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The use of body part terms in expressing emotions in Udmurt

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1. Introduction

The paper discusses the role of body part terms in expressing emotions in Udmurt from a cognitive linguistic point of view and within the framework of the embodiment hypothesis in particular. The paper discusses the use of body part terms in the conceptualization of HAPPINESS, SADNESS, ANGER, FEAR, AND LOVE.

2. Conceptual metaphors and metonymies

A general tendency of human thinking is that more abstract domains are understood in terms of more concrete, tangible ones, for instance, metaphors. Conceptual metaphors are a set of system correspondences between two different conceptual domains (Kövecses 2010). The source domain is typically more concrete, and the target domain is more abstract, therefore the target domain is understood in terms of the source domain. There are three types of conceptual metaphors: structural, orientational, and ontological (Lakoff and Johnson 1980). In the case of structural metaphors, a concept is structured in terms of another (e.g. AN ARGUMENT IS A BUILDING). Orientational metaphors organize a system of concepts in relation to one another (e.g. HAPPY IS UP, while SAD IS DOWN). Ontological metaphors concern physical objects and substances representing abstract concepts as if they had physical properties (e.g. THE HUMAN BODY IS A CONTAINER).

Similarity is considered the basis of metaphor, but in addition to the similarity between the two conceptual domains, metaphors can be based on human experience and on various kinds of biological and cultural roots. For example, in AN ARGUMENT IS A BUILDING structural metaphor, the stability and structural similarity of a building is mapped on the foundation, strength and construction of an argument, cf. *She constructed a solid argument*, or *We have got a good foundation for the argument*. However, in the case of ANGER IS A HOT FLUID IN CONTAINER, the basis of this ontological metaphor is bodily experience, cf. *boiling with anger; simmer down; making one's blood boil* (Kövecses 2010: 54, 79, 92).

Conceptual metonymies provide mental access through one conceptual entity (vehicle) to another conceptual entity (target). The entities are a part of the same conceptual domain, or, in other words, the same idealized cognitive model (*icm*), hence metonymy is based on the relationship of contiguity (Kövecses 2010: 173–174). There are two main configurations which apply to different sets of *icm*: (i) THE WHOLE STANDS FOR A PART, OR A PART STANDS FOR THE WHOLE; and (ii) A PART STANDS FOR ANOTHER PART. The first version typically gives rise to metonymies involving things (e.g. Thing-and-Part *icm*: THE WHOLE FOR THE PART metonymy), the second version applies to metonymies involving events (e.g. Causation *icm*: EFFECT FOR CAUSE) (Kövecses and Radden 2007).

3. The embodiment cognition thesis and emotions

The embodiment cognition thesis emphasizes that the human body has a substantial role in thinking. Our conceptual organization and structure of thinking are built on our physical, embodied experiences (cf. Evans 2007, Kövecses and Benczes 2010). In other words, according to the what has been called the embodiment premise:

“Human language and thought emerge from recurring patterns of embodied activity that constrain ongoing intelligent behavior. We must not assume cognition to be purely internal, symbolic, computational, and disembodied, but seek out the gross and detailed ways that language and thought are inextricably shaped by embodied action.” (Gibbs: 2005: 9)

Also, since the body is not culture independent, sociocultural factors also stimulate human language and cognition.

The human body often constitutes as a source domain for other, more abstract concepts (Kraska-Szlenk 2014: 8–12). One example can be the consistent mapping of body parts on the corresponding part of an object, e.g. Eng. *legs of the table*; Fi. *pullonsuu* ‘mouth of the bottle’; Hu. *a cipő nyelve* ‘tongue of a shoe’; Ru. *rukav rubashki* ‘shirtsleeve’ (lit. arm of the shirt). The human body is one of the most common source domains for conceptual metaphors and many metaphorical meanings derive from our bodily experiences (Kövecses 2010: 18).

The concept of emotion is a superior target domain (Kövecses 2010: 23). The cognitive model of emotion in folk theory (Kövecses 2000: 58–59) can be characterized as a five-stage scenario:

(1) cause → (2) emotion → (3) control → (4) loss of control → (5) (behavioral) response.

Thus, emotion is a caused change of state, from a non-emotional state to an emotional one. Emotion is assumed to affect the self, which may try to control emotional behavior. The self may respond to the emotion by undergoing emotional behavior,

rather than acting as a willful agent. Furthermore, emotions are subcategorized in the following way: states (cf. change of state), events (cf. behavioral response), actions (cf. control), and passions (cf. effect on the self).

The human body is often referred to when emotions are being described (Enfield and Wierzbicka 2002; Sharifian et al. 2008). In the description of emotions, a high degree of universality can be observed in the languages of the world. A reason for this universality is that the structure of the human body and the functions of the body parts are nearly the same everywhere. Another reason is the metonymic conceptualization and verbalization of the biological and physiological reactions to different kind of emotions (Kövecses 2000: 164). It is to be expected that cultural factors have great influence on the description and conceptualization of emotions as well.

Various forms of embodiment can be observed in respect to emotional concepts and emotional language (Kövecses 2000: 116–117). In the case of emotion metonymies, bodily responses are associated with emotion concepts, e.g. the physiological effects and expressive responses of an emotion stands for the emotion (more generally EFFECTS OF A STATE STAND FOR THE STATE) – BLUSHING FOR LOVE (*She blushed when she saw him*) (Kövecses 2000: 124, 134).

Considering emotional metaphors, two image schemas have significant roles: the CONTAINER schema and the FORCE schema. In the CONTAINER schema, emotions are events/states that happen inside the human body, which serves as a container (cf. the ontological metaphor THE HUMAN BODY IS A CONTAINER), e.g. HAPPINESS IS A FLUID IN A CONTAINER (*She was bursting with joy*) (Kövecses 2010: 111). In the FORCE schema it is considered that certain causes produce emotions, and emotions produce certain responses, e.g. SADNESS IS A NATURAL FORCE (*Waves of depression came over him*) (Kövecses 2000: 25) This schema roots in the generic level conceptual metaphor CAUSES ARE FORCES (cf. the folk theory of emotions).

In connection with the CONTAINER schema it can be concluded that emotions are located in the body (Kraska-Szlenk 2014: 40; Sharifian et al. 2008: 13), and a particular body part is considered the center of emotional activity in many languages (THE LOCUS OF EMOTIONS IS A PARTICULAR BODY PART). Not only the center of emotional, but the center of mental activity is also often associated with a certain body part. Typically, internal body organs are the source of such conceptualizations. There are three types of conceptualizations: abdomen-centering, holistic heart-centering and dualistic heart/head-centering conceptualizations. They can be linked to certain cultural models; consider the dual heart/head-centering and the religious (Christian) and philosophical (cf. Plato, Descartes) cultural models on distinguishing rational head and emotional heart in Western cultures (Sharifian et al. 2008).

4. Research material and methodology

I discuss conceptual metaphors and metonymies involving body part terms in respect to emotion categories, illustrating them with figures about the proportions of certain body-part terms occurring in the data.

