Color Linguistics: Khanty riddles

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Abstract. From the point of view of physics and physiology, the perception of color should be the same by all people, but the process and associations connected with it have historical and cultural determinants in different nations. The conceptual apparatus of color linguistics is studied in different scientific studies and from different points of view. The material of this study comprises riddles extracted from Khanty folklore by the method of continuous sampling, as well as scientific literature on the description of color words. A common way of creating riddle metaphors is color matching. Therefore, exploring color words in the Khanty riddles allows us to reveal the cognitive, pragmatic and cultural factors of language functioning. The present research highlights the role of color terms in the formation of the linguistic worldview, as well as conceptualizes and defines the place of the color vocabulary in the cognitive process. Key words: Khanty riddles, basic color terms, color words.

1 Introduction

Language is a mirror of culture reflecting not only the real world of the people, i.e. the native speaker, but also their mentality, character, customs, traditions, as well as perceptual features and color terms. The use of color terms increases significantly the emotional and expressive meaning of the communication process; these linguistic units can express the most subtle relations and aspects of people's life. The system of color terms and color perceptions is marked by ethnic and culturological features [1-4]. Ethnic coloristics is filled with deep philosophical meaning and is a reflection of the people's worldview, their various sacred, mythical, religious, cultural and social strata. The process of initial nomination is always conditioned by some or other factors, the environment primarily. Features of color perception and color use are complementary; they affect the perception and frequency of the use of some or other color terms [3-5]. Thus, the relevance of the color words study consists in perceiving them as vehicles and instruments of national cultures and languages, as well as cognitive, pragmatic and ethnocultural factors of language functioning [6-8].

2 Objective of the study

The objective of our study is to identify the semantic and cultural specificity of color terms in the Khanty language. To achieve the goal, we set the following tasks: to identify lexical units that contain color semes in their composition; to analyze the revealed color terms in the language under study.

The data for the research were riddles obtained from the Khanty folklore by the method of continuous sampling, as well as scientific literature on color words. The Khanty people have many riddles that are laconic, metaphorical and figurative, like poetry itself. Riddles contain the digested results of human observations of different natural phenomena, flora, and fauna, objects of labor and life; they ;asp demonstrate important conclusions and illations of people, and therefore characterize the people themselves. This is one of the oldest forms of folk art passed on by word of mouth to for many generations, so we can assume that the color naming used in the riddles reflects the vocabulary of lexical units, which is more ancient compared with the current state of the language. Meanwhile, metaphor is the spirit of a riddle. This is what makes riddles interesting, and distinguishes them from other types of oral folklore [9]. To solve a riddle is to find a real-life equivalent for metaphoric images. One of the common ways of creating riddle metaphors is color matching. Therefore, exploring color words in the Khanty riddles allows us to reveal the cognitive, pragmatic and cultural factors of language functioning. The research highlights the role of color terms in the formation of the linguistic worldview, as well as conceptualizes and defines the place of the color vocabulary in the cognitive process.

3. Problem statement

In recent decades considerable attention has been devoted to topics related to color linguistics as well as theoretical approaches and practical methods for extracting color terms, resulting in a large number of publications. The wide spectrum of color linguistics approaches represented
in this paper includes the basic color term theory of Berlin and Kay, the typological evolutionary scale of Kay and Maffi, the Vantage Theory of MacLaury, conceptual semantics of Jackendoff and Nikanne, historical linguistics, ethnolinguistics, the Natural Semantic Metalanguage of Wierzbicka, approaches examining the focal colors across eleven languages affiliated to Uralic and Indo-European languages of Mari Uuskuла, David Bimler, philological and etymological analyses of color terms of Nganasan, one of the least documented Uralic languages by Sándor Széverényi and various graph visualization techniques [10-19].

To identify psychologically significant colors, various experiments have been performed and attempts have been made to create a system of basic colors. The classic reference point in the color semantics study was the work by American linguists B. Berlin and P. Kay [10]. Based on the data derived from 98 languages they came to the following conclusions. Despite the fact that different languages in their dictionaries contain a different number of basic color terms, the total universal word-stock consists of the same 11 basic colors: black, white, red, yellow, green, blue, brown, purple, pink, orange, grey. Berlin and Kay have also established that even if there are less than 11 basic colors in the language, in this case there are strict rules as to what basic colors exist in this language. All languages have color terms for white and black basic colors. Thus, if there are only three basic color terms in the language, then the third one is necessarily the term for the red color. The researchers have built the following hierarchy of 11 primary colors: the first stage – black, white; the second – red; the third – green, yellow; the fourth – blue; the fifth – brown; the sixth – purple, pink, orange, gray [10]. This proves yet again that there are subjective color perceptions in different languages. Each language segments the reality in different ways, therefore Kasevich notes that ‘some peoples distinguish, for instance, three colors, while others — seven, etc.’ [20].

