



The Meaning of Symbolism of Colours in Fear-Themed Drawings of Polish and Turkish Children

Znaczenie symboliki kolorów na rysunkach o tematyce lęku dzieci polskich i tureckich

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Received: 10 Mar 2024 Revised: 14 Apr 2024 Accepted: 17 Mai 2024 Published: 30 Jun 2024 Abstract: The aim of our research was to discover the symbolism of colours applied in fear-themed drawings. The research covered 482 children from Poland and Turkey, whose ages ranged from 6 to 10 years and who were of Polish and Turkish nationalities (purposive sampling, snowball sampling). The research consisted in comparing the range of colours used by the children of both nationalities in their drawings and in interpreting them, considering the respective cultural contexts. For the needs of the analysis presented in the article, we formulated the following questions: What colours dominate the drawings of children of both nationalities? What are the similarities and the differences between the colours applied in the examined drawings? How can the applied colours be interpreted, taking into account their symbolic meaning and function in the given culture? It was discovered that the predominant colours used by the group of examined children were black, red, and blue. Based on the conducted research the authors put forward the hypothesis that the use of these colours in children's fear-themed drawings is not accidental. They can be treated as colours of fear, which is ones that have a symbolic relation with this emotion. In the case of the colour black, this can be the fear of death, whereas the colour red can symbolize the fear of getting injured. On the other hand, the use of the red and blue colours can also be interpreted as a need to be protected against danger (apotropaic significance of colours).

Key words: colours, children's fear-themed drawings, 6-10-year-old children, cultural context, symbols

Abstrakt: Celem naszych badań było odkrycie znaczeń symboliki kolorów użytych na rysunkach o tematyce lęku. Objęliśmy nimi 482 dzieci z Polski i Turcji w wieku 6-10 lat narodowości polskiej i tureckiej (dobór celowy, metoda kuli śnieżnej). Badania polegały na porównaniu kolorystyki rysunków dzieci obu narodowości oraz ich interpretacji uwzględniającej kontekst kulturowy. Na potrzeby przedstawionej w artykule analizy sformułowaliśmy następujące pytania: Jakie kolory dominują na rysunkach dzieci obu narodowości? Jakie podobieństwa, a jakie różnice występują w kolorystyce badanych rysunków? Jak można interpretować użyte kolory, uwzględniając ich znaczenie symboliczne i funkcję w kulturze? Zauważono, że wśród użytych kolorów dominujące były czarny, czerwony i niebieski. Na podstawie przeprowadzonych badań stawiamy hipotezę, że użycie tych kolorów przez dzieci na rysunkach o tematyce lęku nie jest przypadkowe. Można je potraktować jako tzw. kolory lęku, czyli takie, które mają symboliczny związek z tą emocją. W przypadku koloru czarnego może być to lęk przed śmiercią, czerwonego lęk przed zranieniem. Użycie czerwonego i niebieskiego koloru można też interpretować jako potrzebę ochrony przed niebezpieczeństwem (apotropeiczne znaczenie kolorów).

Słowa kluczowe: kolory, rysunki o tematyce lęku, dzieci w wieku 6-10 lat, kontekst kulturowy, symbole



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Introduction

Colours are present in everyday life and their function is related to the prehistoric culture of human beings. The common knowledge of the code of colours results in the fact that nearly every infant already at the very moment of entering the world is usually welcomed with a layette prepared in the colour corresponding to its sex (cf. Uzun 2022, 178-196). Colours also play a significant role at the initiation of successive stages of people's lives as well as during the ceremony at the end of people's worldly existence. Colours are perceived as a factor shaping individual or collective identity, they provide a kind of information communicating values, norms and behavioural patterns of a given community. Colours allow identifying with the community and building a commonwealth. They also serve the purpose of determining and delineating boundaries (physical, social, moral), point to the occurrence of cultural dissimilarities, or describe class differences and social distinctiveness. Colours can evoke clear associations and trigger reactions, which is made use of in many domains of life. C.P. Biggam observes that "the exact nature of the colours we see is the result of a complicated interaction between the physics of light, the physiology of the human eye, environmental conditions at the time of viewing, the physical properties of the object being viewed and the way in which our brains receive and interpret all this information" (2012, 2). In a simplified way, colour1 "is an optically perceived property of an object dependent on the degree of absorption, dispersion or penetration of rays of light" (Sobol 2000, 337). The brief history of research on colours presented below will help explain the function which they perform in social life and in culture.

1. Research on colours

The history of colour is intricately linked to art, physics, medicine, psychology, sociology, anthropology, marketing, or even music (Whiteford et al. 2018). The first attempts at learning about the properties of colours were founded on observation of nature and experience of ancient artists who, through their own intuitive practice of applying hues, created a new palette of colours. The beginnings of research of scientific character, dealing with colour, are associated with Descartes and then Newton who experimented with dispersion of light by prism. Newtonian model of colours offered an inspiration and plane for polemics and further search by, among others, painters (e.g. Jacob Christoph Le Blon) and poets (e.g. Johann Wolfgang von Goethe). The cognitive value of their outputs in this sphere significantly outweighs the intuition connected with the art practiced by them. Such an interpenetration of knowledge on colours between different domains is clearly visible in the activity of French chemical engineer Michel Eugene Chevreuln, whose work titled *De la loi*

¹ The scientific literature distinguishes between the two terms: colour and hue. Colour possesses several parameters, including a hue. This means that, in practice, a hue is one of the features of a colour (Gonigroszek 2008, 91-99, 94).

du contraste simultané des couleurs et de l'assortiment des objets colorés (translated into English by Charles Martel as *The principles of harmony and contrast of colours*) (1839) had a strong impact on the development of art. In turn, achievements in the fields of anatomy and physiology enabled establishing the reaction of human eye to light waves evoking the impression of different hues in the brain depending on wavelengths. Towards the end of the 19th century, Albert Munsell elaborated one of the first numerical systems of colour description, which made it possible to launch a scientific debate on the subject matter. The system was based on the assumption that each colour possesses three characteristic features, namely: hue, chroma and value. Despite the fact that since that time there have appeared also other systems of colours (e.g. NCS, RAL, Colour Matching System), the system presented by Munsell is still in use nowadays (in its new version as Uniform Colour Scales) (World Museum 2024).

A scientific debate on colours is also conducted on the ground of linguistics. The theory describing the appearance of colours is of no importance in it, neither is it significant here in what way – from the point of view of anatomy – colours are perceived. The dispute concerns relations between language and thought, and more precisely – the influence that language exerts on thinking about colours. This oscillates most often between the universalistic and relativistic stances. The first group of researchers recognize the existence of a universal repertoire of thoughts and perceptions which find their reflection in all languages of the world. They claim that cognition of colours is an innate process, a physiological one, therefore it is identical to the whole humanity. On the other hand, the proponents of the relativistic standpoint maintain that our perception of the world is shaped by semantic categories of the mother tongue, while the changeability of terms connected with colours in different languages points to phenomena more specific of culture.² The present state of knowledge favours acceptance of a more balanced perspective regarding the influence of language on perception of colours. Authors of studies are inclined to accept the thesis that "colour naming reflects both universal and local determinants" (Kay and Regier 2006, 51-54).