I have examined five categories of emotion: HAPPINESS, SADNESS, ANGER, FEAR AND LOVE. These emotion categories can be considered general and perhaps universal (Kövecses 2000: 4). It is important to mention that emotions are not considered to be feelings exclusively. Emotion concepts have a complex structure, which consists of conceptual metaphors and metonymies associated with the emotion concept in question, related concepts and also cognitive models (Kövecses 1990: 40). This results in the “broader” interpretation of the abovementioned categories (cf. the folk theory of emotions, in which the cause and the behavioral and physiological responses are also part of the emotion). For example, the category of HAPPINESS will also include BEING CONTENT, GLAD, HAPPY, FEELING GOOD, DELIGHTED, ECSTATIC, etc.

The data used for this paper comprises 138 phrases and idioms with 142 occurrences of body part terms.¹ Expressions are taken from the Kozmács’s 2002 dictionary, and from two dictionaries of phrases and idioms, Dzjuina (1967) and (1996). The material of the online Udmurt corpus² is also included in the analysis to some extent: collocational searches have been carried out based on the typology literature, particularly on Kövecses (1990) and (2000) and on Baş (2015). The classification of phrases and idioms is conducted according to the typology literature as well (Kövecses 1990, 2000, 2010).

5. Body part terms in conceptual metaphors and metonymies in expressing emotions

The present section reviews the conceptual metaphors and metonymies related to HAPPINESS, SADNESS, ANGER, FEAR and LOVE. Reflections on typological findings are made as well.

5.1. Happiness

In the data under consideration, 22 expressions stand for the emotion HAPPINESS. Of them, 14 (64%) are metaphors, and 8 (36%) are metonymies. The most frequent body part terms are *śulem* ‘heart’ (8 instances; 36%) and *śin* ‘eye’ (7; 31%) (cf. Figure 1).

¹ The occurrence of body part terms is higher than the number of phrases because there are some expressions that may refer to more than one emotion concept.

² <http://web-corpora.net/UdmurtCorpus/search/> Date of access: January 19, 2020.

In conceptual metaphors the source domains are the following: FLUID/SUBSTANCE IN A CONTAINER (4 instances), FIRE (3), BEING OFF THE GROUND (2), LIGHT (1), WARM (1), UP (1), LIVING ORGANISM (1) and FORCE (1). The source domains BEING OFF THE GROUND and LIGHT seem to apply to HAPPINESS only, not just in Udmurt, but, for example, in English as well (cf. Kövecses 2000: 39). In expressions of HAPPINESS the CONTAINER metaphor is mostly connected to *šulem* ‘heart’, while the FIRE and LIGHT metaphors to *šin* ‘eye’. Some examples of metaphorical expressions are presented below.

HAPPINESS IS A FLUID/SUBSTANCE IN A CONTAINER

- (1) *šumpotonen šulemy pačyl tyrmiz* (lit. my heart **fills to the brim** with happiness) ‘I am extremely happy’
 (2) *šulem šumpotonen pačylme* (lit. the heart **overflows** with happiness) ‘being extremely happy’
 (3) *köt puškaz žec esep lukaloz* (lit. one hoards up good mood to their stomach/belly) ‘something good came up’

HAPPINESS IS FIRE

- (4) *šinjosyz tyl kišto* (lit. one’s eyes **pour fire**) ‘being euphoric’
 (5) *šumpotyša žuaš šinjos* (lit. the eyes are **burning** with happiness) ‘being extremely happy’

HAPPY IS LIGHT

- (6) *yynyryz pište šumpotonen* (lit. one’s face **glows with happiness**) ‘there is a glow of happiness on one’s face’

HAPPY IS BEING OFF THE GROUND

- (7) *syče šumpoti, pydjosy muzjemez ik öz šöde hi* (lit. I was so happy; my feet **did not feel the ground**) ‘I was very happy’
 (8) *oj, šumpoti, pydy muzjeme ik ug jöty* (lit. oh, I was happy, my foot **did not touch the ground**) ‘I was very happy’

From the conceptual metonymies, SMILING FOR HAPPINESS (2 instances) and BRIGHT EYES FOR HAPPINESS³ (4) were the most frequent. Both can be traced back to the general type of conceptual metonymy where the EXPRESSIVE RESPONSES OF EMOTION STAND FOR THE EMOTION (7 instances altogether). The metonymy AGITATION/ EXCITEMENT FOR HAPPINESS (1) can also be found, although only in one case in the data. This is a specific instance of THE PHYSIOLOGICAL EFFECTS OF EMOTION STANDING FOR THE EMOTION general metonymy. Such contiguity between expressive

³ Instances of this conceptual metonymy are related to the metaphor HAPPY IS LIGHT as well.

responses/physiological effects and emotions is widespread, since these are substantial metonymic principles in our conceptual system (Kövecses 2000: 134) and can be encountered throughout the whole data.

THE EXPRESSIVE RESPONSES FOR AN EMOTION STAND FOR THE EMOTION

(9) *ymnyryz šaŋgi śiem bere kad* (lit. one's **face looks like** they were eating *šaŋgi*⁴) 'glowing with happiness'

BRIGHT EYES FOR HAPPINESS

(10) *śinmyz ćilja, šude* (lit. one's eye is shining, playing) 'one's eyes are shining with happiness'

(11) *śinjsoyz solen zoro* (lit. one's eyes are shiny) 'one's eyes are shining with happiness'

SMILING FOR HAPPINESS

(12) *ymyz peldoraz vuemyn* (lit. one's **mouth** got to one's temple) 'having a big smile'

Figure 1 shows the distribution of body part terms in the conceptual metaphors and metonymies considering HAPPINESS. The word *śulem* 'heart' takes a significant role in metaphoric expressions (seven out of 14; 50%), whereas the face and its parts (cf. *śin* 'eyes', *ym* 'mouth', *ymdyr* 'lips') make up almost all instances (seven out of eight) of the metonymic ones. The term *śin* 'eye' appears not only in metonymies but it is exclusive for the HAPPINESS IS FIRE metaphor.

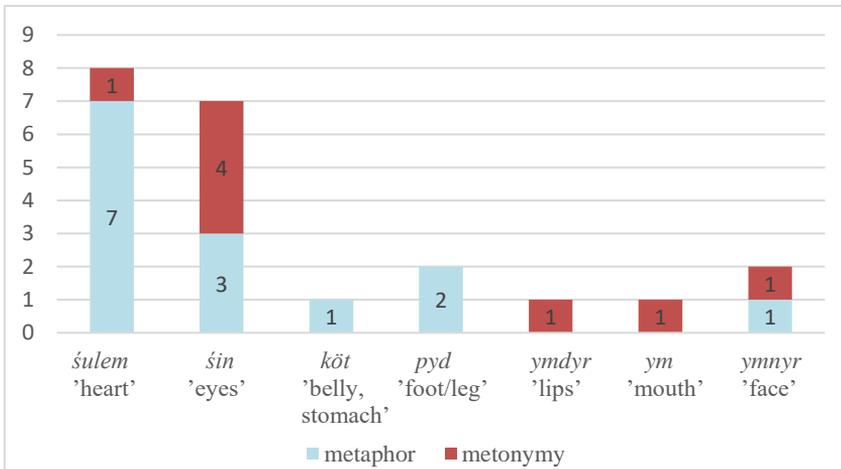


Figure 1. Body part terms in conceptual metaphors and metonymies for HAPPINESS

⁴ *Šaŋgi* is an Udmurt pastry.