According to the Khanty language data, there are some papers studying the issues of color symbols in traditional culture, clothing, ornamental patterns, methods of color terms [21-25]. Besides, some aspects of the color symbolism are touched upon by scientists in the studies of other topical issues of Khanty Philology and traditional culture [26-28]. The researchers claim that the Khanty language has plenty of color terms and shades. For instance, the Khanty of the Lower Ob have 17 names for white color, where 16 terms are descriptive, and 10 names out of 11 color terms are descriptive for black and red color [29]. Descriptive terms have many expressions indicating colors of objects, real-world phenomena, for instance, light and sky are white; the soil and charcoal are black, etc. Reindeer herding is one of the main activities of the Khanty, so it is not surprising that a wide color spectrum emerges for reindeer color terms [30, 31]. For example, A. Shiyanova distinguishes six tints of white color with regard to the reindeer color ranging from deep white to white-gray: ворча ↔ варача ↔ нави/нови ↔ шовер хорна ↔ хэлх хорна ↔ хатмэр. [25].

According to Sokolova and Taligina, the basic colors in the Khanty language are white, black and red, and the colors constitute the so-called color triad, which corresponds to the tripartition of the Universe in the Khanty culture [29, 32]. K.P. Cheremisina claims, that The Upper world, inhabited by gods, is associated with the white color; the World of People or the Middle world — with red, and the World of the Dead, the Lower world — with the black color. However, in the recently published ‘Dialectological Atlas of the Uralic languages spoken in the Yamal-Nenets Autonomous district’ the authors, who consider the features of the color terms systems organization, come to the conclusion that ‘in fact, only black and white are basic colors in the Khanty language. According to N.B. Koshkareva et. al, other names are mostly based on associations with different objects of the real world, and serve as a reference for following color terms: red for blood, blue for the sky, green for grass, and yellow for autumn leaves or bile [33]. V.I. Spodina also points out that ‘in the Khanty language, there are only two words indicating color, and they have their own independent color naming: white and black’ [23].

4 Research methods

The study data are riddles extracted from different riddle books written in the Khanty language and translated into Russian [9, 26, 34-35]. With the method of continuous sampling the authors revealed 59 riddles, which were then grouped according to color. The data in the present study were gathered via questionnaires and interviews complementing each other. Five native Khanty speakers were given a pre-questionnaire to elicit information about other topical issues of Khanty Philology and traditional culture [26-28]. The researchers claim that the Khanty language has plenty of color terms and shades. For instance, the Khanty of the Lower Ob have 17 names for white color, where 16 terms are descriptive, and 10 names out of 11 color terms are descriptive for black and red color [29]. Descriptive terms have many expressions indicating colors of objects, real-world phenomena, for instance, light and sky are white; the soil and charcoal are black, etc. Reindeer herding is one of the main activities of the Khanty, so it is not surprising that a wide color spectrum emerges for reindeer color terms [30, 31]. For example, A. Shiyanova distinguishes six tints of white color with regard to the reindeer color ranging from deep white to white-gray: ворча ↔ варача ↔ нави/нови ↔ шовер хорна ↔ хэлх хорна ↔ хатмэр. [25].

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5. Findings

Upon the experiment, the following names of colors were revealed in the Khanty riddles: 'чумы' white – 11, 'ниты' black – 10, 'вўрты' red – 13, 'ниты вўрты' dark red – 2, 'вўрты бушумы' literally red-and-yellow – 2, 'вусты' green – 1, 'бушум' yellow – 1, 'сорын, сорне' purple – 1.
gold/goldish – 11, ‘цел вух’ silver – 8. Based on the results of the revealed colors, we plotted a color frequency chart (see Figure 1.) as well as a number of tables containing examples of riddles, color words and associations that helped the speakers to solve the riddle (see Tables 1-7). In some riddles, one comes across two colors simultaneously, for instance: ‘пуны сула жьрпийлэд, пуны сула ювьрпийлэд, (хэлэл па ат)’. White cloth opens up, black cloth curls up. Answer to the riddle - day and night.

