisms; the measure Man used was himself, his own *advantages* and *disadvantages*".

Krzeszowski (1997: 156 passim) describes this axiological 'plus-minus' parameter with regard to the opposing dimensions (like IN-OUT, UP-DOWN, etc.), in which the second elements are assumed to carry negative default evaluations, and notes that these evaluative components are preserved in metaphorical extensions.

On the other hand, the evaluation of the members of the binary opposition in the positive-negative parameter is not always so unambiguous (in particular, the positive member of the opposition in the ironic context may transform its evaluative meaning into the opposite one, see also Hampe 2005).

In AE, the stimuli which mean *light* and *dark*, sometimes also cause "non-classical" responses, but they are of limited frequency. For instance, light can be sharp, blinding or scary (9a). Instead, responses to the stimuli with the meaning of *dark* reveal a positive evaluation or emotion, linked with the relevant stimulus in the respondent's mind (9b).

(9a)   Pol. *światło* 'light$_n$' – *ostre* 'sharp' 0.9%, *oślepiające* 'blinding' 0.3%; *ból* 'pain'; *lęk* 'anxiety', *ostrożnie* 'carefully' – 0.1% each (Kurcz 1967: 201-202); *razi* 'dazzles' 0.4%, *ból* 'pain', *ostre* 'sharp' – 0.2% each (PSA: 83–84);

   Rus. *svetlyi* 'light$_{adj}$' – *rezkiy* 'sharp' 0.5% (TANRL: 157);

   Eng. *light* - *pain* 0.1% (EAT)

(9b)   Bulg. *tŭmen* 'dark$_{adj}$' – *dobro* 'good', *dobŭr* 'good, kind', *privlekatelen* 'attractive', *priyaten* 'pleasant' – 0.1% each (Gerganov 1984: 187–188);

   Pol. *ciemny* 'dark $_{adj}$' - *ładny* 'nice' 0.1% (Kurcz 1967: 134);

   Rus. *temnyi* 'dark $_{adj}$' - *khoroshiy* 'good' 0.16% (TANRL: 174);

   Eng. *dark* – *nice* 0.1% (KR: 48).

Responses which express positive evaluation or emotions associated with light (10a) and, accordingly, negative evaluation or emotions associated with dark (10b), in the consciousness of the speakers are significantly more frequent.

(10a) Bulg. *svetŭl* 'light_{adj}' – *khubav* ' beautiful, nice' 1%, *krasiv* 'beautiful' 0.3%, *otlichno* 'excellent', *prekrasen* 'wonderful', *priyatno* 'pleasantly', *khubavo* 'nicely', *tikh* 'quiet', *topŭl* 'warm', *vesel* 'cheerful', *gord* 'proud' – 0.1% each (Gerganov 1984: 164-165);

Pol. *jasny* 'light_{adj}' – *radosny* 'joyful' –0.4% (PAE); *światło* 'light_n' – *dobrze (dobre)* 'well (good)' 0.3%, *łagodne* 'gentle' 0.2%, *miłe*(o) 'nice' 0.2%, *przyjemne(ość)* 'pleasant(pleasure)' 0.2%, *spokój* 'calm' 0.2%, *cicho* 'quietly', *pewność* 'confidence', *przytulne* 'cozy' – 0.1% each (Kurcz 1967: 201-202); *światło* 'light_n' – *cisza* 'silence', *spokój* 'peace', *wspaniale* 'wonderfully' – 0.2% each (PSA: 83-84);

Rus. *svetlyi* 'light_{adj}' – *radostnyy* 'joyous' 0.7%, *veselyy* 'cheerful', *krasivyy* 'beautiful', *priyatnyy* 'pleasant' – 0.2% each (RAT 1: 572); *khorosho* 'well' 1%, *khoroshiy* 'good' 0.5% (TANRL: 157);

Ukr. *svitlyi* 'light_{adj}' – *lehkyi* 'lightweight', *pryyemnyi* 'nice', *shchaslyvyi* 'happy' – 0.5% each (UAT 1: 280);

Eng. *light* – *pleasant* 0.3%, *beautiful* 0.2%, *beautifying, cheer, enjoy, nice, peaceful, placid, pleasure* – 0.1% each (KR: 76).

(10b) Bulg. *tŭmen* 'dark_{adj}' – *strashen* 'terrible' 1.2%, *strakh* 'fear' 0.8%, *strashno* 'scary' 0.2%, *tŭga* 'sad' 0.2%, *opasen* 'dangerous', *podtiskasht* 'depressive', *skuka* 'boredom', *tikho* 'quiet' – 0.1% each (Gerganov 1984: 187–188);

Pol. *ciemny* 'dark _{adj}' – *strach* 'fear' 0.3% and *straszny* 'scary' 0.1%, *brzydki* 'ugly', *głuchy* 'deaf', *niepokój* 'anxiety', *ponury* 'gloomy', *przykry* 'annoying', *negacja* 'negation', *zły* 'bad' – 0.1% each (Kurcz 1967: 134);

