# BEYOND COLOUR: THE EVOLUTION OF MEANING REPRESENTATION

### Marina Platonova, Larisa Iljinska

Faculty of E-Learning Technologies and Humanities, Riga Technical University, Latvia Marina.platonova@rtu.lv Larisa.iljinska@rtu.lv

The present paper is only a small part of the investigation we have performed into the evolution of how the meaning of colour is represented in contemporary LSP texts. The English language is undergoing a process of change characterized by a tendency towards the extension of the meaning of lexical units. This tendency can be observed in the semantic field of colour, which is a significant component of the cognitive models that enable both an understanding and representation of reality.

Having studied multiple sources and analyzed numerous examples illustrating the historical evolution of this phenomenon, we aim to demonstrate both the complex, multifaceted nature of colour terms and their possible application in the designation of concepts and the formation of new terms. Within the scope of this paper, we have investigated the mechanisms of how contemporary colour-based terms are formed with the additional aim of broadening the perception of colour term applications.

### 1. INTRODUCTION

The semantics of colour has always attracted the interest of philosophers, scholars and professionals from various fields as the emergence of new meanings is not an issue to be addressed solely by traditional linguistics. The mental processes relating to meaning creation have been extensively studied by cognitive linguistics. Many books and articles on the different aspects of the cognitive nature of colour, colour categorization and colour vocabulary development have been written, and the phenomenon of how the meaning of colour is represented through the use of colour terms is still a fascinating area for research. The study of colour terms (e.g. Berlin, Kay 1969; Rosch 1975; Witkowski, Brown 1977; Kay, McDaniel 1978; Wierzbicka 1990; Dedrick 1998; Steinvall 2002; Kay 2015) in disciplines such as anthropology, psycholinguistics, statistics and corpus methodology has had a great impact on the research and analysis of the changes in the patterns and usages of colour-term formation.

The application of colour terms as a pattern for the formation of technical terms is rooted in the necessity to denote emerging concepts that reveal different aspects of life, including scientific ideas, technical phenomena, artistic visions of the world and cultural traditions. The evolution in term formation, in tandem with the shift towards an increased prevalence of its usage, requires the adoption of a diachronic perspective since it is not possible to conduct research into the changing nature of terminology without taking etymology into account. The present study has been conducted as part of ongoing research into colour representation in different types of texts (see Iljinska, Platonova 2011).

Following the theories proposed by Berlin and Kay (1969) and Pellegrino Morato (1535), we differentiate between *colour terms* and *colour-based terms*. The former concerns the names of different colours coined following different patterns, while the latter refers to the terms and elements of the professional lexis of particular scientific and/or technical fields, which have been coined employing colours as terminologization patterns. The multifaceted nature of colour-based terms demands an analytical approach from diverse perspectives, i.e. looking at their development over the course of time under the influence of other symbolic systems (e.g. art, literature).

The present paper looks at terminological tendencies in the representation of meaning, and focuses on the manifestation of the diverse nature of colour terms (colour names) in the context of both prominent literary works and contemporary LSP texts in the English language, paying particular attention to the analysis of the processes of meaning formation, extension or compression. These processes have been analyzed within the framework of conceptual metaphor theory, adopting lexico-semantic, cognitive, pragmatic and semiotic approaches to exploring the representation of the meaning of colours.

In addition to the subject under investigation, the authors provide an analysis of the mechanisms of contemporary colour-based term formation with the aim of broadening the perception of colour term applications.

## 2. METAPHOR AS A VEHICLE FOR REPRESENTING MEANING AND COGNITION

Metaphor as an instrument to express knowledge is one of the oldest modes of meaning representation. Metaphor is usually defined as a transfer of meaning based on an association of similarity, which often reveals aspects of reality that escape other modes of expression. Lakoff and Johnson (1980) developed the theory of conceptual metaphors based on

the existence of metaphorical relations or mappings between conceptual domains in the human mind. They argue that most abstract notions, phenomena and events are mapped in language in the form of metaphors. The primary goal in developing the conceptual theory of metaphor was both to uncover metaphorical mappings between different domains and to demonstrate how they had guided human reasoning and behavior. Conceptual metaphors are based on human perception of reality, everyday experience and numerous associations; they are also influenced by the social and cultural environments people inhabit. In exploring conceptual metaphors, cognitive linguists have pointed out that many possess a universal character (cf. Lakoff, Johnson 1980, 154–155).

The extension of conceptual metaphors is a never-ending cognitive process resulting in a continual evolution of meaning. The origins of many metaphors in use today are frequently rooted in the past. Concepts based on fixed meanings provide an immensely useful tool to analyze the way in which figurative meaning evolves through time (cf. Lakoff, Turner 1989, 185–187).