Table 1. Питы/Black

| Riddle                                                                 | Comment                                                                 |
|----------------------------------------------------------------------|-------------------------------------------------------------------------|
| 1. Питы милт хөт ю яо и зыпийлн вөзээт. (шайраыа)                     | ‘Питы милт’ means a black hat.                                          |
| Sixty men in black hats live in one house. (matches)                 |                                                                         |
| 2. Питы пунт молтии вөт вәвәт хӑттйлэд. (пун)                        | ‘Питы’ means dark, since one cannot call fur black                      |
| Black fur coat in the wood hangs around. (bear)                      |                                                                         |
| 3. Нуви сула жьрпийлэд, пуны сула ювьрпийлэд. (хэлэл па ат)             | ‘пуны’ means light, ‘пунь’ means dark                                  |
| White cloth opens up, black cloth curls up. (day and night)          |                                                                         |
| 4. Питы шхаэрэн и хо сорми вүзэлэд жьуултэлэд. (тыллын)               |                                                                         |
| At the black cemetery, a reindeer herdsman counts his golden deer.   |                                                                         |
| (crescent)                                                          |                                                                         |
| 5. Шума зооытты сӑххем хуша камла курем вутэл зўулы.                   | ‘Питы вой - вурты вой’ means parallelism, often used in speech. ‘пунь’ |

Fig. 1. A color frequency chart.

5.1 Питы/Black

The adjective ‘питы’ is translated into Russian as black, dark [36]. In the collections of riddles, this word is always translated as black, but native speakers translate it as dark in most cases.

Table 2. Нуви, нэви/white

| Riddle                                                                 | Comment                                                                 |
|----------------------------------------------------------------------|-------------------------------------------------------------------------|
| 6. Асэгэш-горыншан шооти нуви сухум лэр тлаасмал. (Енж хонгэхэлэй хох)  | ‘Нуви’ means white (thread).                                            |
| White thread winds across the river-lake. (ice cracked on the river) |                                                                         |
| 7. Нуви сӑххэ хо карти љоркана, вух љоркана питмалз. (Сос)              | ‘Нуви’ means white, because it refers to fur color.                     |
| A man in white saka (fur coat) got into an iron snare, silver snare. |                                                                         |
| (ermine)                                                            |                                                                         |
| 8. Пӑтлам хотем хотхэр вуڤат нуви нул хӑмлэд. (тыллын)                  | ‘Нуви’ means light, which is opposed to ‘пунь’ meaning dark.           |
| A white piece is moving on                                            |                                                                         |
5.3 Вўрты/Red

The adjective ‘вўрты’ is translated into Russian as red, ginger, rosy [36]. In most cases, it is translated into Russian as red. In two examples, a combination of ‘пинты вўрты’ (literally, dark red) is used, which translates as dark red in one case, in the other – burgundy. In two examples, a combination of ‘вўрты вўшлэм’ is used (literally, reddish yellow), which is translated into Russian as red-and-yellow in one case, in the other as scarlet. In one example, ‘вўрты’ translates as ginger when the riddle means a fox.

Table 3. Вўрты/Red.

| Riddle | Comment |
|--------|---------|
| 10. Сер вони, мур вони, сым ийына пішат вўртылы иими олмас (морх) | If a woman or man wearing a red karchef/hat is sitting in the middle of the forest, then it is a mushroom; if a woman wearing a red (reidish yellow) karchef is sitting in the middle of a swamp, then it is a cloudberry. This association is transmitted through the color itself, though they do not describe cloudberry as red or yellow in the Khanty language, but it is ‘инэап’ – unripe, raw and ‘жүу’ – ripe, literally, molten. |
| 11. Нёрум кытум пітты вўрты тымал икі зол. (сымат вони) | The respondents failed to solve this riddle, as it is uncommon for a tree to be referred to with color; perhaps, it is a loan translation from Russian; this riddle may be asked about mushrooms, as respondents do not associate red with such berries as raspberry or rose hip. |
| 12. Вони зыпилом вўрты вухаману ик зол. (хон ын) | A woman with a red karchef is standing in the forest. (an aspen) |
| 13. Ипх сём хўват вўрты вухар хохал. (шухал тўт) | ‘Вўрты’ literally means red although it is translated into Russian as ginger, because a fox is supposed to be red in the Russian linguistic culture. |
| 14. Хуналы ын | In this case, ‘вўрты’ is translated as red (fox), where red color is associated with fire and burning. |

5.4 Вусты/blue and green

In the Khanty language, just one word is used to denote blue and green colors, it is ‘вусты’.