² The beginnings of the above-mentioned dispute among linguists stems from the *Basic Colour Terms: Their Universality and Evolution* (1969) by Brent Berlin and Paul Kay. Making use of Munsell colours system, researchers established, among others, that in each language in which there appears the term describing "red", it corresponds to the same colour. They also established that in the languages examined by them it is possible to identify eleven basic categories of colours, such as white, black, red, green, yellow, blue, brown, purple, pink, orange and grey. They acknowledged thus that language possesses a certain evolutionary pattern. In the situation where there are fewer than eleven terms describing colours available, it is possible to notice defined regularities. For instance, in each of the examined languages, there are "white" and "black" (or light and dark). In the case there exist three terms describing colours, the next one is "red". Then, there follow either "green" or "yellow" (four terms), which appear in the case where there are five terms in the given language. When there are six terms, then the language contains a term referring to the colour blue; consequently, in the case of seven terms – colour brown. Other colours occur only in languages which recognize eight or more terms describing colours (Berlin and Kay 1969, 2-4, cf. Kay and Regier 2006, 51-54).

At this point, we would like to refer to research on the relation between colours and emotions and to return to J.W. Goethe mentioned earlier. In the book dealing with the nature of colour Goethe connected the perception of colours with emotional experiences, classifying them in two groups. The first one, the "plus colours" is a group of lively, inspiring and warm colours evoking positive emotions. They include yellow, yellow-red and red-yellow. In turn, the other group, i.e., the "minus colours", make people feel restless, anxious and cold and it includes blue, blue-red, red-blue. This conception was developed over one hundred years later by Kurt Goldstein, who noticed that in his patients, contact with colours evoked physiological reactions in the form of clearly observable emotions (cf. Elliot and Maier 2014, 97).

The above-described relation between the colour, which is a psychic expression evoked in the brain by means of electromagnetic waves, and an emotion, being an affective psychic state of varying amplitude, does not seem too obvious. In reality, however, authors of studies notice that "the cross-modal association of colour with emotion is a universal phenomenon" (Jonauskaite et al., 2020, 1245-1260; cf. Spence 2011, 971-995), while studies on this issue indicate that colour choices are affectively driven: brighter colours are related to such emotions as exultation or joy, whereas darker ones link to fear and panic (Dael et al. 2016, 1619-1630). Research conducted among small children proved that it is three-year-olds who discover coherent relations between colours and facial expressions (Zentner 2001, 389-398). In a group of 5- and 6.5-year-old children, following the presentation of nine colours to them, they were asked the question "How does (the colour) make you feel?" All the children were able to express their emotional reaction to each colour and their responses pointed to a clear relation between the colours and emotions (Boyatzis and Varghese 1994, 77-85). In other research in the field of evaluation of colours and understanding of emotions, it turned out that 7-8-yearolds can associate colours with positive and negative emotions. The colour blue is identified with the feeling of happiness, whereas those of black, white, red, green, and brown are associated with unhappiness. The children were also able to assign colours to positive emotions more easily than to negative ones, which – according to the authors – suggests that there exists a specific schema of colour-emotion kind typical of this age group (Pope, Butler and Qualter 2012, 1-9). In another study, children at a younger school age indicated the dominant colours for love (red), death (black) and anger (red followed closely by black) (Byrnes 1983, 247-250).

In turn, intercultural research relating to semantic differential affective meanings revealed the occurrence of similarities and confirmed the existence of a universal model in assigning emotions to individual colours (Adams and Osgood 1973, 135-157; cf. D'Andrade and Egan 1974, 49-63).³ According to authors of

³ Research carried out in 30 countries (including Poland) allowed observing global probabilities. Among the most significant pairs of associations of colour-emotion type, there were found the following ones: "black and sadness, black and fear, black and hate, red and love, red and anger, pink and love, pink and joy, pink and pleasure, gray and sadness, gray and disappointment, yellow and joy, orange and joy, orange and amusement, and white and relief." There were also certain slight

studies, the results suggest that the occurrence of intermodal associations⁴ has its roots in "universal human experiences and in culture-specific variables, such as language, mythology, and literature" (Hupka et al. 1997, 156-171).

2. Own research into the symbolism of colours in fear-themed drawings

The research described in the present article was conducted by us in the constructivist paradigm which assumes that social reality is a structure created in someone's mind (a construct), formed based on experiences of an individual and their interactions with the surrounding environment. Since it is of subjective nature, it cannot be evaluated in categories of true/false or an absolute reality. The aim of humanistic studies is not endeavouring to reflect the reality in a cognitive manner, but rather creating it in the way of sociocultural discourse (cf. Rorty 1994, 284-285), while the obtained knowledge is an unending act of dialogue between participants of the research process (Guba and Lincoln 1994, 109-111).

Accepting the above-presented point of view allowed us to give answers to questions concerning the essence of the problem (ontology), the relation emerging between the cognizing and the cognized (epistemology), as well as research orientation covering strategies and methods appropriate for the given subject of research (methodology). Responding to questions of the ontological nature, we accepted the view that experiencing an artistic piece makes the starting point for reflection on the meanings of symbols of culture and including them in a comprehensive recognition of the world (Gadamer 2007, 135). In response to epistemological questions, we accepted that cognition of the reality proceeds through an attempt at interpreting and the sense of the piece being a set of certain cultural codes (Rapaille 2019) and the heritage of a given community. A researcher, initially limited by his lack of knowledge, looks for an answer in the common past, the tradition that allows understanding the surrounding world. Interpreting codes of diverse cultures occurs on the plane of a common language offered by motifs from fairy tales, literature, painting, mythology, religion. This is a process referred to as fusing of horizons by Hans-Georg Gadamer, meaning that "the old integrates with the new into a living sense" (2007, 420).

differences noticed in this respect between Poland and Arab countries. Moreover, with reference to terms relating to colours, strong similarities between national and global models were found. The lowest variance in similarities in all the examined countries was connected with such colours as pink, green, turquoise and black, while the highest with purple and yellow (Jonauskaite et al. 2020, 1245-1260). In turn, research conducted between international students' community revealed that in each of the examined countries "anger" was associated with the colours of black and red, "fear" with black, and "jealousy" with red. Intercultural differences were also noticed, like, for instance Polish students associating the emotions of anger, envy, and jealousy with purple, while German ones connecting those of envy and jealousy with the colour yellow. In the case of Americans, envy was associated with black, green, and red, in turn, Russians identified it with black, purple and yellow.

⁴ Intermodal associations are impressions arising from different senses (Rogowska 2015, 141).

The research presented here is of a qualitative character and refers to the phenomenological-hermeneutic tradition. In practice, hermeneutics is a kind of peculiar discourse whose aim is to understand the sociocultural reality. In our studies, the understanding of it consisted in interpreting colours used in children's drawings. In hermeneutics, the ontological status of fear can be multi-contextual (it has a historical, cultural, social, political, individual dimension) and is a result of interpretation of the reality of the person experiencing it. Such interpretations are never ultimate and lead to other ones that make the beginning of a new and deepened understanding. Hermeneutic studies on symbolism of colours create a possibility of discovering the meaning which colours play in culture and in society. Gadamer believed that "art is a cognition, while experiencing a piece of art allows participating in this cognition" (2007, 153). We decided that artefacts can also include children's drawings being an act of communication, a universal means of free expression of innate reaction to phenomena that children make use of from their very early age (Mannathoko and Mamvuto 2019, 384; Farokhi and Hashemi 2011, 2219-2224). For this reason, they are willing to describe by its means their representations of the real world and supernatural phenomena, including fears.