In cognitive linguistics, culture is generally seen as a shared and common understanding of the real world (cf. Kövecses 2005, 193–195). Kövecses has examined the interaction between conceptual metaphor and cultural models. The author argues that concepts may vary within each culture, and this is determined by the system of values and the perception of time and space. Metaphors may not only change their meanings over the course of time, but also acquire other meanings with possibly contradictory connotations. However, metaphors created with first-order meanings are saved and stored in human memory and become activated in the proper context. Thus, any study of lexical change needs to consider the new coinage within its social and historical parameters, as even metaphoric models rooted in antiquity or the Renaissance, for example, are linked together in the form of diachronic conceptual networking (cf. Kövecses 1995, 336).

According to Kövecses (2005), metaphor can be understood only in the context of the religious, cultural or metaphysical background of any given author, who will construct, draw parallels, and create verbal images based on their direct experience of life. Each culture has a clearly distinguished system of symbols, and research into symbols based on metaphors reveals the complexity of their character. They differ from allegory, allusion and other types of abstract images based on imagination, as well as possessing:

the vast ever-expanding realms of possibilities, realms of wordless thought, and make possible the perception of fundamental relationships between seemingly diverse forms and experiences (Lin Yu-tang cited in Cooper 1978, 7).

The range of meanings communicated through existing symbols is constantly growing; these are frequently applied in novel language use to represent new lexical units. The symbolic resources of a language generally provide an array of alternative images for describing a given scene, and we shift from one to another with great facility, often within the confines of a single sentence. (Langacker 1987, 47)

According to Langacker (1987, 149), all human conceptions are grounded in basic domains; there is a link between our sensory capacities and basic domains.

## 2.1. Colour symbolism

Humans predominantly comprehend the world through visual perception – that is why the vast majority of metaphors and symbols are visually derived. The semantic field of colours is one of the basic domains, which clearly reflects the main tendencies for meaning extension characteristic of contemporary language. This view is supported by Cooper, who states that although interpretations of colours may vary from culture to culture, colour symbolism is one of the most representative, if not universal, of human symbolic systems (cf. Cooper 1978, 7).

Over the years, a number of different methods have been developed for the study of colour terms. According to Foley and Matlin (2015, 190) colours add richness to one's perception of the world. Colours can be associated with certain emotions (black – sorrow; red – love, emergency; green – safety, prosperity, envy; white – purity, etc.) (cf. Black 2002, 25).

Despite the many studies demonstrating that the colour spectrum is interpreted in various ways, Berlin and Kay (1969) consider there to be an underlying pattern of universality. Much of Berlin and Kay's work has since become axiomatic. Their contrastive approach to the question was decidedly novel at the time. Although colour terms possess different connotations in different cultures, Berlin and Kay (*ibid.*) argue that *basic colour terms* are almost similar in all languages. Quinlan and Dyson claim that: "...according to universalism (i.e. following the Roschian hypothesis) such a category structure reflects natural colour groupings that are non-arbitrary and reflect the nature of the colours found in the world" (cf. Rosch in Quinlan, Dyson 2008, 550).

We share their opinion and believe this statement is rooted in the analysis of "how humans conceptualize the world in categories and how they structure their thinking" (Ostermann 2015, 51). It also proves the inclination of humans to think in metaphorical categories inasmuch as it facilitates thought and expands our understanding of the world as a conceptualization of experience. This is highly relevant for cognitive activities based on imagination (cf. Lyons 1980). We have analyzed the extension of the metaphorical meanings of colour terms within the framework of cognitive linguistics, addressing the relationship between language and thought, categorization (concepts, conceptual universals, prototypicality, cognitive models, mental imagery, metaphor), and the pragmatic background of language-in-use (context and models of communication).

One of the key concepts of cognitive linguistics is categorization, which is a mental phenomenon crucial to the understanding and structuring of reality. Categorization is the process through which experiences and concepts are recognized and understood. It consists of the creation of cognitive categories or concepts that form complex structures.

In their anthology on colour categorization, Maffi and Hardin (1997) provide an insight into various aspects of the investigation of colour and the methods used. In general, there are two major approaches to colour categorization research: (1) within a language as a correlation method and (2) a cross-language descriptive method (Kay cited in Wilson, Keil 2001, 143). It is virtually impossible to elaborate a unified approach and method (indeed, it is not actually required), since the application of a particular method is research-driven and highly context-dependent. If we perceive the colour domain as being universal in character, then a contextual study of the lexical items within this domain is likely to broaden our understanding of colour semantics. In the present paper the term 'contextual study' is used in the sense that because colour terms frequently possess different meanings (in different fields of knowledge), and even nuances of meanings, they should not be analyzed in isolation, but rather in combination with adjacent words (micro context level) while keeping in mind the ultimate aims of the whole text (macro context level).