Table 4. Вусты/blue and green.

| Riddle | Comment |
|--------|---------|
| 17. Вусты пайкы ўт ён эстэ, къур ваныча. (Песлы) | When speaking about the grass, they use ‘вусты’, for instance, ‘вусты тур’ means green grass. Speaking of trees, they usually do not refer to colors but shapes, e.g., a straight tree, a crooked tree, though there is an expression ‘пинты вони’ for dark forest. This riddle was solved with the help of the color term (green, color of grass) and quality of grass-cutting. |
| 18. Вусты сымат вўрты вукол (ворхал вўрты). (шухал тўт) | A green thing with sharp edges cuts a hand and leg. (a sedge) |
In the folklore, the expressions are typical: ‘Вууум(әә) нәйә әйнән(ыә) вәтәп(әә), Вууум(әә) нәйә(ыә) эзүә(ыә) вәтәп(әә)’. T.A. Moldanova says that ‘our forest is motley like a crook’s beak’, which reproduces an image of the Ural foothill with boulders covered with lichen, and is compared to a crook’s beak, which is framed by a fluff, and at the same time with the dark grey color of the bird [26]. Speaking of the river, they do not refer to colors either; there is an established dark grey color of the bird [26]. Speaking of the river, expressions ‘ворӈа(ыә) нөйә ыөнлөв(ыә) вөңт(ыә) вөңт(ыә)’, ‘Вурӈа(ыә) нөйә ыөнлөв(ыә) вөңт(ыә) вөңт(ыә)’, ‘Вууум(ыә) лыпəәт’ are typical: ‘Муя ёйиӈк ыөнлөв(ыә) вөңт(ыә) сөңи(ыә) ыөнлөв(ыә) вөңт(ыә)’. The phrase ‘щєл вух’ means motley, sacred, colored. In the dictionary, the expression is translated into Russian as ‘sacredness and value. It characterizes the characters of the divine pantheon and their zoomorphic incarnations. In folk texts to describe the forest: ‘вууум(әә) нәйә(ыә) әйнәх(ыә) ям тәп(әә)’ – ‘Муя(ыә) ёйиӈк(ыә) ёйиӈк(ыә) ыөнлөв(ыә) вөңт(ыә)’ [36].

5.5 Вууум/Yellow

The adjective ‘вууум’ is translated as yellow [36].

Table 5. Вууум/Yellow.

| Riddle | Comment |
|--------|---------|
| 18. Сємн ан ныты вөңт вөңт нөйә ёйиӈк | сөңи(ыә) вөңт(ыә) хойса’ – literally, birch leaves slightly touched by frost, therefore, yellow. The riddle was solved by color (yellow) – birch in autumn is yellow. The yellow color is also found in folklore texts to describe the forest: ‘вууум(әә) нәйә(ыә) әйнәх(ыә) ям тәп(әә)’. ‘Муя(ыә) ёйиӈк(ыә) ёйиӈк(ыә) ыөнлөв(ыә) вөңт(ыә)’ [26]. |

5.6 Сорни, сорнеӈ

The adjective ‘сорни (сорнеӈ)’ is translated as golden [36]. The golden color is at the top of the color hierarchy related to the spiritual world, as it symbolizes the highest sacredness and value. It characterizes the characters of the divine pantheon and their zoomorphic incarnations. Speaking about variation in the use of words ‘сорни’ and ‘сорнеӈ’ some informants noted that ‘сорни’ is used when value or the highest status is meant, for example: ‘Сорни Торум’ (literally – gold Torum), ‘Сорни най’ (literally – gold goddess), that is, he (she) himself (herself) is gold, absolute value, one cannot say ‘сорнеӈ Торум’ or ‘сорнеӈ най’, but they say ‘сорнеӈ ауа’ - golden girl, ‘сорнеӈ зөй’ - golden ring. In most examples, ‘сорни (сорнеӈ)’ is translated as gold, and in one case, it is golden.

Table 6. Сорни, сорнеӈ.

| Riddle | Comment |
|--------|---------|
| 19. Сорни хәйиӈап йыңк азымы йуушан | ‘хәйиӈап’ means motley, multicolor, so ‘сорни’ cannot be translated as golden but valued, divine. The riddle is solved by the shape (yoke) and place (across the river).

23. Юхан хонуӈаң сорнеӈ севкәп ёзриләд. (пүңи пүңи). A golden rattle is rolling along the river bank. (a bear.) The riddle uses the expression ‘сорнеӈ севкәп’ - golden rattle. Here the word golden means the highest value, divinity.