Figure 2 demonstrates the conceptual metaphors and metonymies in relation to the concept of HAPPINESS in the research material. The upper part of the figure shows the metaphors, the lower part the metonymies.

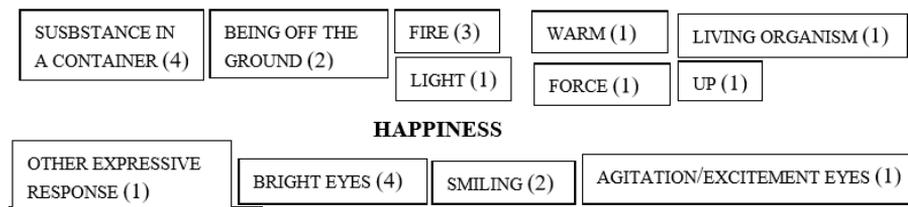


Figure 2. Conceptual metaphors and metonymies for HAPPINESS

5.2. Sadness

Phrases and idioms expressing SADNESS and its related concepts (like DISTRESS, WORRY, MISERY, FEELING BAD, UNHAPPINESS) make up the largest proportion of the research material (40 expressions). Just as in the case of HAPPINESS, the term *šulem* occurred in the highest numbers and proportions (25 instances; 62.5%). Of the 40 expressions, 25 are metaphors (62.5%), and 15 are metonymies (37.5%).

The source domains of metaphors for the concept of SADNESS are PHYSICAL AGITATION (9), PHYSICAL DAMAGE (4), FIRE/HEAT (3), LIVING ORGANISM (2), DOWN (2), CONTAINER (2), NATURAL FORCE (1), BLOCKING SUBSTANCE (1), and BURDEN (1). Although this paper does not intend to make a comparison between Udmurt and English metaphors and emotional concepts, it is noteworthy to mention the relatively high number of instances of SADNESS IS PHYSICAL AGITATION and SADNESS IS FIRE, since this type of conceptual metaphor is not mentioned in respect to English (cf. Kövecses 2000), but it can be well attested in Turkish⁵ (cf. Baş 2015: 164, 168 SADNESS/DISTRESS IS PHYSICAL ANNOYANCE/AGITATION; SADNESS/DISTRESS IS FIRE). SADNESS IS PHYSICAL AGITATION can be linked to the generic level metaphors, which are EMOTION IS PHYSICAL AGITATION and EMOTIONAL DISTURBANCE IS PHYSICAL AGITATION, however, emotional disturbance stands metonymically for emotion. Considering the emotion scenario, this metaphor represents “cause → emotion” part: sadness is a disturbed state of mind that arises from some cause (Kövecses 2000: 80–81).

It is also important to mention the orientational metaphors HAPPY IS UP – SAD IS DOWN. Such oppositions like up vs. down, light vs. dark, and warm vs. cold focus on

⁵ A crucial difference, however, between Turkish and Udmurt in respect to such metaphoric expressions is that in Turkish the physical agitation/annoyance affects the ‘head’, while in Udmurt it affects the ‘heart’ (cf. the metonymies HEAD FOR PERSON – HEART FOR PERSON).

the positive vs. negative evaluation of an emotion (like happiness as positive, sadness as negative) (Kövecses 2000: 44).

SADNESS IS PHYSICAL AGITATION

- (13) *śulem ćutyrtyny* (lit. the heart **cramps**) ‘feel sorrow, being really worried’
 (14) *śulem syzla* (lit. the heart **stings**) ‘being sad’
 (15) *śulme mertćyny* (lit. to **grasp**, to **pierce** the heart) ‘to make one sad’

SADNESS IS PHYSICAL DAMAGE (cf. EMOTIONAL DAMAGE IS PHYSICAL DAMAGE)

- (17) *śulem putkoške* (lit. the heart **shatters**) ‘feel great sadness’
 (18) *śulem piliškoz* (lit. the heart will **break**) ‘feel great sadness’

SADNESS IS FIRE/HEAT

- (19) *śulem žua* (lit. the heart **ignites**) ‘being sad’
 (20) *śulem pyže* (lit. the heart **fries**) ‘being sad’

SAD IS DOWN

- (21) *jyr ošyny* (lit. **hang** the head) ‘having a long face’

SADNESS IS A FLUID IN A CONTAINER

- (22) *kurektonen paćylmem śinjos* (lit. the eyes **overflow** with misery) ‘sad, miserable’

Emotion metonymies of the generic level metonymy EXPRESSIVE AND PHYSIOLOGICAL EFFECTS OF EMOTION STAND FOR THE EMOTION can be attested in the case of SADNESS as well. The specific level metonymies are PHYSICAL AGITATION FOR SADNESS (7), CRYING FOR SADNESS (5 instances), and INABILITY TO MOVE (2). There is one instance of expressive response that does not stand for SADNESS itself but rather for CRYING (which implies SADNESS, cf. example 28). The metonymy PHYSICAL AGITATION FOR SADNESS is also rooted in the generic level metaphor EMOTION IS PHYSICAL AGITATION. However, this metonymy represents the “emotion → response” part of the emotion scenario. Therefore, agitation does not come from a disturbed state of mind (as in the case of SADNESS IS PHYSICAL AGITATION), but it is a physiological response which arises from an emotion. As can be seen, almost as many instances of PHYSICAL AGITATION FOR SADNESS (7) are attested in the research material as SADNESS IS PHYSICAL AGITATION (9).⁶

⁶ In the classification of certain Udmurt instances two strategies were applied. One was consultation with a native speaker and examining the use of phrases and idioms in the online Udmurt corpus. The other was analyzing the phrase: if it contained verbs meaning *lue, luiz* ‘become, became’, *pote* ‘turn into something’ (as the heart) or if it was explicit that the SADNESS

PHYSICAL AGITATION FOR SADNESS

(23) *mözmon šulemez čityr-čutyre kare* (lit. sadness **makes** the **heart crisscross**)
‘being worried, distressed’

(24) *šulmyz giži-gaži⁷ luiz* (lit. the heart **became constricted**) ‘living in anxiety’

CRYING FOR SADNESS

(25) *bördonaz ymduraz* (lit. one’s **crying** is on the lips) ‘one is about to cry’

(26) *šinjos vužekto* (lit. the eyes **fog up**) ‘weeps, cries’

INABILITY TO MOVE

(27) *sujpyd ug žutsky* (lit. one’s limbs **do not rise**) ‘unable to move because of sadness’

EXPRESSIVE RESPONSES FOR THE EMOTION STAND FOR THE EMOTION

(28) *šinkaš hebžemyn* (lit. the eyebrow is **limp**) ‘one gets teary-eyed’

In Figure 3, illustrating the distribution of body part terms in conceptualizing SADNESS, *šulem* ‘heart’ stands out with its 25 occurrences. It is noteworthy to mention that while in western cultures the heart is often associated with LOVE, in Udmurt it is rather associated with SADNESS and DISTRESS. Consider the lexicalizations involving *šulem* ‘heart’: *šulmany* ‘to be sad, to disappear’; *šulmaškyny* ‘to take care, to worry’; *šulemšug* (lit. heart + trouble) ‘worry, distress’ (Kozmács 2002: 469).