Rus. *temnyi* 'dark _{adj}' – *strakh* 'fear' 0.6%, *mrachnyy* 'gloomy' 0.4%, *strashno* 'scary' 0.4%, *glukhoy* 'deaf' 0.2%, *negativnyy* 'negative' 0.2%, *strashnyy* 'scary' – 0.2% each (RAT 1: 653); *mrachnyy* 'gloomy' 1.31%, *nepriyatno* 'unpleasant' 0.49%, *strashno* 'scary' 0.49%, *khmuryy* 'gloomy' 0.33%, *strashnyy* 'terrible', *tyazhelo* 'heavily, hard ' – 0.16% each (TANRL: 174);

Ukr. *temnyi* 'dark_{adj}' – *pokhmuryi* 'gloomy' 0.9%, *strashnyi* 'scary' 0.9%,

hore 'sorrow', *zhakhlyvyi* 'horrible', *strakh* 'fear' – 0.5% each (UAT 1: 315);

Eng. *dark – gloomy* 1.1%, *afraid* 0.6%, *fear* 0.6%, *dismal* 0.3%, *fright* 0.2%, *dreary*, *fearful*, *fearsome*, *lonely*, *lonesome*, *lonesomeness*, *scare*, *stillness* – 0.1% each (KR: 48); *fear 0.4%, frightening, gloomy, pain, scare, slow* – 0.1% each (EAT).

Actually, this positive markedness for LIGHT or negative markedness for DARK (in contrast to occasional instances of evaluating these concepts) creates the foundation for metaphorical transferences.

Since "we understand morality via mappings of structures from other aspects and domains of our experience" (Lakoff & Johnson 1999), among which LIGHT and DARK occupy an important place, our moral concepts and values find their expression through them. Light is associated with different moral virtues (11a), and darkness serves to express negative evaluation (11b) from the speakers of language and culture.

(11a) Bulg. *svetŭl* 'light$_{adj}$' – *spomen* 'memory' 0.8%, *obraz* 'image' 0.6%, *lik* 'face' 0.4%, *mig* 'jiffy', *pŭt* 'road, way' – 0.1% each (Gerganov 1984: 164–165);

Pol. *jasny* 'light$_{adj}$' – *dusza* 'soul' (PAE); *światło* 'light$_n$' – *kolega* 'colleague, mate', *marzenie* 'dream', *prawda* 'true', *wolność* 'freedom', etc. – 0.1% each (Kurcz 1967: 201-202); *światło* 'light$_n$' – *radość* 'joy' 0.4%, *ideał* 'ideal', etc. – 0.2% each (PSA: 83–84);

Rus. *svetlyi* 'light$_{adj}$' – *put'* 'path, way' 12.6%, *obraz* 'image' 3%, *budushcheye* 'future', *zavtra* 'tomorrow', *namereniya* 'intentions', *period* 'period', *serdtse* 'heart', *tsarstvo* 'kingdom', etc. – 0.2% each (RAT 1: 572);

Ukr. *svitlyi* 'light$_{adj}$' – *obraz* 'image' 1.5%, *vchynok* 'act' 1%, *den' u moyim zhytti* 'day in my life', *myt'* 'jiffy', *moment* 'moment', *namir* 'intention', *nastriy* 'mood', *pravda* 'true' – 0.5% each (UAT 1: 280);

Eng. *light - hearted, joy, pathway, peaceful, placid, truth* – 0.1% each (KR: 76).

(11b) Bulg. *tŭmen* 'dark$_{adj}$' – *chovek* 'person' 1.1%, *subekt* 'individual' 0.8%; *lichnost* 'person' 0.2%, *bezdushen* 'soulless', *zlodeĭ* 'villain', kharakter 'character' – 0.1% each (Gerganov 1984: 187–188);

Pol. *ciemny* 'dark adj' - *charakter* 'character' 0.4%; *bandyta* 'bandit', *kolega* 'colleague, mate', *psychopata* 'psychopath', etc. - 0.1% each (Kurcz 1967: 134);

Rus. *temnyi* 'dark adj' - *chelovek* 'person' 4.1%, *dela* 'business', *loshadka* 'horse', etc. – 0.2% each (RAT 1: 653); *delo* 'business' 0.65%, *lichnost'* 'personality' 0.33%, *dusha* 'soul', nezametny 'inconspicuous', *podlyy* 'mean', *strashnyy* 'terrible', *tip* ' fellow' – 0.16% each (TANRL);

Ukr. *temnyi* 'dark adj' – *vazhka lyudyna* 'heavy, difficult person', *lyudyna* 'person'[2], *obraz* 'image', *shlyakh* 'way' – 0.5% each (UAT 1: 315);

Eng. *dark – horse* 0.3%, subject 0.1% (KR: 48); *ages* 0.2% (EAT).

The comparison of the above-mentioned binary oppositions to the so called 'orientational metaphor' described by Lakoff and Johnson (1980), where image-schemas are used metaphorically to structure other complex concepts (HAPPY IS UP, SAD IS DOWN; CONSCIOUS IS UP, UNCONSCIOUS IS DOWN; HEALTH and LIFE ARE UP, SICKNESS and DEATH ARE DOWN; GOOD IS UP, BAD IS DOWN, etc.), reveals a certain parallelism. For instance, UP as a member of the opposition is used metaphorically to structure corresponding members of other oppositions (e.g. HAPPY, LIFE, GOOD), while DOWN is used for the contrasting members of those oppositions (e.g., SAD, DEATH, BAD). So, the orientational metaphor UP and DOWN, as well as LIGHT and DARK, is a binary opposition that forms a complex system of metaphoric transformations.