Riddle no. 23 (about the bear) is closely related to a mythological motif, according to which the supreme god Torum sends Pelym God son, whom the former affectionately calls: ‘Мӑшак(әә) лууат(әә) сорни(ыә) пухем(әә), Мӑшак(әә) лууат(әә) сорни(ыә) пухем(әә)’ – fist-sized golden son, fist-sized golden clew. This “golden clew” is called in other tender words: ‘сорни(ыә) кўвак(әә)’ – “golden bell”, ‘сорни(ыә) пухат(әә)’ – “golden clod”, ‘сорни(ыә) ёйиӈк(ыә) айза(ыә) пухи(ыә)’ – “little nestling looking like gold”, ‘Мӑшак(әә) лууат(әә) айза(ыә) ишы(ыә)’ – “fist-sized little baby” [26].

5.7 Ычәл вух (сөңи)

The phrase ‘ышал вух’, or just ‘ышал’ and ‘сух’ are translated into Russian as silver. According to the Khanty-Russian dictionary ‘ышал вух’ means a silver coin, ‘сух’ – money, silver. In the dictionary, the expression is
translated as silver ‘щєл вух єԓəәп’, but it is not used in the riddles [36]. The informants translated it as with a silver surface. Informants report that ‘щєл вух’ translates literally as liquid money. It is supposed that the word ‘єԓəәп (моск)’ used to denote metal meaning value. In the riddles, there is a comparison to silver (window, icicles, moonlight rays).

Table 7. Щєл вух (єԓəәп).

| Riddle                                                                 | Comment                                                                 |
|-----------------------------------------------------------------------|------------------------------------------------------------------------|
| 24. Ішни ѐзпа щєл вух.                                                 | Щєл вух’ means liquid money, this is how silver is described.          |
| Silver coin is hanging in front of the window. (an icicle)            |                                                                        |
| 25. Хот пїтж щєл вух мїхїмї. (їшшї)                                   | йшшї мїхїмї’ means shiny, мїхїмї means deerskin.                         |
| There is silver deerskin on the house wall. (a window)                |                                                                        |
| 26. Пїтшлам хот сўорж картья ѐзпїнш ё, аєг ѐзпїнш ёс ёїтїс. (Тышїцї, ѐї, хїпїл ѐї) | ’Вух’ means iron, and an addition of ’щєл’ makes it silver.           |
| A woman with iron, silver rings is sewing in a dark corner of the house. (moon and sun rays) |                                                                        |

6. Conclusion

The main findings of the study include the following:

1. The concept of color linguistics as an independent scientific paradigm in modern linguistics is acquiring more and more distinct features. A circle of scientists has been formed who regularly discuss the problems of color names in various aspects and directions, a sufficient amount of scientific literature has been accumulated on the description of color in various languages, there is constant discussion of these problems at relevant scientific events.

2. The considered linguocultural characteristics of color terms and color perception confirm that in the Khanty riddles there are more color terms that go beyond the 3 basic colors. The secondary nomination of the mentioned units has such a developed structure that it cannot be covered by the framework of one research work. Reconsideration of meanings in the cognitive process proceeds in accordance with the associative nature of human thinking and the logical form of functional transfer of names according to similarity of external or internal features, namely color (the mushroom and berry are red), color and shape (golden, valuable means divine rainbow i.e. yoke), as well as color and place (red man in the forest, red woman in the swamp).

3. In the future, a study of lexical properties of color terms seems appropriate to be conducted in the framework of the activity approach to the language, including a study of the location of color vocabulary in cognitive processes and the role of color terms in shaping the linguistic worldview in adults and children.

4. Interlanguage (Russian – Khanty) comparison of the content aspect of the words for color terms shows universality (red hat, man means mushroom) of many processes in the studied languages alongside with a different degree of their actualization and an unequal set of lexical color units, which is primarily due to ethnic, social and cultural factors (’rainbow’ means golden - ’a golden staff’ is put in the sky).

5. The Khanty language has its own ethnically preferred colors, possessing the quality of dominance and ethnic priority, which serve to convey ethnic feelings when it comes to things most sacred for a person/people, i.e. idealization takes place in color, for example, a bear is a golden rattle (sacred animal), golden crosses mean crane footprints (a crane is the incarnation of a god). The present study is an attempt at developing a hypothesis that certain color terms are extremely important for this ethnic group; in the Khanty culture, it is gold meaning valuable, sacred.

Thus, the conducted study shows that color terms are complex lexical units of language and speech, whose meanings are determined to a large extent by the historical and cultural experience of certain linguistic groups.

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Appendix 1. Pre-questionnaire for native Khanty speakers.

Instruction: Please write down your responses to the following questions:
1. What is your age?
2. What is your gender? (Male/female)
3. What languages do you speak?
4. What is your level of competency of the Khanty language? (minimal, functional, proficient)
5. What is your dialect?