“itself” caused the agitation (cf. example 25) the phrase was considered a metonymic expression.

⁷ Onomatopoeic.

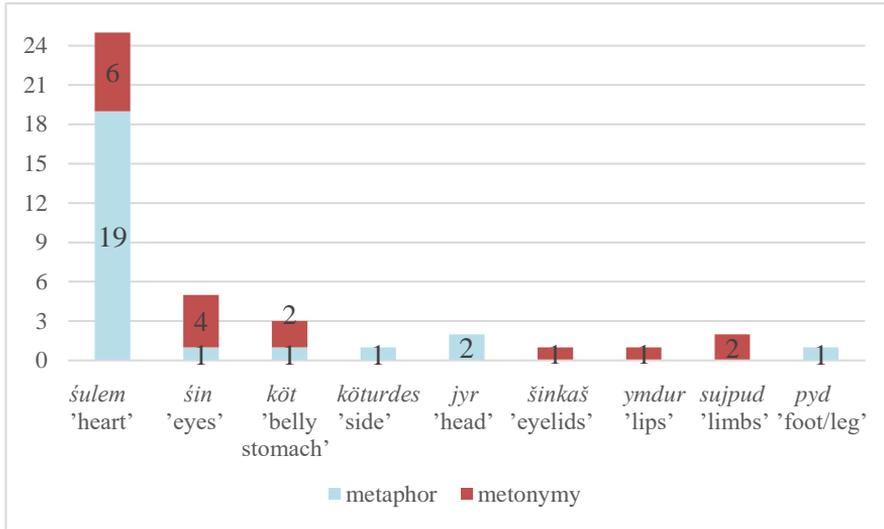


Figure 3. Body part terms in conceptual metaphors and metonymies for SADNESS

Figure 4 demonstrates the conceptual metaphors and metonymies in relation to the concept of SADNESS in the research material. The upper part of the figure shows the metaphors, the lower part the metonymies.

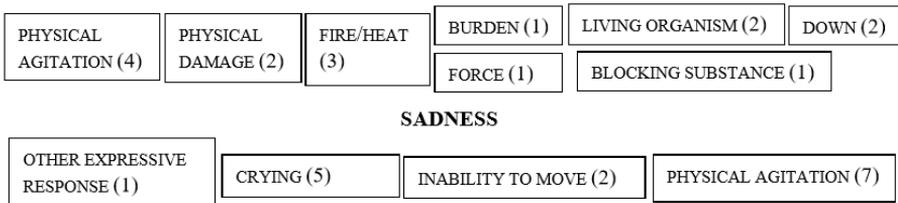


Figure 4. Conceptual metaphors and metonymies for SADNESS

5.3. Anger

In the data ANGER and related emotions (such as ANNOYANCE, IRRITATION, FURY, BEING UPSET etc.) were represented in 29 expressions. The most frequent body part terms were šulem ‘heart’ (7 instances; 24%), jyr ‘head’ (4; 14%), and piń ‘tooth’ (4; 14%). The number of metonymical (15; 52%) expressions was slightly higher than the metaphorical ones (14; 48%).

In conceptual metaphors the source domains were the following: EXPLOSION (3), LIVING ORGANISM (3), FIRE (3), INSANITY (2), OPPONENT (1), DARK (1), and FORCE (1).

All these source domains are typical for most emotion concepts. The ANGER IS A HOT SUBSTANCE/FLUID IN A CONTAINER metaphor is considered central in the conceptualization of ANGER in various languages and cultures (Kövecses 2000: 146, 154 Baş 2015: 177). The Udmurt expressions did not explicitly show this type of conceptualization, but ANGER IS EXPLOSION can be seen as a subtype of the CONTAINER metaphor, since when anger becomes too intense, the person explodes, as intense anger is putting pressure on the container (Kövecses 2000: 150). In this sense the ANGER IS A HOT SUBSTANCE/FLUID IN A CONTAINER and THE ANGRY PERSON IS A PRESSURIZED CONTAINER metaphors apply to Udmurt as well.⁸ The cross-culturally similar conceptualization of ANGER can be traced back to the physiological responses given to anger (e.g. higher blood pressure).

ANGER IS EXPLOSION

- (29) *sepez pöštem* (lit. one's gall **erupts**) 'to bristle up'
 (30) *vožde en vaj – pekłajed pöštoz* (lit. don't get angry – your kidney will **erupt**) 'don't get angry'
 (31) *jyr puštyny* (lit. the head **explodes**) 'to get angry'

ANGER IS FIRE

- (32) *köt žua* (lit. stomach/belly flames up) 'getting angry'
 (33) *sinjosyz žualskizy* (lit. one's eyes lit up) 'getting mad'

ANGER IS INSANITY

- (34) *jyr yštyny* (lit. **lose** the head) 'get angry'
 (35) *jyrzy kuren urmizy* (lit. their head **got rabies** with anger) 'they got into rage'

The conceptualization of ANGER in relation to the head is also apparent in Turkish (Baş 2015: 106) and in Hungarian (Kövecses 2000: 149). Considering the compound verb *jyrkur* (lit. head + shame) 'anger' (Kozmács 2002: 172) the term is clearly associated with ANGER. Moreover, in Udmurt *jyr* 'head' is the locus of mental activity (Kubitsch 2019: 365) – its appearance in the conceptual metaphor ANGER IS INSANITY (and, in my opinion, the lexicalization denoting 'anger') illustrate the stage of loss of control in the cognitive model of emotion: the self attempts to control the emotion by the locus of mental activity but does not succeed (cf. LACK OF EMOTIONAL CONTROL IS INSANITY).

⁸ In the data under consideration the only evidence of the substance being hot is the verb *pöštyny* 'to erupt', which can be linked to the adjective *pös* 'hot, occurring in 2 of the 3 EXPLOSION metaphors.

The relatively high proportion of metonymic expressions (52%) compared to other emotion concepts (36% for HAPPINESS and 37.5% for SADNESS) suggests that Udmurt conceptualizes ANGER through the responses given to the emotion, which is the final stage of the emotion model of the folk theory.

Subtypes of the general emotion metonymies PHYSIOLOGICAL/BEHAVIORAL/EXPRESSIVE RESPONSE FOR THE EMOTION STANDS FOR THE EMOTION⁹ can be attested. The specific-level metonymies are PHYSICAL AGITATION (1), VIOLENT, FRUSTRATED BEHAVIOR (10), AGGRESSIVE VERBAL BEHAVIOR (1) and DISAPPROVING GLAZE (2).