### 2.2. Decoding meaning: the role of context

The relation between meaning and context is of particular importance as it represents an interactive process that enables cognition and productive communication. Meaning in any particular situation depends upon the context in which the colour term is used. This means that context and situation are phenomena closely related to categorization, as "context is the theoretical construct of mental spaces, whereas situation refers to interaction with the real world" (Fauconnier 1994, 16).

In a linguistic context, three aspects can be distinguished: previous knowledge, immediate linguistic environment (type of discourse, genre, register, field of discourse) and symbolic connection (cf. Croft 2000, 102).

Lyons (cf. 1986 [1981], 6–34) maintains that even when people speak the same language, they should be aware of factors such as age, social status, occupation, educational and cultural background and other systematic differences underlying their linguistic behavior. These systematic differences are described as contextual variables. He states (1986 [1981], 38): "it is important to distinguish between context-independent use and contextual use". For example, it is possible to distinguish numerous colour-based terms that, being specific to particular domains, have become independent of context over the course of time. Like a large number of other stock metaphors, they have contributed to the development and enrichment of both professional and general vocabulary (e.g. *white and blue collar workers, red tape, blue chip<sup>1</sup>*, etc.).

At the same time, the usage of expressive means and professional references in LSP texts often determines the context-dependent character of some terms (e.g. *green men* (marine) – the term denotes a pool of men who have experienced the rigours of an Arctic voyage; *green (people)* (ecology) – the term denotes those people who are concerned with ecological and environmental issues). Thus, the meanings of particular colour-based terms are often determined by their contextual relations.

It is not only the relatedness of the senses but also "the meaning dominance and the strength of contextual bias" (Simpson 1994) which affect the particular meaning of a given lexical unit in contemporary LSP texts.

Some metaphorical terms may generate their own subjective meaning as a result of the wide range of pre-existing associations encoded in them. For example, the use of eponymous adjectives derived from the names of famous artists, such as *Botticellian*, *Turneresque*, or *Kandinskian*, may create meanings in literary texts that are assumed, unknown or may even express paradox for the reason that numerous meanings in such cases depend on the associations of any given word.

In the above-mentioned examples, a special type of allusion, based on intersemiotic phenomena (cf. Jakobson 2000 [1959]), i.e. a system of other signs, is created through the proper names (cf. Gardiner 1940) of artists and the titles of their paintings. This type of allusion can engender ideas, associations and additional information in the reader's mind through a mere word since, depending on the context, it is often assumed that the reader will be familiar with the various connotations concealed within the word. Over the course of time eponymous adjectives derived from proper names may morph into common terms in the semantic field of colour, e.g. *Vandyke brown printing*<sup>2</sup>.

<sup>&</sup>lt;sup>1</sup> www.dictionary.com (accessed on 29 March, 2016].

<sup>&</sup>lt;sup>2</sup> http://filmphotographyproject.com/content/howto/2012/02/vandyke-brown-printing-basics [accessed on 29 March 2016].

The analysis of the contextual meaning of lexical items is of considerable theoretical and practical importance for the further study of meaning transfer and meaning extension<sup>3</sup> in the process of the development of a language. Context then makes it possible to differentiate and define the connotative meanings of a lexical item as well to interpret the additional meanings created beyond the lexical level and encoded in literary works.

## 3. ASSOCIATIVE FIELDS OF COLOUR TERMS

Every word is surrounded by a network of associations, which are connected with other terms that are related to it in form, in meaning, or in both (cf. Ullmann 1977, 238). According to Ullmann (*ibid*), the associative field of a word is an unstable and highly variable structure which produces an indefinite number of coordinated terms: derivatives formed from the same stem, words of similar or related meaning, and homonymous words.