The research dealing with fear-themed drawings was conducted in the years 2014-2022 on the territories of Poland and Turkey. Our goal was to find out about fears of children at a younger school age on the basis of symbols used. The total number of study subjects was 482 children at the ages ranging from 6 to 10 years, including 111 girls and 57 boys from Poland and 153 girls and 161 boys from Turkey, respectively. Purposive sampling was based on the availability of respondents and conducted using the snowball method (Babbie 2007, 204-205). It included children of the age mentioned above who wanted to participate in the study and whose parents gave their consent to it (for more, cf.: Konieczna and Talu 2022, 111-138).

The analysis presented here concerns only one fragment of the research on fearthemed drawings and concentrates on colours used in the drawings. The aim of it was to deepen our understanding of the meaning of colours, considering the ethnic, national and intercultural contexts. For the needs of the analysis, we formulated the following questions: What colours dominate in the drawings by children of both nationalities? How can one interpret the colours used, including their symbolic meaning and function in culture? The procedure assumed creating one drawing by each of the examined children. To this end, each child was given a sheet of paper of A4 size and crayons and then was asked to draw its fear. Upon finishing the drawing, the child was interviewed, which was meant to obtain additional information on the content of the work and complement the whole performance (cf. Konieczna and Talu 2021, 172-185; Konieczna and Talu 2022, 111-138).

At the stage of analysing the drawings, we availed ourselves of the theory of Erwin Panofsky (D'Alleva 2013, 25-34). As regards our research, the pre-iconographic (formal) analysis proposed by this researcher consisted in isolating the most significant features of the drawing, which can be determined without the necessity of making reference to other sources (e.g. the output of culture). On this

basis we elaborated a base of characteristics of drawings comprising, among others, age, sex, names of symbols of fear and all the colours which had been used by the examined children. Additionally, at this stage of the research, the authors were aided by opinions of competent judges⁵ (cf. Brownlee 2016, 312-326). The purpose of these activities was to determine whether the symbol visible in the drawing corresponds to the intention of the drawer and the researcher's interpretation (cf. Deguara 2019).

It follows from it that in the pictures created by children of both nationalities the dominant colour is black (see Table 1 and Table 2). It features in almost every collected work either as one of the several colours (e.g. used to mark contours, to draw one or a few elements) or as the only colour used. The children also willingly reached for the colours of red and blue. Differences were related to the other colours identified in the drawings: the Turkish children more frequently applied the colours of yellow and then green, brown, orange, purple, grey, pink, whereas the Polish study subjects, more often than their Turkish counterparts, chose to use brown, less frequently used the colours of green, yellow, orange, grey, pink and purple.

Table 1. Classification of the colours used in the fear-themed drawings by Polish children

	Colours used in the fear-themed drawings	Child's age							
No.		6 years (n= 16)	7 years (n=47)	8 years (n=31)	9 years (n=37)	10 years (n=37)	Total		
1	Black	15	39	26	35	34	149		
2	Red	9	23	17	14	14	77		
3	Blue	8	16	18	17	13	72		
4	Brown	8	19	10	18	14	69		
5	Green	9	18	10	13	14	64		
6	Yellow	7	18	9	19	10	63		
7	Orange	3	10	5	11	6	35		
8	Grey	2	12	4	9	7	34		
9	Pink	1	10	3	11	6	31		
10	Purple	1	8	2	6	4	21		

Source: E.J. Konieczna.

Table 2. Classification of the colours used in the fear-themed drawings by Turkish children

	Colours used in the fear-themed drawings	Child's age							
		6 years (n= 55)	7 years (n= 62)	8 years (n= 66)	9 years (n= 64)	10 years (n= 67)	Total		
1	Black	55	61	64	62	57	299		
2	Red	33	31	30	26	29	149		
3	Blue	15	18	24	38	44	139		
4	Yellow	24	22	22	15	9	92		
5	Green	26	24	18	13	6	87		
6	Brown	14	15	14	12	13	68		
7	Orange	16	15	13	12	11	67		
8	Purple	-	-	-	11	24	35		
9	Grey	-	-	-	2	13	15		
10	Pink	4	1	-	-	-	5		

Source: E. Talu

⁵ The drawings made by pupils were evaluated by teachers of visual arts (Turkey) or teachers of early education and art (Poland).

The next stage of the research work was an iconographic analysis of the drawings, which consisted in seeking the symbolic and allegorical meaning of the main three colours applied to express fear (D'Alleva 2013, 27). Colour, as every symbol, possesses both literal and hidden meanings. Its symbolic meaning refers to the history of the given community as well as their social and cultural output. Therefore, the analysis of colours was to aid us in comprehending the fundamental values present in a given community. In turn, its allegorical interpretation (being a hermeneutic method) in our study consisted in discovering and deepening the cognition of children's fears (Gadamer 2007, 119-121). Anne D'Alleva believes that "both symbols and allegory are specific of a given culture and their meaning is not always obvious, even to representatives of the very culture" (2013, 28). It is for this reason that the third stage was indispensable to understand the meanings of the examined symbolism in a more comprehensive way, namely iconology based on establishments of iconography. The iconological interpretation consisted in examination of symbols and allegories with the aim to explain their sense in the cultural context.

3. The meaning and function of the colours used in fear-themed drawings

In the conducted intercultural research concerning associations between colours and emotions, the following predictors for similarity between the examined children representing different nationalities were taken into account: cultural similarities of both countries, linguistic distance and geographic distance. Many authors observe that the similarity of examined relations is greater when the nationalities remain closer to each other as far as their languages and territories are concerned (Jonauskaite et al. 2020, 1245-1260). In the case of Poland and Turkey, the cultural similarity is related to the influence of the Western culture and globalization processes with reference to both countries. On the other hand, the observed differences result from different histories, geopolitical situations, traditions, political and religious systems. Those pertaining to geographic⁶ and linguistic distance⁷ are also of significance. Despite the above-mentioned differences, children's drawings displayed common features, one of which is the colour scheme.⁸

As it follows from Table 1 and Table 2, the dominant colour in the examined fear-themed drawings is black, whose symbolism is not univocal, especially considering the intercultural context. An additional difficulty which we encountered

⁶ It is worth mentioning here the common border between the two states in the years 1478-1792, that is between The Polish Commonwealth and the Ottoman Empire and its tributaries.

⁷ The Polish language belongs to the group of Western Slavic languages, while the Turkish language – to the Oghuz languages (Majda 2015, 7).