BEHAVIORAL RESPONSE FOR THE EMOTION STANDS FOR THE EMOTION

VIOLENT, FRUSTRATED BEHAVIOR STANDS FOR ANGER

(35) *piñjosses jyrjyny* (lit. **gnaw** the teeth) ‘be angry’

(36) *ku vylýs kuze ñijoz* (lit. one will **strip** the skin from the skin) ‘being very angry with sb’

(37) *vače jyrši vuyny* (lit. **got to** each other’s hair) ‘to fall out with sb’

(38) *jyrde kurtčozy* (lit. they will bite your head off) ‘speak to sb angrily’

AGGRESSIVE VERBAL BEHAVIOR STANDS FOR ANGER

(39) *ym dyrti šuky ponysa* (lit. putting **foam through the mouth**) ‘shouting angrily’

EXPRESSIVE RESPONSE FOR THE EMOTION STANDS FOR THE EMOTION

DISAPPROVING GLAZE FOR ANGER

(40) *kyryž šin učkyny* (lit. watching **crooked eye**) ‘look angrily

(41) *šinmynyz šie* (lit. one **eats** with their eye) ‘being very angry with sb’

The metonymy VIOLENT, FRUSTRATED BEHAVIOR STANDS FOR ANGER involves the body part term *piñ* ‘tooth’ in four cases and *ku* ‘skin’ in three cases. The appearance of these terms is unique in the data for conceptualizing ANGER. Interestingly, in Mari (which is culturally close to Udmurt), the conceptualization of ANGER may also appear through the term *püj* ‘tooth’.

(42) *iktaž-kö baštareš püjâm šumaš* (lit. one is **sharpening tooth** to sb) ‘to be out to get sb; to bear a grudge against sb’¹⁰

Figure 5 illustrates the distribution of body part terms in relation to ANGER. As it shows, a great variety of body part terms is involved in the linguistic expressions of

⁹ According to Kövecses (2000: 159), conceptualized physiology (conceptual metonymies) provides cognitive motivation for metaphoric conceptualizations of the angry person as a PRESSURIZED CONTAINER.

¹⁰ The source is the online Mari–English Dictionary: <https://www.univie.ac.at/maridict/site-2014/index.php?int=0> – Date of access: January 22, 2020.

the concept of ANGER. The occurrence of the term ‘heart’ is not as outstanding (24%) as it was in the case of SADNESS (62%) and as it is in the case of LOVE (cf. 4.5), below. In the conceptualization of ANGER, the terms *jyr* ‘head’ and *piñ* ‘tooth’ also play a relatively great role.

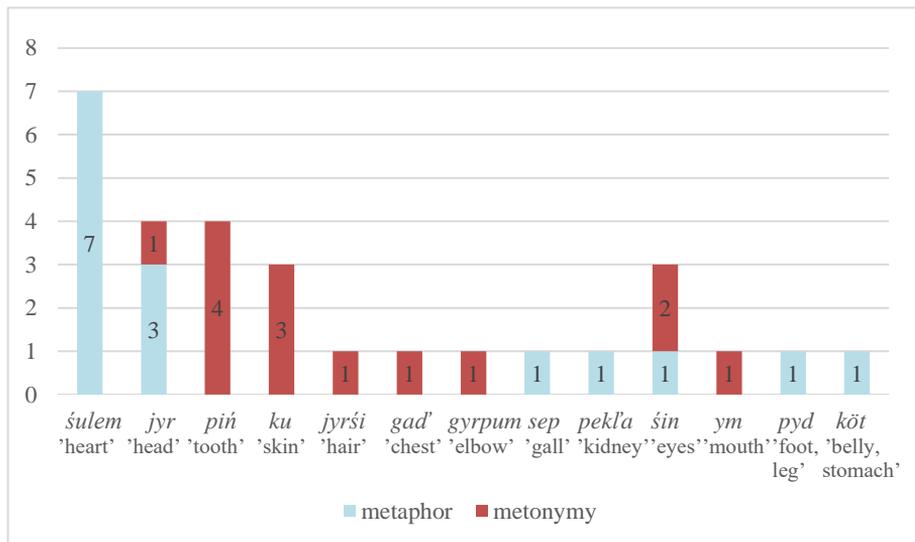


Figure 5. Body part terms in conceptual metaphors and metonymies for ANGER

Figure 6 shows the conceptual metaphors and metonymies in relation to the concept of ANGER in the research material. The upper part of the figure demonstrates the metaphors, the lower part the metonymies.

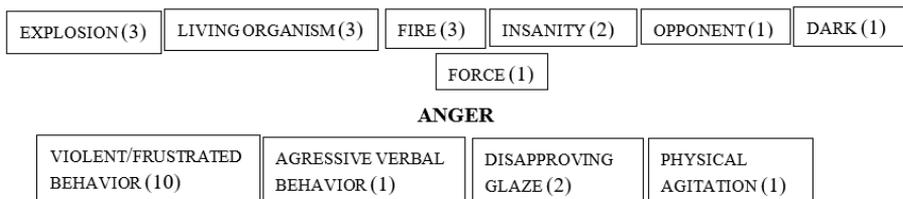


Figure 6. Conceptual metaphors and metonymies for ANGER

5.4. Fear

In the data 28 expressions referred to the emotion concept of FEAR. It is an emotion which seems to be characterized “by a rich system of its physiological effects and behavioral reactions” (Kövecses 1990: 70). This claim applies to Udmurt, since only 8 of 28 instances (29%) are metaphorical expressions, therefore 71% of the cases (20) are metonymic. In the conceptualization of FEAR the term *šulem* ‘heart’ has a

significant role (10 instances, 36%), but the term *pyd* ‘foot’ (5; 18%) also appears in a relatively large proportion.

As has been mentioned, only a handful of metaphoric expressions can be attested in the data under consideration. The source domains are the following: COLD (2), LIVING ORGANISM (2), FORCE (2) FOG (1), and RAPTURE/HIGH (1). The source domain of LIVING ORGANISM is considered to apply to all emotional concepts (cf. EMOTION IS A LIVING ORGANISM) and the domain of FORCE applies to most emotion concepts (Kövecses 2000: 36). These source domains appear in the conceptualization of all the other discussed emotion concepts in Udmurt. Therefore, they can be considered quite general for various emotions. The source domains COLD¹¹ and FOG, however, are unique for FEAR in Udmurt, and they can be grouped together as FEAR IS A NATURAL PHENOMENON. The motivation for FEAR IS COLD is probably the similarity in their physiological symptoms (trembling and shaking). The verb used in the expressions of FEAR IS FOG is *tölžyny* ‘to dissolve’ – this verb is used for the dissolution of fog as well. Also, other phrases, which are not included in the data, since they do not involve body part terms, refer to FEAR as fog. Consider the following expression: *kyškan bus kad’ tölžoz* (lit. fear will dissolve like fog) ‘one will not fear anymore’. According to Kövecses, FEAR appears to be characterized by both very general and specific metaphors (Kövecses 2000: 23). This claim seems to be true for Udmurt.