The associative field of a colour term may be universal and individual at the same time. It is very sensitive to changes in meaning. Words such as rose, cream, orange, lilac, amber, emerald, golden, silver, milk, snow, coal, flame, wine, apricot, honey, apple, and mouse have associative meanings with basic colours used in combination, for instance milk white, snow white, lily white, coal black, apple red cheeks, mouse-coloured hair, apricotcoloured light of a summer day, and dove-grey suit. As a rule, they are polysemous. Many colours simply cannot be categorized into basic groups, i.e. blue, green, brown, for then specific information about each colour might be lost. Therefore, all shades of colour are language-based and special combinations are used to evoke various meanings in different contexts with the help of words usually associated with colour as well as through literary coinages. The meaning of a basic colour term, together with the specific shade of colour, may be expressed using a synonym (words of similar or related meaning), for instance black – dark, charcoal, jet, sombre; white – milky, snowy, alabaster; red – crimson, vermilion, purple, scarlet; blue – turquoise, navy blue, sapphire, ultramarine, cobalt, azure; yellow – amber, lemon, chicken; violet – lilac, lavender, plum; green – emerald, fresh, grassy, leafy; pink – rose, coral, salmon; brown – chestnut, copper, hazel, chocolate.

The different meanings of colour-based terms may also reflect the intensity of colour. There are three main dimensions of colour intensity: *hue, lightness, and satura-*

<sup>&</sup>lt;sup>3</sup> Meaning transfer implies the transmission of meaning employing various instruments or tools, while meaning extension concerns the process of meaning change through a metaphorical shift.

*tion.* They denote the quality of colour by which we distinguish strong or weak colour intensity (Munsell 1961, 16). Terms referring to these nuances are found throughout literature. Adjectives such as *pale, dark, jet, silvery, icy, milky* and *brilliant* also express the intensity or shade of colour; some, for instance *cold, warm, deep* and *soft*, have synesthetic properties. Intensity can also be expressed by adding modifiers to the basic colour term: *quite, rather, slightly, completely, mostly, extremely, pure, bright, very, almost.* The dimensions of colour are coded linguistically and related to collocations of colour. It is crucial to understand which words can collocate and what meanings they can convey. Modification of colour may also be achieved with the help of another colour term by means of a derived form; i.e. *reddish brown, silvery grey, greenish blue, grass green, olive green.* 

Many examples of unusual colour terms have entered language through literary invention e.g.:

The colours were so strange that words can hardly tell what a troubling emotion they gave. There were *sombre blues, opaque* like a delicately carved bowl in *lapis lazuli*; and yet with a quivering *lustre* that suggested the palpitation of *mysterious* life; there were *purples, horrible* like raw and putrid flesh and yet with a glowing, *sensual* passion that called up vague memories of the Roman Empire of Heliogabalus; there were reds, shrill like the berries of Holly – one thought of Christmas in England; there were *deep yellows* that died with an unnatural passion into a *green*, as fragrant as the sparkling water of a mountain brook... (Maugham 1919, 160).

The semantic field of colours is therefore rich with the element of individual style, which takes the forms of neologisms and/or occasional words created either according to the patterns of a particular language or in contradiction to them. In the excerpt above the author joins components which do not usually collocate: *sombre blues, opaque like; mysterious; purples, horrible like raw and putrid flesh; deep yellows that died with an unnatural passion into* a *green*. The convergence of different stylistic devices makes the description of a picture more vivid and recognizable.

Many stylistic devices are used in literature in the form of epithets, metaphors or similes that possess positive and negative connotations. Some colourful examples include: *clouds yellow as soap; her face white like a spray of jasmine; her eyes were so blue such a wonderful forget-me-not blue* (D.H. Lawrence); *a dress, blue as a joy-bird's feather* (S. Maugham); *hair the colour of chestnuts; eyes cornflower blue; he looks as white as a ghost; flame red wine-yellow topazes; honey-coloured moon* (O. Wilde); *blue to make you jump; eyes which were light and inexpressive; nocoloured eyes* (J. Joyce).

Irony is a special figure of speech used by writers in an attempt to describe a personage, for instance: *a girl like a blot of vermilion; a face like a bad orange, yellow and blue; Eve's face; What a colour... Tinned salmon* (J. Cary); *tomato-coloured blobs* (J. Galsworthy). These terms may not be repeated but they convey instantly comprehensible meaning. In English literature, such figures of speech are generally used to describe the appearance of characters and landscapes.

Word combinations belonging to the field of colour are "characterized by the contradiction between the semantic integrity of the whole and the formal independence of its parts" (Öz 2007, 141). It is often impossible to establish a clear boundary between free and set combinations of words. Within a given context they can convey two types of meanings: literal meaning (black eyes, black diamonds, blue flower, black belt) and figurative (background) meaning (black eye, black ball, black arts, black magic, green thumb, golden handshake, etc.) Free combinations form the bulk of all lexical combinations. In contemporary language the link between the initial meaning of the colour term may be vague or even lost. From a synchronic perspective, colour terms may therefore be used metaphorically to create collocations containing a non-colourbased meaning because readers of the text are no longer aware of the connection. Take *in the pink*, for example: this lexical unit has nothing to do with the actual colour but frequently denotes the perfect condition or degree of the thing it refers to; or white *lie* – a term that refers to abstract notions and not to concrete colours. Some terms occasionally describe phenomena that may be better communicated by terms from other domains, such as *pink elephant* and *green years*. It should be noted that a primary meaning, if it is based on metaphorical mapping, may yet become dominant again in a new and relevant context through the potency of its initial meaning. As a result, collocations can convey not only a generalized meaning but also numerous field-specific meanings.