⁸ For more about similarities and differences observed in fear-themed drawings of the examined children, cf. Konieczna and Talu 2021, 172-185; Konieczna and Talu 2022, 111-138.

while interpreting the drawings is the fact that the meaning (of colours as well as of darker hues) evolved along with changing epochs. In antiquity, a psalmist wrote about deriving "from darkness and the shadow of death" (Psalm 107:14). The symbol of death was also a black (or purple) sail in the Celtic legend of Tristan and Isolde. In turn, "a black wind" is the infernal penalty for sinners in Dante's Divine Comedy providing a description of hell. Within the circle of European culture, since the 16th century the colour black has been associated with death, rituals connected with it and the spiritual state of mourners (the so-called "black despair", i.e. "the doom and gloom"). Nowadays the colour black still raises associations with desolation, mourning, funeral, depression and "something ominous". Its negative message was greatly strengthened with the onset of World War II, owing to the black shirts worn by members of the Nazi paramilitary organization (Kopaliński 2007, 48). At the same time, at the beginning of the 20th century the colour black became synonymous with elegance, luxury, sophistication, a good taste (Necki, Sowa and Rosoński 1999, 26-27), and also with power, superiority and dignity. In the symbolism of dreams, it is interpreted as the Shadow, dark side of personality and fear of death (Guiley 1997, 228). Apart from these, black is identified with sorcery and Satan – "the Prince of Darkness" to the honour of whom there are held "black services." A slightly different sense is offered by black coal transforming into diamond, which means a process of "germinating secretly" or revival (e.g. through penance). Black juxtaposed against white stands for dualism of phenomena of nature such as "life - death", "light - darkness", "appearance - disappearance" (Cirlot 2012, 186-189).

In Polish folk culture, black appears in opposition to white and means "death", "darkness", "a sin", "profane". Prejudice against this colour is visible in superstitions, according to which, for instance, a black cat brings bad luck. A chimney sweep dressed in their traditional black outfit raises associations with a devil, therefore seeing one, it is necessary to make a suitable gesture (gripping a button), which secures protection and good luck (Biedermann 2001, 60). The dislike of this colour is also present in the sphere of language: "a black character" means a bad man, "a black sheep" is applied to someone who is a disgrace to members of a community, "black soup" means refusal, rejection of one's courting, while "black hour" stands for time of hardship, poverty (Kuleszewicz 2003, 39). However, black is not only assigned the above-mentioned sense of ending (e.g. of a life). Tales and legends feature, e.g. a black knight (a rider on a black horse) who represents a new stage. Similarly, as the black raven appearing in the Bible in the role of a scout sent out by Noah in search of a new land, in Polish fairy tales, black birds can be a symbol of hidden wisdom, secret knowledge (e.g. Starling Mateusz of The Academy of Mr Kleks by Jan Brzechwa).

In Turkish tradition, the colour black is used in many different meanings, still most often in negative ones. Similarly, as in the circle of European culture, it is associated with fear, death, and also hell, devils and magic. It is a symbol of unhappiness, hopelessness and disappointment, too (Çelik 2010, 4). Since black is

the colour of eternal darkness of the universe and night (Yazmacı 2012, 15), it is identified with secrets, and it evokes fear. The reason for this is that dark night hides many unknowns, disorder, turmoil, chaos, and lawlessness. The colour black relates to eternal silence, damnation, no future and no hope. The essence of black is that is blackens and absorbs all other colours and shapes. Since nothing stands out in it, blackness is considered the colour of indifference (Sözen 2003, 101-102). When we look at idioms related to black in Turkish, their meanings are always negative. Terms such as "black day", "black magic", "black book", "black winter", "wearing black", "blackening", "black love" emphasize negative expressions (Mazlum 2011, 130). It is true, on the other hand, that in Turkish tradition, the colour black can have positive connotations as well – it is used as the symbol of greatness, sovereignty, and power (e.g. the epic of Karayılan). Despite this dualism of meanings, black is a lot more frequently used to express mourning, misery, sad days, and situations, as in the case of other societies (Yağbasan and Aşkın 2006, 127).

As regards Turkish folk tradition, black and darkness have always been perceived as evil, as unhappiness dwelling in people, therefore black is the colour of evil spirits, namely ghosts and jinn (Eyüboğlu 1998, 124). Such examples in the beliefs of Turkmen are "Black Kırnak", a creature living in a river, resembling a woman whose body is covered with hair, and "Black Kura", a creature that eats the lungs of women who have just given birth to their babies, causing them to have nightmares (Öztürk 2009, 556). In a similar way as Polish also Turkish folklore recognizes the superstition of black cat, which is popularly linked to the meaning of "bad luck" (Yazmacı 2012, 15).

In turn, the colour red, which was also present in the drawings of children of both nationalities, has an ambivalent meaning, which can be explained on the ground of evolution. It is associated with both a threat to life (blood) and with its beginning (sexuality). The above-mentioned association is pointed to by certain magical rites. The Neanderthal people believed that by smearing a dead person with ochre and red chalk (symbolizing blood) it will be possible to bring them back to life (Lurker 1989, 39). In Christianity, it is associated with Christ's blood, ardent love, yet also with paganism and wanton women. In the Book of Revelation, the Great Whore, clothed in purple and crimson, is a personification of depravation, evil and Antichrist (Rev. 17:1-18).

Culture-based convictions can tighten the relation between the colour red and positive emotions, while at the same time weakening those negative ones and the other way round. Additionally, differences in perceiving this colour may be strengthened through language and geographical locations (Jonauskaite et al. 2020, 1245-1260). For instance, in Poland, the colour red is associated with communism but can also be treated as an amulet bringing good luck (wearing red underwear while attending proms a hundred days before sitting secondary school leaving examinations is supposed to secure good results in the final exam). In folk culture, the colour red has an apotropaic significance. As a detail of Polish folk costume (e.g. red beads, bows in hair, ribbons on hats) red performs the protective function,

shielding against spells cast by bad people, including those cast on animals (hence petty red elements in horse tacks) (Piskorz-Branekova 2003; Piskorz-Branekova 2008). The custom of tying a piece of red thread/cord around a baby's hand or on prams has continued until our times (Jurek 2011 79-80; Pawlik 2022). A slightly different role was assigned to red Easter eggs which were the symbol of love and prosperity as well as imitations of brownies clad in red, the presence of which favoured augmentation of wealth and affluence of the master of the house. Yet, the folk tradition also includes a dislike of the fox or the squirrel due to their red coats (these animals can be suspected of having relations with the devil associated with the colour red). For similar reasons, red-haired people can sometimes meet with a dislike on the part of others (Biedermann 2001, 62). In turn, in Polish literature the meaning of the colour red has evolved from the symbol of sin, might, power, devil, through that of happiness, love, into the contemporary symbol of violence, subjugation or provocation (Popławska, Białek and Lech 2007, 55-58).