FEAR IS A NATURAL PHENOMENON

FEAR IS COLD

(43) *šulem ik yrak-yrak lue* (lit. the heart becomes **cool**) ‘to gasp, to get scared’

(44) *šulemjosmy dyrekjazy*¹² (lit. our heart **trembled**) ‘we were afraid’

FEAR IS FOG

(45) *šulemyštyz kyškan öz tölžy* (lit. fear **did not dissolve** from one’s heart) ‘one was still afraid’

FEAR IS A LIVING ORGANISM

(46) *šulemazy kyškan karjaškemyn* (lit. fear **has nestled** in one’s heart) ‘one is afraid of sth’

(47) *šinjosazy kyškan karjaškemyn* (lit. fear **has nestled** in their eyes) ‘they are afraid of sth’

FEAR IS A FORCE DISLOCATING THE HEART

(48) *šulmy tetčiske val* (lit. my heart **jumped**) ‘I startled’

¹¹ The conceptual metaphor FEAR IS COLD is attested in Turkish as well (Baş 2015: 191).

¹² According to Kozmács’s Udmurt dictionary (2002: 113), this verb specifically refers to trembling with cold.

In the data under consideration a great variety of specific metonymies of the PHYSIOLOGICAL EFFECTS OF EMOTION STANDS FOR THE EMOTION generic-level metonymy can be attested. These are the following: INABILITY TO STAND (6), LAPSES IN HEARTBEAT (3), HAIR STRAIGHTENS OUT (4), PHYSICAL AGITATION (2), WAY OF LOOKING (2), SWEATING (2), and BLOOD LEAVES FACE (1). The body part term *pyd* ‘foot, leg’ appeared in most conceptual metonymies (cf. INABILITY TO STAND). The term *šulem* ‘heart’ was encountered in four cases – the term rarely appears in metonymic expressions (in six cases of SADNESS and in one case of HAPPINESS), since terms of inner body organs tend to take part in metaphoric expressions.

INABILITY TO STAND

(49) *pydesšinjös kwalekjalo* (lit. the **kneecaps** tremble) ‘trembles with fear’

(50) *pydjösyz žilnaške* (lit. one’s **legs** weaken) ‘weaken by fear’

(51) *pydjös kaltyralo* (lit. the **legs** tremble) ‘trembles by fear’

LAPSES IN HEARTBEAT STANDS FOR FEAR

(52) *šulem kwaláz* (lit. the heart **trembles**) ‘one is startled’

(53) *šulem norkak kare* (lit. the heart **makes a large beat**) ‘one is startled’

HAIR STRAIGHTENS OUT FOR FEAR

(54) *jyrši vyllaň žutske* (lit. **hair rises**) ‘got scared’

(55) *jyršiosyz ik žabyrskizy* (lit. one’s **hair spears up**) ‘one’s got scared’

WAY OF LOOKING STANDS FOR FEAR

(56) *šinjosaz kyškan šödiške* (lit. fear is felt in one’s eyes) ‘one is being afraid of sth’

BLOOD LEAVES FACE STANDS FOR FEAR

(57) *ymnyryz köd-köd luem* (lit. the **face** became **pale**) ‘got scared’

Figure 7 illustrates the distribution of body part terms in relation to the concept of FEAR. Since FEAR typically conceptualizes through metonymies, body part terms appearing in the data do not denote inner organs but refer to the visible parts of the human body (i.e. face or hair), which function as a display of emotions (cf. section 5).

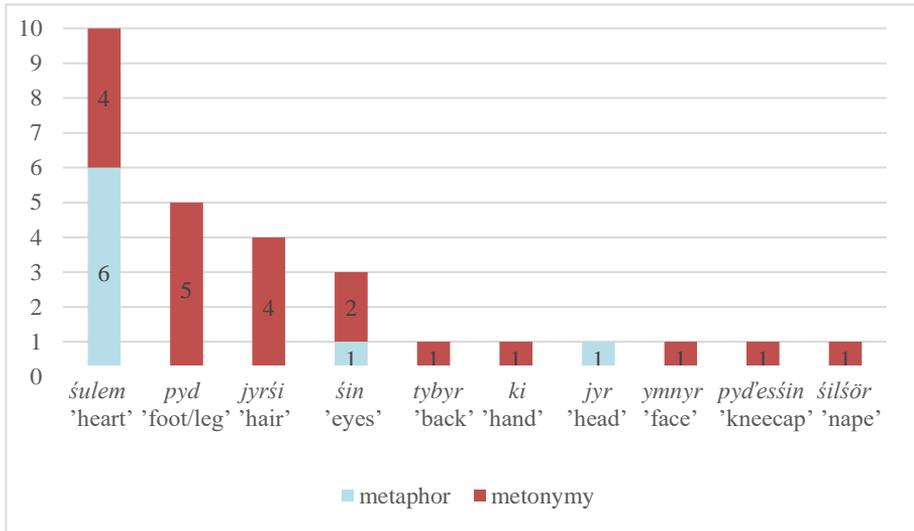


Figure 7. Body part terms in conceptual metaphors and metonymies for FEAR

Figure 8 illustrates the conceptual metaphors and metonymies in relation to the concept of FEAR in the research material. The upper part of the figure shows the metaphors, the lower part the metonymies.

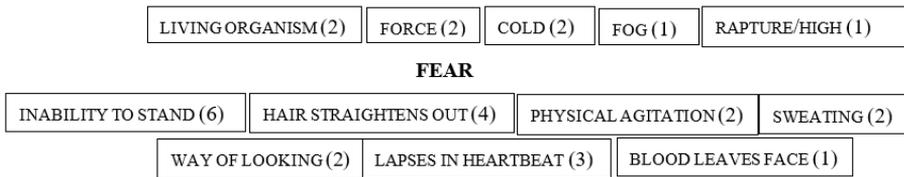


Figure 8. Conceptual metaphors and metonymies for FEAR

5.5. Love

LOVE and its related concepts (such as ROMANTIC LOVE, LIKING, and AFFECTION) are represented in 23 cases in the research material. As many as 21 out of 23 (91%) are

metaphorical expressions, and two (9%) are metonymical ones. According to Kövecses (2000: 27), “the concept of love is the most highly ‘metaphorized’ emotion concept”.