### 4. COLOUR IN THE CATEGORY OF SYNAESTHETIC METAPHORS

*Synaesthesia* was an area of major scientific research between the late 19th and mid-20th century. In search of new meanings, many authors around that time wrote about their synaesthetic experiences in an attempt to explore how the senses affect each other. Colours can evoke strong feelings and emotions as well as communicate meaning through associations with other senses or symbols from other domains.

The concept of synaesthesia in the arts reflects the simultaneous perception of multi-sensory experience (cf. Simner, 2012). According to Cytowic (1995), synaes-

thesia is "the involuntary physical experience of a cross-modal association, because the stimulation of one sensory modality causes a perception in one or more different senses" (Cytowic 1995 in Bretones Callejas 2001).

The analysis of synaesthesia in literary works dates back to the end of the 19th century. Writers often used synaesthesia as a creative process to express additional hidden meanings, e.g. "mood, emotion, feelings, sensation, shape, texture, colour(s)…" (Balla 2012, 105). Many newly coined words from that time have entered the language. The following examples illustrate a variety of uses of synaesthesia, the intensity of synaesthetic perception, and how the senses link across different semantic fields: *wet green light, brooding green silence, a blue day, a blue laughter, a hard blue-staring anger* (D.H. Lawrence); *grey-green somnolence* (V. Woolf), *deep brown voice, slow black horror* (J.B. Priestley), *rose-coloured joy, rose-red youth* (O. Wilde), *brown years* (S. Lewis), *tiger-yellow eyes* (P. Back), *red-faced monsters* (A. Huxley), *viking-blue eyes* (S. Maugham). Synaesthesia is often used in literature to develop a character's inner life or to convey how they perceive complex phenomena in the real world. Synaesthesia also vastly enhances the ability to describe nature.

The elements of synaesthesia foreground the individual style of the author, usually characterized by a unique combination of language units, expressive means and stylistic devices peculiar to a particular writer, which makes his/her works recognizable (cf. Galperin 1977, 17). The individual style is never entirely independent of literary norms, but knowledge of the language system allows the writer to deviate from the norms to achieve the desired stylistic effect (cf. *ibid*, 12–17).

Synaesthesia can add an extra layer of meaning and create more detailed and complex imagery. It can also express confusion, anxiety, loneliness, anger and excitement. Writers often create synaethetic metaphors based on illogical and intuitive associations. The emotional world dominates their work; their images accumulate super-natural significance (cf. Van Campen 2007). Synaesthetic metaphors can convey meaning which would otherwise be lacking and are striking evidence of the instability of colour perception.

Colour synaesthesia (grapheme) has again become an area of scientific research with the emergence of the Internet and the establishment of international organizations, such as the American Synaesthesia Association and the Netherlands Synaesthesia Web Community. According to recent research, synaesthesia plays an important role in the processes of conceptualization. Most phenomena that have been linked to synaesthesia are related to semantic representation (i.e. meaning). The new term *ideasthesia*  defines the phenomenon whereby activations of concepts (inducers) evoke perceptionlike-experiences (concurrent). The implications of this distinction can go a long way in helping to solve the mystery of conscious experience, such as how we use one sense to convey the experience of another, although one is purely sensory while the other is semantic (cf. Nikolic 2009). The growing body of empirical evidence, together with the study of rarified perceptual states like synaesthesia, will be crucial to future scientific progress in other areas.

Colour synaesthesia has always been a source of inspiration for composers, poets, and writers, and now creative methods involving synaesthesia are being used by designers and artists. Contemporary artists are attempting to find and transmit their individual cross-sense experiences in order to bolster their creativity, to activate concepts and in doing so create new meanings. They aim to find innovative methods and approaches to technological development and creative design, the success of which can be greatly enhanced through the appropriate use of synaesthesia. The connection between meaning and colour may seem obvious but at times it is highly unpredictable. The impact of colours on human perception is being studied in laboratories and new models are being developed and compared with the results of previous research.