In the culture of the Orient, the colour red is identified with the colours of Ottoman Turkey and the Ottoman dynasties. Thus, it represents an immense value to the nation, since it is popularly believed that red is firmly connected with the protective spirit. This colour is a powerful stimulant and energizer (Sözen 2003, 95-96; Sun and Sun 1996, 86-87; Wills 1996, 116). Red expresses extreme emotions and, in the symbolic context, its meaning emerges in a more distinctive way compared to other colours. War, power, speed, seduction, love, childhood, festivity, greed, anger, charity, and benevolence as well as dedication-devotion, attack-aggression, desire-lust - all are identified with the colour red (Zuffi 2012, 27; Göktan 2010, 91). It is also the colour of desire, happiness and puberty, a symbol of excitement, power, raiding (Heyet 1996, 57-58), brutality, strength, masculinity, bravery, vitality as well as dynamism and acting ruthlessly. The polysemy of red is caused by its relationship with fire and blood. The red of our blood is the colour of the life water of all our cells. Its dark hue recalls associations with a desperate and demonic warrior (Yalman and Aktas 2006, 197-198; Sözen, 2003, 95-96). It also carries a message about sin and prohibition which was breeched and about danger, too. According to tradition, the forbidden fruit, the picking of which resulted in the banishment from Eden, was red (Göktan 2010, 91). One of the Turkish superstitions observed already in ancient Turks (but present also in Polish folklore) derives from the belief in the spirit of the colour red (Genç 1999, 37). This concerns the fear of mother and her newly born child, who can be abducted by evil spirits. Such beliefs led to the appearance of the tale of "albastı" (or "alkarısı") in folk tradition. This is a figure most often represented as an old and exceptionally ugly witch dressed in red (Yıldırım 2012, 128-129). Some measures continue to be taken against the strong belief and "albasti" among people, the most obvious of which is tying a red ribbon on the head of the mother and her baby (Küçük 1989, 469). In Turkish tales, influences of the Western culture are visible as well, a good example of which is the acceptance of the popular tale of Little Red Riding Hood (Göktan 2010, 91).

The colour blue was the third in the ranking of colours used while creating fear-themed drawings by Polish and Turkish children. Going back to history, due to the lack of raw materials to produce this hue, it was rarely used by primitive people (Biedermann 2001, 38). In many cultures it is associated with the sky, water, transcendence, truth. This is also the colour of depth, spirituality, immensity, endlessness, and air. In the popular perception, it symbolizes stability and peace, therefore, it can be found on the flags of the European Union, NATO, and the UN. As regards European art, blue/azure accompanies representations of beings and fantastical animals. Blue quite often appears paired with white ("heavenly colours") juxtaposed against green, red, and yellow ("terrestrial colours"). A good example in the iconography are pictures which present St George fighting the dragon – a symbol of the Devil, Satan. The Saint's blue attire stands for the spiritual existence and purity, whereas the red colour of the dragon symbolizes deceit and evil. Generally, in Christian art, the colour blue (azure) of the robes worn by figures is an expression of lightness and immateriality (Pascual and Serrano 2008, 22). The Polish collocation "dream of blue almonds", meaning "to daydream", "to imagine", "to think of something unreal", functions in a similar way. In turn, the phrase "blue blood" which means belonging to the nobility, aristocracy (Kuleszewicz 2003, 22-23), has a different meaning. Contemporarily, in Polish society, blue evokes such associations as transparency, cold, sky, water, ice, depression, fear (Necki, Sowa and Rosoński 1999, 26-27). The colour blue is also that of some uniformed services (e.g. Polish police officers, and until recently the dominant one of Polish pupils' school uniforms). In fashion, it can be associated primarily with jeans which, in post-communist countries, has earned the position of a symbol of freedom (cf.: Pastoureau 2013, 181-195).

When it comes to Turkish culture, the colour blue has the characteristics of both the intangible nothingness and the tangible, like a transparent sky. It is considered to be the colour of freedom, journey, sleep (which is a kind of escape) and dreams. Blue is used together with green in Islamic belief as a symbol of religious belief, sanctity, and heaven (Sözen 2003, 97). This colour frequently features in talismans representing the Blue Eye which, according to beliefs, keeps evil and bad energy away from people (Ersoy 1990, 59; cf. Kalafat 1995, 30). For this reason, the custom of wearing beads resembling such an eye or hanging them in houses to protect the inhabitants against the power of an evil look or the impact of bad energy is commonly practiced in Turkey.

⁹ Interestingly, the above-presented way of interpreting the meanings of the colour blue differs from the way in which we perceive the colour in the Western culture and the perspective of Turkish authors. According to one of them, in the past centuries, the colour blue was described by Europeans in a negative manner, being perceived as a colour closest to black, hence expressing death, mourning, pessimistic mood, melancholy, sorrow, and being felt as cold and distant. In his opinion, that this colour evokes such opposing associations in both cultures can stem from the fact that European sky is more often overcast and rainy, and the climatic conditions do not offer longer spells of clear and bright sky (Orçan 2011, 79).

Discussion

The aim of the research presented here was to find out about the meanings of symbols of the colours used in fear-themed drawings. We noticed that while creating their drawings on this theme, both Polish and Turkish children most frequently reached for black, red, and blue crayons. During our research, we tried to comprehend why the children living in cultures that considerably differ from each other, were using the same colours to represent their fears in drawings. Therefore, in interpreting the findings, we concentrated on the similarities between the meanings which the colours are invested with by both cultures discussed here.

The similarities noticed by us can result from many-century interpenetration of the cultures of the Orient and the Occident. The conditions behind the universalization of the meaning of a symbol ranging across borders will be in this case the phenomenon of globalization and the popular access to the Internet. In our opinion, what connects the meanings of the colour black in both cultures are the references to death, mourning, magic, sadness, but also seriousness, respect and power. The common recognition of the meanings of the colour red, in turn, relates to fire (and societal aspects of life) as well as blood (and biological aspects of life). The presence of this colour in respective traditions, rites and superstitions that protect the members of both cultures (the symbolic meaning of the red thread) is significant. The colour blue, despite producing a slightly different interpretation in each culture, holds a common symbolic meaning associated with freedom and protection against evil (in the case of European culture this can be robes of saints fighting with evil, while in Turkey – evil eye beads of Nazar Boncuk).

Based on our observations, we assume that the choice of colours used in drawings relates to the theme. Research conducted by E.J. Konieczna proved that in the case of drawings where children were free to choose any theme they wanted, the most often applied colour was blue (176 times), green (170) and red (150) (2022, 59-74). The colour black in that case took the next, the fourth, place (148 times). In turn, research dealing with support of neurological diagnosis proved that children, when asked to express their headache, used the colour black and red, which - in the interpretation of the researchers – meant strong pain (Wojaczyńska-Stanek et al. 2008, 184-191). We, therefore, suppose that the colours used by the children in their fear-themed drawings had not been chosen by them accidentally or merely in consequence of their preferences. There is a high probability that the colours of black and red, owing to their symbolic statuses, serve children to express states of negative emotions (fear, pain). That is why, we are of the opinion that these hues can be treated as colours of fear, which is ones symbolically related with this emotion. It needs noting, though, that both colours may perform distinct functions in drawings on the theme of fear: the colour black can express a fear of death, while the colour red - apart from fear of getting hurt - also the need for protection. Such an apotropaic role can also be played by the colour blue used in fear-themed drawings. Here, it is worth reminding that colours can hold several meanings and

associations at the same time, sometimes even extreme ones. Hence the necessity of creating interpretations which take into account individual manners of their application by examined children.