A great variety of source domains are encountered in the 21 metaphoric expressions, which are the following: SUBSTANCE/FLUID IN A CONTAINER (6), FIRE (5), PHYSICAL FORCE (2), RAPTURE/HIGH (2), LIVING ORGANISM (1), WARMTH (1), INSANITY (1), THE OBJECT OF LOVE IS A VALUABLE OBJECT (1), THE OBJECT OF LOVE IS IN THE HEART (1), and PHYSICAL AGITATION (1). The source domains related to HEAT (WARMTH and FIRE) are especially common in the conceptualization of PASSIONS (Kövecses 2010: 21). The CONTAINER metaphor also has significant role in the conceptualization of LOVE (just like in the case of HAPPINESS and inexplicitly in the case of ANGER). It roots in the generic level metaphor BODY IS A CONTAINER FOR THE EMOTIONS (Kövecses 2010: 370). In Udmurt the container of LOVE (and the container of other emotions as well cf. section 5) is *śulem* ‘heart’. The body part term *śulem* ‘heart’ appears in almost all of the conceptual metaphors with the exception of LOVE IS INSANITY and LOVE IS RAPTURE/HIGH – in these cases the term *jyr* ‘head’ is attested. The LOCUS OF MENTAL ACTIVITY is conceptualized in the head – the person under the influence of love is viewed as someone whose mental faculty functions improperly. Just like in the case of ANGER, these metaphors represent the stage of loss of control in the cognitive model of emotion; extreme anger or love can interfere with one’s normal mental functioning.

LOVE IS A SUBSTANCE/FLUID IN A CONTAINER (IN THE HEART)

(58) *śulemyz jaratonen pačylmemyn* (lit. one’s heart **overflows** with love) ‘be in love’

(59) *śulemyz no lulyz tyrmemyn jaratonen* (lit. one’s heart and soul is **filled** with love) ‘be in love’

(60) *solen śulemaz jaraton pyčam* (lit. love **soaks** one’s heart) ‘be in love’

LOVE IS FIRE

(61) *śulem žua jaratonen* (lit. the **heart** burns with love) ‘be crazy in love’

(62) *śulemam tyl aratid* (lit. you **lit fire** in my heart) ‘I fell in love with you’

(63) *piosmurtlen śulemaz jaraton kenžytoz* (lit. sb **ignites** love in the man’s heart) ‘sth made the man to fall in love’

LOVE IS PHYSICAL FORCE

(64) *śulem kyskyny* (lit. the heart **pulls**) ‘to long for sth or sb, to prefer sth or sb’

LOVE IS RAPTURE/HIGH

(65) *jaratonen poromem jyr* (lit. the head is **dizzy** with love) ‘be confused by love’

LOVE IS INSANITY

(66) *jyrze yštytož šinmaškem* (lit. **losing** one's **head** because of love) 'be crazy in love'

THE OBJECT OF LOVE IS A VALUABLE OBJECT

(67) *ki vylyn nullyny* (lit. **carry on** one's hand) 'to love, appreciate sb'

In the data under consideration there were only two metonymic expressions related to the concept of LOVE. These are LOVING VISUAL BEHAVIOR and INABILITY TO SPEAK, which are specific level metonymies of BEHAVIORAL REACTIONS OF THE EMOTION STAND FOR THE EMOTION.

LOVING VISUAL BEHAVIOR STANDS FOR LOVE

(68) *jaratiš murtlen šinmyz no veraške* (lit. even the **eye speaks** of a person who is in love) 'love is seen in the eyes'

INABILITY TO SPEAK STANDS FOR LOVE

(69) *jaratiš murtlen kylyz myrk* (lit. the **tongue** is **dumb** of a person who is in love) 'unable to speak because of strong affection'

Figure 9 shows the distribution of body part terms in the expressions for LOVE. As it can be seen, despite the great variety of conceptual metaphors, only a few body part terms play role in the conceptualization of LOVE, and *šulem* 'heart' make up 70% (16 instances) of all the appearances.

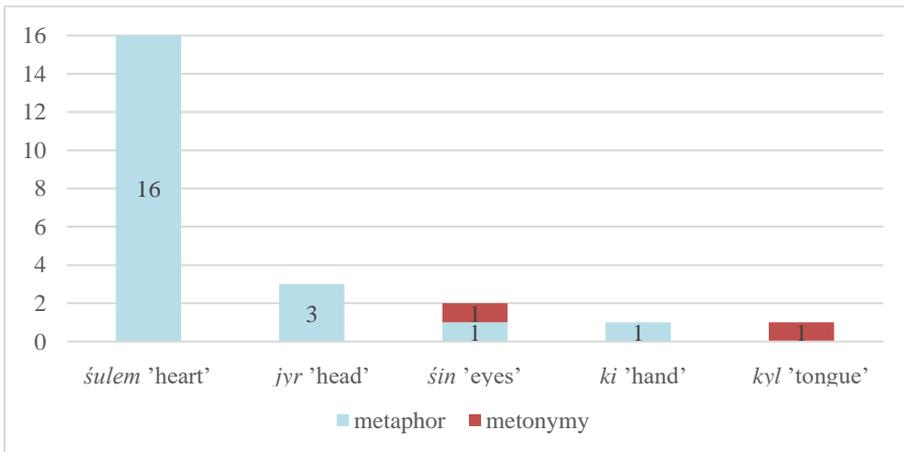


Figure 9. Body part terms in conceptual metaphors and metonymies for LOVE

Figure 10 shows the conceptual metaphors and metonymies in relation to the concept of LOVE in the research material. The upper part of the figure illustrates the metaphors, the lower part the metonymies.

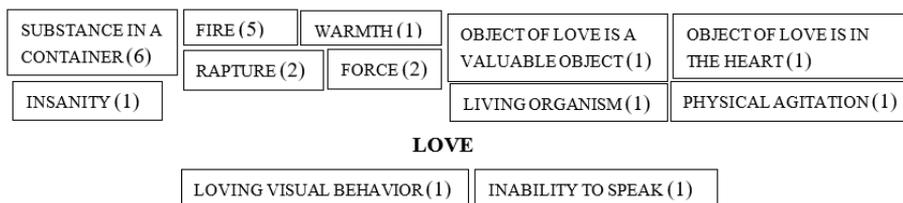


Figure 10. Conceptual metaphors and metonymies for LOVE

6. Distribution of body part terms in the data

Figure 11 shows the distribution of body part terms in all the examined emotion expressions. The total number of occurrences is 142. The term *šulem* ‘heart’ has a significant role in the conceptualization of HAPPINESS, SADNESS, ANGER, FEAR, and LOVE (66 instances, 46%). The term typically takes part in metaphoric mappings. In the discussed emotion concepts *šulem* ‘heart’ is either the container of the emotion in question (cf. happiness, love) or it is affected by the emotion (cf. sadness, fear). Based on the fact that *šulem* ‘heart’ makes up almost half of all the body part term appearances and that all the discussed emotion concepts conceptualize primarily through metaphors and metonymies which involve this term, it can be concluded that the center of emotional activity in Udmurt is in the heart: LOCUS OF EMOTIONS IS HEART.

The second most common body part term is *šin* ‘eye’ (19 instances, 13%). It principally takes part in the conceptualization of HAPPINESS (BRIGHT EYES FOR HAPPINESS and HAPPINESS IS LIGHT) and SADNESS (CRYING FOR SADNESS), but it appears in the expressions of all emotion concepts at a lower degree. As Yu (2004: 665) claims, although the face is the most distinctive part of a person, both physically and socially the focus is really on the eyes, which are commonly viewed as a “window to the soul” in many cultures (Kövecses 2010: 218).