## 5. COLOUR-BASED TERMS IN LSP TEXTS

The meanings of colour terms are boundless. In order to standardize colour terms and liberate them from their cultural restraints, eleven basic colours, selected by Berlin and Kay (1969, 3) are used in the creation of new terms: *white, black, red, green, yellow, blue, brown, grey, purple, pink* and *orange*. There has also been a recent tendency to use terms derived from non-colour sources: *lemon heat* (metallurgy), *gold code* (telecommunications), *amber light* (traffic), etc.

Two of Berlin and Kay's hypotheses – (1) semantic universals and (2) evolutionary sequence in the lexical encoding of colours – have been used since 1978 as the basis for numerous studies and are of the utmost importance for the author's research into extensions in metaphorical meaning in contemporary English, or, "…the language of science and technology, i.e., of most primary term formation" (Sager 1990, 80).

The progress of human consciousness is reflected in the development of lexical meaning: changes in reality lead to the formulation of new notions. As a result, the continuous processes behind meaning extension require continuous changes to contemporary scientific terminology.

The study of the complicated processes behind these changes in contemporary LSP texts have altered traditional perceptions of colour terms, broadening their meanings and extending the sphere of their usage in both monolingual and multilingual communities.

The use of colour terms in LSP texts has had a major impact on the coinage of terms, which are used as foregrounding elements typical of the individual style of the authors. The inherent character of each colour forms the basis of the figurative meaning not only of a colour term itself, but also of a colour-based term created following this pattern. The ability of colour-based terms to encapsulate a myriad of related meanings, preexisting associations and distinct emotions allows the designation of scientific and technical phenomena to observe the principle of linguistic economy since technical terms are usually short and precise, e.g.: *white heat* (metallurgy); *brown coat* (building); *green audit, green accounting* (economics); *green chemistry; greenhouse effect; white coal; red, green, blue high-definition monitor system* (computing). Nevertheless, despite the tendency towards the formalization, standardization and concretization of professional vocabulary, colour-based terms still remain explicitly expressive, although they rarely preserve their allusive (metaphorical) nature when translated into other languages. This stylistic pattern is quite frequently used in the English language to coin novel terms, and, if applied well, can contribute significantly to the stylistic enrichment of the text.

The analysis of colour-based terms should take into account certain parameters, not least of which is the genre of the text in question: the complexity of metaphorical meaning may depend on the specific genre. Genre analysis is often viewed as the study of situated linguistic behavior (Bhatia 2004, 30). Although genres are identified on the basis of recognizable conventionalized features, they are constantly evolving. As Fair-clough states: "We all manage to describe and identify different genres, yet in the real world they are often seen in hybrid, mixed and embedded forms" (Fairclough, 1993).

As with the authors of literary works, the authors of contemporary LSP texts are to a certain extent "deliberately manipulating linguistic form for aesthetic effects, regardless of the actual situation context" (Biber, Conrad 2009, 51). The characteristics of LSP texts may also be influenced by particular domain(s). As a result, these texts are less formal, hybrid, more expressive, and are characterized by the metaphorical extension of the meaning of colour terms.

The vast majority of newly created terms can be found in rapidly developing fields such as political science, the social sciences, environmental science, technology and engineering. They frequently possess an obvious similarity to the phenomenon or object being denoted, such as *black gold* (the colour of black and high value of oil), *clear blue water* (significant distance between the ideologies of two political parties), and *blue noses* (pretending to be someone you are not), etc.

Since the number of emerging concepts is growing across numerous languages, it is recommended that basic colour terms are used in the creation of new terms in order to facilitate their intralingual and interlingual application, harmonization and standardization. An example of this could be: *green accent* (perfume), *green day* (diet), *green hand* (inexperienced crew member), *brown fields* (contaminated real estate), *brown fumes* (environment), and *white hat hacker* (an authorized ethical computer hacker who specializes in security system testing).

Colour-based terms in various scientific and technical fields are quite often created by analogy, which has a long tradition as a basis for the creation of new words (Sapir 1921; Jespersen 1965), and are applied to denote the same concept or the same phenomenon, even though it might be of a different influence, degree, scale and/or role in the same communicative setting. The following examples are a good illustration of this: green electricity – brown electricity (power engineering), black hole – grey hole (astronomy), red goods – brown goods, white goods, green goods (economics); black market – grey market (economics), bluejacket – greyjacket, brownjacket (military), red mud – green mud, blue mud (oceanography), blue shift (physics) – red shift (astronomy); grey power – black power – brown power – green power (politics); yellow sheets – pink sheets (advertising). The creation of terms by analogy is, to a certain extent, justified because they are easy to comprehend in relation to other related terms: they are unambiguous (as long as people are aware of the initial term and can trace back the pattern) and are comprehensible to experts from various language communities. Furthermore, they promote the standardization of terminology in its respective field.