Based on our research, we were able to formulate conclusions regarding the considerations dealing with the relation of colour-emotion. As we proved, each of the above-described colours has at least several common and local meanings (sometimes ambivalent ones). Endeavouring to better understand the functions that they perform in children's drawings, it is indispensable, in our opinion, to recognize the relations which arise between a given colour and the fear symbol (cf.: Michera, 1987, 98; Kramer and Prior 2019, 1977-1983). Deepening our studies concerning inter-contextuality of the system of symbols will consist in seeking interpretations of the semantic relation between the colour black and the symbols of fear most often drawn by the examined children, that is the spider (Polish children) and the snake (Turkish children) (cf.: Konieczna and Talu 2021, 177). A black spider can express the feeling of threat posed by the unknown and/or the fear of death, similarly as a black snake, meaning a link with the underground, where the evil and what is unavoidable for man comes from. Since the colour black and symbols of fear hold similar meanings in both cultures, 10 this can mean that their joint use by the examined children is to emphasize the negative features of the spider and the snake. An illustration of this interpretation can be the legend of the Black Snake (Erbüke) that evokes fear in Turkish children. In folk tales, this creature is represented as a half-man half-snake being, living under the earth (Bayat 2012; Coruhlu 2013; Karakurt, 2011; Seyidoğlu, 1998). 11 Both fear symbols can also be harbingers of existential dilemmas and fears appearing in children's consciousness. Therefore, we think that the presence of a black snake and a black spider in the drawings can testify to making an attempt at conforming with death, which results from the need to understand it and accept it as an inseparable element of life on earth. The above suppositions require conducting further studies and deepened research reflections, though.

As for the practical side of our research, it may be applicable to intercultural education. Because social experiences are located in the collective mind, explication

¹⁰ In ancient cultures, the snake was associated with danger due to its biting and the fatal venom. It was also identified with demonic forces. Although its relationship with Satan, as presented in the Koran, is not as obvious as in the Bible, orientalists do not doubt that it does exist in the former (Kościelniak 1999, 184, 186). The spider carries a similar meaning. It is the symbol of devil or, generally, that of the Shadow which stands for the fear of the unavoidable (*Pająk – symbol cienia* 2018; cf. Reagan 2012, 19-24).

¹¹ In the case of spiders, the dark hue is their natural colour. For this reason, it seems to us that drawing a spider in this colour is meant to reflect its real characteristics. Another reason can be the influence of mass culture on the typical representations of this arachnid. Black spiders featuring in horror or fantasy films are usually presented as scary and predatory creatures. An example to illustrate the above is the fictitious giant spider Shelob appearing in the second part of J.R.R. Tolkien's *The Lord of the Rings* and its film adaptation. A negative role is also assigned to Aragog, the Acromantula, and his children-spiders that attacked Harry and Ron – the main characters of the popular series created by J.K. Rowling. The spider is also a symbol of popular Halloween traditions as well as other contents and circumstances associated with death.

of the meanings of symbols in the context of the culture they refer to allows us to show the social construction of the world. Reconstruction of meanings makes it possible to move from the individual way of explaining the experienced reality to the content that exists beyond individual understanding. This way of collecting knowledge allows us to learn not only the subjective concepts of phenomena and their individual meaning. Learning through the cultural meaning of symbols also enables the reconstruction of intersubjective concepts relating to a given culture and understanding its social reality.

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REFERENCES:

- Adams, Francis M. and Charles E. Osgood. 1973. "A Cross-Cultural Study of the Affective Meanings of Color." *Journal of Cross-Cultural Psychology* 4: 135-157. DOI:10.1177/00220221730040020.
- Babbie, Earl 2007. *Badania społeczne w praktyce* [org. The Practice of Social Research]. Translated by Witold Betkiewicz et al. Warszawa: Wydawnictwo Naukowe PWN.
- Bayat, Fuzuli. 2012. *Türk mitolojik sistemi (ontolojik ve epistemolojik bağlamda Türk mitolojisi*) [Turkish mythological system (Turkish mythology in ontological and epistemological context)], Vol. 2. İstanbul: Ötüken Neşriyat.
- Berlin, Brent and Paul Kay. 1969. *Basic color terms: Their universality and evolution*. Berkeley: University of California Press. Accessed on: 07.04.2022. https://books.google.pl/books?hl=pl&lr=&id=sGDxruwl9OkC&oi=fnd&pg=PR5&ots=yQwPKEycXf&sig=esOif2w7Pgek0engHG4HRe55mCs&redir_esc=y#v=onepage&q&f=false.
- Biedermann, Hans. 2001. *Leksykon symboli* [A Lexicon of symbols]. Translated by Jan Rubinowicz. Warszawa: Muza S.A.
- Biggam, Carole P. 2012. *The Semantics of Colour: A Historical Approach*. Cambridge University Press. DOI: 10.1017/CBO9781139051491.
- Boyatzis, Chris J. and Reenu Varghese. 1994. "Children's emotional associations with colours." *The Journal of Genetic Psychology* 155: 77-85. DOI:10.1080/00221325.199 4.9914760.
- Brownlee, Kimberley. 2016. "The Competent Judge Problem." *Ratio* 29(3): 312-326. DOI:10.1111/rati.12099.
- Byrnes, Deborah A.1983. "Color associations of children." *The Journal of Psychology: Interdisciplinary and Applied* 113(2): 247-250. DOI:10.1080/00223980.1983.9923582.
- Çelik, Beşir. 2010. *Kur'an-ı Kerimdeki Renkler ve Renk İfade Eden Kelimelerin Tahlili* [Colors in the Qur'an and Analysis of Color Expressing Words]. Master Thesis, Şanlıurfa.
- Chenel, Alvaro P. and Alfonso Serrano Simarro. 2008. Słownik symboli [A Dictionary of Symbols]. Translated by Marta Boberska. Warszawa: Świat Książki.
- Cirlot, Jean E. 2012. *Słownik symboli* [A Dictionary of Symbols]. Translated by Ireneusz Kania. Kraków: Wydawnictwo Znak.
- Çoruhlu, Yaşar. 2013. *Türk mitolojisinin ana hatları* [The main lines of Turkish mythology]. İstanbul: Kabalcı Yayınevi.