Thereby binary oppositions form a productive base for creating metaphors while maintaining the same general tendency: the corresponding members of binary oppositions can establish the relations of symbolic substitution between each other.

6. Conclusions

Thus, the responses obtained via the AE reveal both the remnants of ancient semiotic systems in contemporary speakers' minds and the changes occurring in respective conceptual structures.

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[2] Some of the responses (such as Bulg. *chovek* 'person', *subekt* 'individual' , Pol. *chłopiec* 'boy', *człowiek* 'person', *mężczyzna* 'man, male'; Ukr. *lyudyna* 'person', Rus. *chelovek* 'person') are difficult for unambiguous interpretation, since they can express both intellectual and moral negative evaluation.

First of all, these responses demonstrate the importance of oppositional relations between LIGHT and DARK themselves. Moreover, the consciousness of contemporary speakers preserves deep-rooted relations of the LIGHT-DARK opposition with the corresponding parts of other binary oppositions, namely DAY-NIGHT; SUN-MOON; WHITE-BLACK, RED-BLACK; SUMMER-WINTER, HOME-FOREST; LIFE-DEATH; HEAVEN-EARTH or EARTH-HELL; FIRE-(WATER); GROUND-(WATER), HAPPINESS-UNHAPPINESS, (OLD)-YOUNG, SACRED -SINFUL/PROFANE, etc., within the evaluative opposition POSITIVE-NEGATIVE. The most stable relations between the oppositions are those motivated by human experience. On the contrary, the processes occurring in languages can lead to the changes in links between different oppositions and to the decreasing of their significance or even disappearance in the minds of contemporary speakers of certain languages such as it is in the case of Pol. *jasny* 'light adj,' or Eng. *light* where the link to HOLINESS has been lost.

Furthermore, this dichotomy goes far beyond the described semiotic system. The AE responses confirm a tight connection of LIGHT and DARK with the human ability for visual perception in light or darkness. It is also possible to trace the ways, in which LIGHT – ABILITY OF SEEING – KNOWLEDGE / REASONING, on the one hand, and DARK – INABILITY TO SEE – ABSENCE OF KNOWLEDGE / EDUCATION, on the other hand, are closely interconnected and all together generate an extended metaphorical complex in the systematic way despite its partial asymmetry.

The findings of the present experimental study indicate that, interacting with metaphorical mappings, binary opposition LIGHT-DARK creates complex mental images, which can be termed 'oppositional metaphors'.

It is not only the LIGHT-DARK opposition that forms the basis for metaphorical transference: the other binary oppositions are also productive for the formation of such metaphorical complexes. At the same time, the general tendency remains the same: the positively marked members of the related binary oppositions can interact with each other in a metaphorical exchange just like their negatively marked members.

A further step would therefore be to explore other culturally significant oppositions and to consider the peculiarities of their linguistic conceptualization as a result of various cognitive mechanisms' interaction.

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SVJETLO i TAMA:
OPREČNA METAFORA KAO INTERAKCIJA KOGNTIVNIH MEHANIZAMA

Kognitivna lingvistika, koja se prvenstveno bavi konceptualnim strukturama ljudskog uma manifestiranima u jeziku, otvara nove puteve proučavanja binarnih opreka. Usprkos brojnim proučavanjima ove pojave još za mnoštvo pitanja nemamo iscrpne odgovore. Ono što je potrebno je ne samo istraživanje usmjereno prema potvrđivanju univerzalnosti (ili stupnja univerzalnosti) neke binarne opreke već i proučavanje njihovog sustava unutar određene jezično-kulturne zajednice unutar određenog vremenskog perioda. Značajan problem predstavlja i precizno proučavanje međuodnosa različitih simboličkih domena u ovoj sferi. Nadalje, binarne opreke ne valja promatrati kao stabilne i nepromjenjive strukture prisutne u ljudskoj svijesti nego kao izvanjske manifestacije specifičnih kognitivnih mehanizama. Ovaj je članak empirijsko ispitivanje binarne opreke SVJETLO-TAMA metodološki utemeljeno na asocijativnom eksperimentu. Analiza reakcija jasno pokazuje opreke koje su duboko ukorijenjene u svijesti govornika i koje su u tijesnoj interakciji. Te opreke tvore bogatu pozadinu za metaforičku interakciju odgovarajućih domena koje stvaraju cijeli sustav unutar kojega se dijelovi rabe za međusobno metaforičko prikazivanje. Žarište zanimanja ovog istraživanja je interakcija kognitivnih mehanizama kontradistinkcije i konceptualne metafore te daljnja analiza ishoda tog procesa u jeziku.

Ključne riječi: asocijativni eksperiment; binarne opreke; konceptualna metafora; evaluacija; vid; znanje.