## 6. CONCLUSION

In contemporary scientific and technical language, term creation based on knowledge, perception and cognition of colours is widely used due to its associative and cultureframed universal character. Many colour-based metaphors in use today can be traced back through time, revealing an evolutionary sequence of metaphorical models that are linked together in the form of diachronic conceptual networking. Colour terms can transmit an almost infinite number of meanings, certain stylistic connotations, and sometimes even emotions. The variety of meanings communicated in different combinations through existing language resources is constantly expanding; these new meanings are frequently applied in the use of novel language to conceive new lexical units. Despite the fact that the perception of colour terms in all spheres of life, from business to politics, and from IT to design, depends upon their usage and recognition in public discourse, some metaphorical terms may evoke their own subjective associations that are triggered by the wide range of associations historically encoded in them.

#### References

- Balla B. 2012. Symbolism, Synesthesia and Semiotics, Multidisciplinary Approach. USA: Xlibris Corporation.
- Berlin B., Kay P. 1969. *Basic Color Terms: Their Universality and Evolution*. Berkeley: University of California Press.
- Bhatia V. K. 2004. Worlds of Written Discourse: A Genre Based View. Advances in Applied Linguistics. A&C Black.
- Biber D., Conrad S. 2009. *Register, Genre and Style*. Cambridge Textbooks in Linguistics. Cambridge: Cambridge University Press.
- Black J. 2002. Color Psychology for e-Book Cover Design:
- https://archive.org/stream/Color\_Psychology\_for\_eBook\_Cover\_Design/Color\_Psychology\_for\_eBook\_Cover\_Design\_djvu.txt [Accessed on 3-9-2016].
- Bretones Callejas C. 2001. Synaesthetic Metaphors in English. *ICSI Technical Report*, 8: http://www.icsi. berkeley.edu/techreports [Accessed on 2-9-2016].
- Cooper J. C. 1978. An Illustrated Encyclopaedia of Traditional Symbols. New York: Thames and Hudson.
- Croft W. 2000. Explaining Language Change: an Evolutionary Approach. Pearson Education.
- Dedrick D. 1998. Naming the rainbow: color language, color science, and culture. Volume 274 of Synthese Library. Dordrecht: Kluwer Academic.
- Fauconnier G. 1994. Mental Spaces. New York: Cambridge University Press.
- Foley H., MATLIN M. 2015. Sensation and Perception. Psychology press.
- Galperin I. R. 1977. Stylistics. Moscow: Vysshaja Shkola.
- Gardiner A. H. 1940. The Theory of Proper Names. Controversial Essay. London.
- Iljinska L., Platonova M. 2011. Classification of Colour-Based Metaphorical Terms. *Vertimo studijos: Mokslo darbai*, 4, Vilnius: Vilniaus Universitetas, 61–71.
- Jakobson R. 2000 [1959]. On linguist aspects of translation. L. Venuti. (Ed.). *The translation studies reader*. London, New York: Routledge, 113–118.
- Jespersen O., 1965. *Modern English Grammar on Historical Principles*, vol. 2. London: Allen and Unwin; Copenhagen: Enjar Minksgaard
- Kay P., Mcdaniel C. 1978. The linguistic significance of meanings of basic color terms. *Language* 54 (3), 610–646.
- Kay P. 2015. Universality of Color Categorization. Elliot A. J., Fairchild M. D. (Eds.) Handbook of Color Psychology. Cambridge: Cambridge University Press, 245–258.

Kövecses Z. 1995. American Friendship and the Scope of Metaphor. Cognitive Linguistics 6, 315-346.