- D'Alleva, Anne. 2013. *Metody i techniki historii sztuki* [org. Methods and Theories of Art History]. Translated by Eleonora Jedlińska and Jakub Jedliński. Kraków: Towarzystwo Autorów i Wydawców Prac Naukowych Universitas.
- D'Andrade, Roy and Megan Egan. 1974. "The colors of emotion." *American Ethnologist* 1: 49-63. DOI:10.1525/ae.1974.1.1.02a00030.
- Dael, Nele et al. 2016. "Put on that colour, it fits your emotion: Colour appropriateness as a function of expressed emotion." *Quarterly Journal of Experimental Psychology* 69(8): 1619-1630. DOI: 10.1080/17470218.2015.1090462.
- Deguara, Josephine. 2019. "Young Children's Drawings: A Methodological Tool for Data Analysis." *Journal of Early Childhood Research* 17(2): 157-174. DOI:10.1177/1476718X1881820.
- Elliot, Andrew J. and Markus A. Maier 2014. "Color Psychology: Effects of Perceiving Color on Psychological Functioning in Humans." *Annual Review of Psychology* 65: 95-120. DOI:10.1146/annurev-psych-010213-115035.
- Ersoy, Necmettin. 2009. Sembol from The Invisible to The Invisible with Symbols and Interpretations. Istanbul: Zafer and Sena Ofset.
- Eyüboğlu, İsmet Z. 1998. *Anadolu İnançları (Anadolu Üçlemesi 1)* [Anatolian Beliefs (Anatolian Trilogy 1)]. Istanbul: Social Transformation Publications.
- Farokhi, Masoumeh and Hashemi Masoud. 2011. "The analysis of children's drawings: Social, emotional, physical, and psychological aspects." *Procedia Social and Behavioral Sciences* 30: 2219-2224. DOI.10.1016/J.SBSPRO.2011.10.433.
- Gadamer, Hans G. 2007. *Prawda i metoda: zarys hermeneutyki filozoficznej* [The Truth and the Method: An Outline of Philosophical Hermeneutics]. Translated by Bogdan Baran. Warszawa: Wydawnictwo Naukowe PWN.
- Genç, Reşat. 1999. Türk İnanışları İle Milli Geleneklerinde Renkler ve Sarı Kırmızı Yeşil. [Colors and Yellow Red Green in Turkish Beliefs and National Traditions]. Ankara: Atatürk Cultural Center Presidency Publications.
- Gonigroszek, Dorota. 2008. "Językowy obraz świata barw i kolorów jako przykład kulturowych różnic w językach" [The linguistic picture of the world of colors as an example of cultural differences in languages]. *Językoznawstwo: współczesne badania, problemy i analizy językoznawcze* 2: 91-99.
- Göktan, Mustafa Ç. 2010. "Renk Unsurunun Fotoğraf Sanatında Sembolik Olarak Kullanımı" [Symbolic Use of Color in Photography]. *Journal of Photography* 3(90): 86-88.
- Guba, Egon G. and Yvonna S. Lincoln. 1994. *Competing paradigms in qualitative research. In N.K. Denzin & Y.S. Lincoln (Eds.), Handbook of qualitative research.* Accessed on: 18.05.2022. https://ethnographyworkshop.files.wordpress.com/2014/11/guba-lincoln-1994-competing-paradigms-in-qualitative-research-handbook-of-qualitative-research.pdf.
- Guiley, Rosemary E. 1997. *Encyklopedia snów* [org. The Encyclopedia of Dreams]. Translated by Sławomir Kiepiel. Kraków: Wydawnictwo: Al Fine.
- Heyet, Cevat. 1996. "Türklerin Tarihinde Renklerin Yeri" Nevruz ve Renkler ["The Place of Colors in the History of Turks", Nevruz and Colors], edited by Erkan Tural and Sabin Kılıç. Ankara: Atatürk Cultural Center Publications.
- Hupka, Ralph B. et al. 1997. "The colors of anger, envy, fear, and jealousy: A cross-cultural study." *Journal of Cross-Cultural Psychology* 28(2): 156-171. DOI:10.1177/0022022197282002.

- Jonauskaite, Domicele et al. 2020. "Universal Patterns in Color-Emotion Associations Are Further Shaped by Linguistic and Geographic Proximity." *Psychological Science* 31(10): 1245-1260. DOI:10.1177/0956797620948810.
- Jurek, Krzysztof. 2011. "Znaczenie symboliczne i funkcje koloru w kulturze" [The symbolic meaning and functions of the color in the culture]. *Kultura Media Teologia* 6: 68-80. Accessed on: 04.10.2022. https://www.researchgate.net/publication/314186899_Znaczenie_symboliczne_i_funkcje_koloru_w_kulturze.
- Kalafat, Yaşar. 1995. *Doğu Anadolu'da Eski Türk İnançlarının İzleri* [Traces of Old Turkish Beliefs in Eastern Anatolia]. Ankara: Atatürk Culture, Language and History Institution Publications.
- Karakurt, Deniz. 2011. *Türk söylence sözlüğü* [Turkish myth dictionary]. E-book. ISBN 978-605-5618-03-2.
- Kay, Paul and Terry Regier. 2006. "Language, thought and color: recent developments." *Trends in Cognitive Sciences* 10(2): 51-54. DOI: 10.1016/j.tics.2005.12.007.
- Kolory ubranek dla dzieci co znaczą oraz... skąd się wziął róż i błękit? [Colors of children's clothes what do they mean and... where did pink and blue come from?]. Accessed on: 04.06.2022. https://bajkowamoda.pl/kolory-ubranek-dla-dzieci-co-znacza-oraz-skad-sie-wzial-roz-i-blekit#.
- Konieczna, Ewelina. J. 2022. "Próba implementacji techniki rysunku na dowolny temat na grunt praktyki pedagogiczne" [An attempt to implement a drawing technique on any topic onto the ground of pedagogical practice]. *Studia Pedagogiczne Problemy społeczne, edukacyjne i artystyczne* 40(1): 59-74. https://studiapedagogiczne.ujk.edu.pl/numery/40.pdf.
- Konieczna, Ewelina. J. and Ertuğrul Talu. 2021. "Symbols of Fear in the Studies of Drawings by Polish and Turkish Children." *Kultura i Edukacja* 2(132): 172-185. DOI: 10.15804/kie.2021.02.
- Konieczna, Ewelina J. and Ertuğrul Talu. 2022. "The Symbolism of Fear-Themed Drawings of Turkish and Polish Children." *Przegląd Badań Edukacyjnych (Educational Studies Review)* [online]. 31 January 2023, 2(40): 111-138. DOI: 10.12775/PBE.2022.021.
- Kopaliński, Władysław. 2007. *Słownik symboli* [A Dictionary of Symbols]. Warszawa: Oficyna Wydawnicza Rytm.
- Kościelniak, Krzysztof. 1999. Złe duchy w Biblii i Koranie. Wpływ demonologii biblijnej na koraniczne koncepcje Szatana w kontekście oddziaływań religii starożytnych [Evil spirits in the Bible and the Koran. The influence of biblical demonology on Koranic concepts of Satan in the context of the influence of ancient religion]. Kraków: Wydawnictwo UNUM.
- Kramer, Robin S.S. and Joanne Y. Prior. 2019. "Colour associations in children and adults". *Quarterly Journal of Experimental Psychology* 72(8): 1977-1983. DOI: 10.1177/1747021818822948.
- Kuleszewicz, Radosław. 2003. *Słownik symboli literackich* [A Dictionary of Literary Symbols]. Białystok: Wydawnictwo PRINTEX
- Küçük, Abdurrahman. 1989. "Alkarısı" [The Women in Red]. TDV Encyclopedia of Islam, Vol. II, Istanbul.
- Lurker, Manfred. 1989. *Słownik obrazów i symboli biblijnych* [A dictionary of biblical images and symbols]. Translated by Kazimierz Romaniuk. Poznań: Pallottinium.
- Majda, Tadeusz. 2015. *Język turecki* [The Turkish language]. Warszawa: Wydawnictwo Akademickie Dialog. Accessed on: 07.02.2022. http://www.koobe.pl/fragmenty/3458556/75066/jezyk-turecki-demo.pdf.