- Kövecses Z. 2005. Metaphor in Culture: Universality and Variation. Cambridge University Press.
- Lakoff G., Johnson M. 1980. Metaphors We Live By. Chicago: University of Chicago Press.
- Lakoff G., Turner M. 1989. More Than Cool Reason: A Field Guide to Poetic Metaphor. Chicago: University of Chicago Press.
- Langacker R. 1987. Foundations of Cognitive Grammar: Theoretical Prerequisites. Stanford: Stanford University Press.
- Lyons J. 1986. Language, Meaning and Context. (1981). London: Fontana.
- Maffi L., Hardin C.L. 1997. Closing Thoughts. Hardin, C.L, L. Maffi. (Eds.). Colour categories in thought and language. Cambridge University Press, 347–372.
- Maugham S. W. 1919. The Moon and Sixpense. London: William Heinemann.
- Morato F.P. 1535. On the Signification of Colours. Translated by Osborne, Roy in 2012. BrownWalker Press.
- Munsell A.H. 1961. A color notation. 11th ed. Baltimore: Munsell Color Company.
- Nikolić D. 2009. Is Synaesthesia Actually Ideaesthesia? An Inquiry into the Nature of the Phenomenon. *Proceedings of the Third International Congress on Synaesthesia, Science & Art*, Granada, Spain, April 26–29.
- Ostermann C., 2015. Cognitive Lexicography. A nea approach to lexicography making use of cognitive semantics. Berlin/Boston: Walter de Gruyter Gmbh.
- Öz Ü. 2007. Idiom deformation on Semantic, structural and functional levels. *Lingvistica i Literatura* (04), 141–144.
- Rosch E. 1975. The nature of mental codes for color categories. *Journal of Experimental Psychology*. Human Perception and Performance, vol. 1(4), 303–322.
- Sager J.C., 1990. Practical Course in Terminology Processing. John Benjamins Publishing.
- Sapir E. 1921. Language. New York: BiblioBazaar.
- Simner J. 2012. Defining Synaesthesia. British Journal of Psychology. Vol. 103(6), 1–15.
- Simpson G.B. 1994. Context and the Processing of Ambiguous Words. Gernsbacher M. (Ed.). *Handbook* of *Psycholinguistics*, San Diego Academic Press. Chapter 10, 359–374.
- Steinvall A. 2002. English Colour Terms in Context. Umeå: Umeå universitet.
- Quinlan P., Dyson B. 2008. Cognitive Psychology. Pearson education limited.
- Ullmann S. 1977. *Semantics: An introduction to the science of meaning*. Oxford: Basil Blackwell and Mott LTD.
- Van Campen C. 2007. The Hidden Sense: Synaesthesia in Art and Science. Cambridge, Massachusetts: MIT Press.
- Wierzbicka A., 1990. The meaning of color terms: semantics, culture, and cognition. *Cognitive Linguistics*, vol. 1(1), 99–150.
- Witkowski S. R., Brown C.H. 1977. An Explanation of Colour Nomenclature Universals. *American Anthropologist*, vol. 79, 50–57.
- Wilson R. A., Keil F.C. 2001. The MIT Encyclopaedia of the Cognitive Sciences. MIT Press.

### DICTIONARIES AND DATABASES

- 1. ETB, EuroTermBank, © EuroTermBank Consortium 2006-2007
- 2. IT&T, LZA Terminoloģijas komisijas informācijas tehnoloģijas un telekomunikācijas apakškomisija
- 3. Letonika, Angļu-latviešu vārdnīca, Tildes Datorvārdnīca Letonikā, © Tilde 2002-2007
- 4. Oxford English Reference Dictionary. (2003) USA: OUP
- 5. Personālie datori. Angļu-latviešu-krievu skaidrojošā vārdnīca. (1998) Riga: Dati
- 6. Skujiņa V. (1999) Latīņu un grieķu cilmes vārddaļu vārdnīca. Riga: Kamene
- 7. Webster's Third New International Dictionary, Unabridged. (2002) Merriam Webster
- 8. www.thefreedictionary.com
- 9. www.businessdictionary.com
- 10. www.definitions.net
- 11. www.macmillandictionary.com

## SPALVŲ SEMANTINIO LAUKO REIKŠMIŲ KAITA

### Marina Platonova, Larisa Iljinska

### Santrauka

Straipsnyje pristatoma tik nedidelė spalvų semantinio lauko reikšmių evoliucijos LSP tekstuose tyrimo dalis. Teigiama, kad šiuo metu anglų kalboje vykstančiam reikšmių kitimo procesui būdingas leksinių reikšmių plitimas į naujas sritis, arba kontekstus. Spalvų semantinio lauko raida yra puikus šios tendencijos pavyzdys. Analizuodami atskirus jo elementus galime nustatyti reikšmingus kognityvinius modelius, kurie mums padeda suprasti ir vertinti tikrovės reiškinius. Tai svarbu ir šiuolaikinėje terminologijoje, nes spalva yra gana dažnas naujų sudėtinių terminų elementas. Savo išvadas apie sudėtingą ir įvairialypę tokių terminų darybą, pritaikomumą, sąvokų apibrėžtis ir kitus terminologinius su spalvų pavadinimais siejamų terminų reikšmių analizės aspektus autorės grindžia gausia empirine medžiaga ir specialiosios literatūros analize.