- Mannathoko, Magdeline Ch. and Attwell Mamvuto. 2018. "Drawing and the Aestheticisation of the Human Figure by Four- to Ten-Year-Old Botswana Children: Implications for Pedagogy." *International Journal of Art & Design Education* 38(2): 376-386. DOI: 10.1111/jade.12201.
- Mazlum, Özge. 2011. "Rengin Kültürel Çağrışımları" ["Cultural Associations of Color"]. Dumlupınar University Journal of Social Sciences 31: 125 - 138.
- Michera, Wojciech. 1987. "Kolory w procesie symbolizacji" [Colors in the symbolization process]. In *Symbol i poznanie. W poszukiwaniu koncepcji integrującej*, edited by Teresa Kostyrko, 86-106. Warszawa: Wydawnictwo Naukowe PWN.
- Nęcki, Zbigniew, Izabela Sowa and Jerzy Rosoński. 1999. *Psychologia reklamy* [The psychology of advertising]. In *Ze świata reklamy*, edited by Andrzej Stanisław Barczak and Andrzej Pitrus, 19-36. Kraków: Wydawnictwo Uniwersytetu Jagiellońskiego.
- Orçan, Suzan. 2011. *Türk Masallarında Renk İmgesi* [Color Image in Turkish Tales]. Ankara: Master Thesis.
- Öztürk, Orhan. 2009. *Folklor ve Mitoloji Sözlüğü* [Folklore and Mythology Dictionary]. Ankara: Phoenix Publishing House.
- Pająk symbol cienia [Spider a symbol of the shadow]. 2018. Accessed on: 25.08.2022. https://www.kierunekzycie.com/pajak-symbol-cienia/#sennik-symbolicznywidziec-pajaka.
- Pastoureau, Michael. 2013. *Niebieski: historia koloru* [Blue: a history of the color]. Translated by Maryna Ochab. Warszawa: Oficyna Naukowa.
- Pawlik, Ewelina. 2022. *Symbolika kolorów w kulturze ludowej* [Color symbolism in folk culture]. Accessed on: 21.03.2022. http://pisanezalasem.pl/symbolika-kolory-w-kulturze-ludowej/.
- Piskorz-Branekova, Elżbieta. 2003. *Polskie stroje ludowe* [Polish folk costumes]. Warszawa: Muza SA.
- Piskorz-Branekova, Elżbieta. 2008. *Biżuteria ludowa w Polsce* [Folk jewelry in Poland]. Warszawa: Muza SA.
- Pope, Debbie J., Hannah Butler and Pamela Qualter. 2012. "Emotional Understanding and Color-Emotion Associations in Children Aged 7-8 Years." *Child Development Research* 2012(4): 1-9. DOI: 10.1155/2012/975670.
- Popławska, Anna, Dorota Lech and Emilia Białek. 2007. *Słownik symboli* [A Dictionary of Symbols]. Kraków: Wydawnictwo Greg.
- Rapaille, Clotaire. 2019. Kod kulturowy. Jak zrozumieć preferencje współczesnego konsumenta, motywacje wyborców czy zachowania tłumu [The Culture Code: An Ingenious Way to Understand Why People Around the World Live and Buy as They Do]. Translated by Rafał Paprocki. Warszawa: MT Biznes.
- Reagan, Kelly. 2012. Praktyczne porady. Jak zinterpretować symbole pojawiające się w marzeniach sennych [org. Field Guide to Dreams]. Translated by Anna Zdziemborska. Poznań: Wydawnictwo Olesiejuk.
- Rogowska, Aleksandra. 2015. "Synestezja i jej znaczenie w rozwoju poznawczym i językowym w dzieciństwie" [Synaesthesia and its Importance in Cognitive and Language Development in Childhood]. In Nowe perspektywy badań rozwoju w dzieciństwie i dorosłości: księga pamiątkowa dla profesor Marii Kielar-Turskiej, edited by Dorota Kubicka, 135-154. Kraków: Wydawnictwo Uniwersytetu Jagiellońskiego. https://core.ac.uk/download/pdf/288120886.pdf.

- Rorty, Richard. 1994. *Filozofia a zwierciadło natury* (org. Philosophy and the Mirror of Nature). Translated by Michał Szczubiałka. Warszawa: Wydawnictwo Spacja.
- Seyidoğlu, Bilge. 1998. *Kültürel bir sembol: Yılan* [A Cultural Symbol: The Snake]. Ankara: Dursun Yıldırım Armağanı.
- Sobol, Elżbieta. 2000. *Mały słownik języka polskiego* [A small dictionary of the Polish language]. Warszawa: Wydawnictwo Naukowe PWN.
- Sözen, Mustafa. 2003. *Sinemada Renk-Sembolik Anlamlar* [Color in Cinema-Symbolic Meanings]. Ankara: Detay Publishing.
- Spence, Charles. 2011. "Crossmodal correspondences: A tutorial review." *Attention, Perception, and Psychophysics* 73: 971-995. Accessed on: 17.02.2022. .
- Sun, Howard and Dorothy Sun. 1996. *Renginizi Tanıyın* [Know Your Color]. Istanbul: Arıtan Publishing House.
- Uzun, Arzum. 2022. "Pembe ve Mavi İkiliğine Toplumsal Cinsiyet Bağlamında Postmodern Feminist Bir Yaklaşım" [A Postmodern Feminist Approach to the Pink and Blue Duality in the Context of Gender]. *Akdeniz Kadın Çalışmaları ve Toplumsal Cinsiyet Dergisi* [Mediterranean Journal of Women's Studies and Gender] 5(1): 178-196. DOI:10.33708/ktc.1053437.
- Whiteford, Kelly L. et al. 2018. "Color, music, and emotion: Bach to the blues." *i-Perception* 9(6). DOI:10.1177/2041669518808535.
- Wills, Pauline. 1996. *Yansıbilim ve Renk Terapisi Çalışma Kitabı* [Reflectology and Color Therapy Workbook]. Ankara: Alkım Kitap Publishing.
- Wojaczyńska-Stanek, Katarzyna et al. 2008. "Headache in Children's Drawings." *Journal of Child Neurology* 23(2): 184-191. DOI:10.1177/0883073807307985.
- World Museum. 2024. *Teoria koloru*. Accessed on: 24.04.2022. http://historiasztuki.com. pl/NOWA/30-00-01-KOLOR.php.
- Yağbasan, Mustafa and Nida Aşkın. 2006. "Renklerle İletişim ve Ulusal TV Logolarının Göstergebilimsel (Dilbilimsel, Grafiksel, Renksel) Analizi" [Communication with Colors and Semiotic (Linguistic, Graphical, Color) Analysis of National TV Logos]. *Journal of Eastern Anatolia Region Studies* 4: 2.
- Yalman, Hakan and Kubilay Aktaş. 2006. *Sözlerin ve Renklerin Gizemi* [The Mystery of Words and Colors]. Istanbul: Nesil Publications.
- Yazmacı, Arzu. 2012. *Tipografi ve Renk* [Typography and Color]. Istanbul: Master Thesis. Yıldırım, Elvin. 2012. *Türk Kültüründe Renkler Ve İfade Ettikleri Anlamlar* [Colors in Turkish Culture and Their Meanings] (Master Thesis). Istanbul: University Institute of Social Sciences.
- Zentner, Marcel R. 2001. "Preferences for colours and colour emotion combinations in early childhood." *Developmental Science* 4(4): 389-398. DOI: 10.1111/1467-7687.00180.
- Zuffi, Stefano. 2012. Colour in Art. Nederland: Ludion Publishing.