The term *jyr* ‘head’ (10 instances, 7%) mainly appeared in metaphoric expressions related to ANGER and LOVE, since in Udmurt the LOCUS OF MENTAL ACTIVITY IS HEAD, which functions as a controller of emotions (Kubitsch 2019: 365). Considering the cognitive model of emotions implemented in the study, the self may try to control the emotion (cf. section 2). Expressions with the term *jyr* ‘head’ focus on lack of control (within the control aspect of the emotion concept), and this results in conceptualizations like LACK OF CONTROL IS INSANITY or LACK OF CONTROL IS RAPTURE/HIGH (Kövecses 2000: 43).

The term *pyd* 'foot' (9 instances, 6%) primarily takes part in the metaphoric conceptualization of HAPPINESS (cf. HAPPY IS BEING OFF THE GROUND) and in the metonymic conceptualization of FEAR (cf. INABILITY TO STAND FOR FEAR). It appeared twice altogether, once in relation to the concept of SADNESS (SADNESS IS NATURAL FORCE that sweeps sb off their feet) and once in relation to ANGER (ANGER IS AN OPPONENT which cannot be trodden down).

Although the body part term *köt* 'stomach, belly' does not have a high occurrence rate (5 instances, 3.5%), it is worthwhile to mention that dictionaries provide 'heart – locus of emotions' as a secondary meaning for this lexeme (Munkácsi 1896; Kozmács 2002). As can be seen, it has a role in the conceptualization of emotions, but it is not nearly as significant as *šulem* 'heart'. It appears in relation to SADNESS (SADNESS IS PHYSICAL AGITATION), in three instances in relation to ANGER (ANGER IS FIRE), and in relation to HAPPINESS (HAPPINESS IS A FLUID/SUBSTANCE IN A CONTAINER) in one instance. Considering the derivations and compound words (Kozmács 2002: 229–230) including *köt* 'stomach, belly', it is related to SADNESS and ANGER: *köttemmyny* (lit. become one without stomach, belly) 'losing hope'; *kötkajgu* (lit. stomach, belly + sadness) 'sadness'; *kötžož* (lit. stomach, belly + complaint) 'anger, being offended'; *kötšug* (lit. stomach, belly + difficulty) 'sadness, distress'.

From the other body parts the occurrence of *piń* 'tooth' (4 instances) is noteworthy on the one hand because it appeared exclusively in relation to the concept of ANGER, on the other hand because similar conceptualizations can be encountered in the Mari language as well.

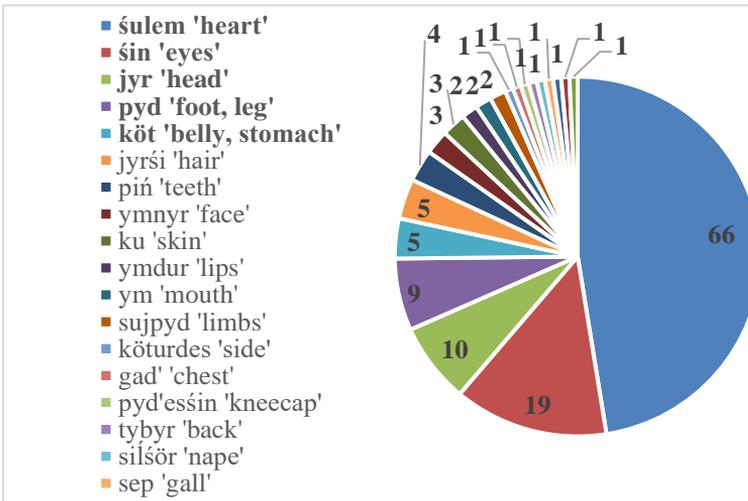


Figure 11. Distribution of body part terms in the entire data

Furthermore, it is important to mention that there are 20 metonymical expressions including the terms referring to the face or its parts (including the 12 metonymic uses

of *šin* ‘eye’). This is rooted in the physical distinctiveness and social significance of face and eyes as it was highlighted before. The generic level metonymies PHYSIOLOGICAL EFFECTS OF EMOTION STANDS FOR THE EMOTION and EXPRESSIVE RESPONSES FOR EMOTION STANDS FOR THE EMOTION involves many phrases and idioms related to facial expressions. Because of this, the face can be considered the display of emotions.

7. Review of central metaphors in the research material

Reviewing the conceptual metaphors related to HAPPINESS, HAPPINESS IS A FLUID/SUBSTANCE IN A CONTAINER and HAPPY IS FIRE seem to be central (section 4.1, Figure 2). In the case of SADNESS frequent metaphors are SADNESS IS PHYSICAL AGITATION and SADNESS IS PHYSICAL DAMAGE, which primarily agitates/damages the heart. The metaphor SADNESS IS FIRE/HEAT also has a relatively high occurrence rate in the data under consideration (cf. section 4.2, Figure 4). Interestingly, FIRE does not seem to be a source domain either for HAPPINESS or for SADNESS in English, neither the source domains PHYSICAL AGITATION and PHYSICAL DAMAGE are in relation to SADNESS (cf. Kövecses 2000), but they are well attested in Turkish and seem to be just as substantial as they are in Udmurt (Baş 2015: 160).

Anger is mainly conceptualized as ANGER IS EXPLOSION (cf. ANGRY PERSON IS A PRESSURIZED CONTAINER) and ANGER IS A LIVING ORGANISM that nestles in the heart (cf. section 4.3, Figure 6). In the case of FEAR there was not such a conceptual metaphor which can be considered as central (at least considering metaphors including body part terms). FEAR IS COLD, FEAR IS A LIVING ORGANISM and FEAR IS FORCE appear equally (cf. section 4.4, Figure 8). FEAR is the only discussed emotion concept comprising more metonymic than metaphoric expressions. However, it is known that FEAR tends to be characterized rather by its physiological effects and behavioral reactions (Kövecses 1990: 70). In the case of LOVE, LOVE IS A SUBSTANCE/FLUID IN A CONTAINER (IN THE HEART) and LOVE IS FIRE are the central metaphors (cf. section 4.5, Figure 10).

The CONTAINER metaphor is central in the case of HAPPINESS, ANGER and LOVE, but it also appeared in the case of SADNESS as well. Conceptualizing emotions as being fluids or substances in a container roots in the generic level metaphor HUMAN BODY IS A CONTAINER FOR THE EMOTIONS (Kövecses 2000: 217). In the case of Udmurt, emotions are often viewed as fluids, but they are not necessarily so – generally, EMOTIONS ARE SUBSTANCES INSIDE A PERSON (HUMAN BODY), which serves as a container.

Another central metaphor in more emotion concepts is EMOTION IS FIRE. It takes part in the conceptualization of SADNESS, ANGER and LOVE and it highlights the intensity aspect of emotion concepts. This can be characterized by the INTENSITY OF

EMOTION IS HEAT metaphor. The metaphor has application beyond the domain of emotion as well (INTENSITY IS HEAT) (Kövecses 2000: 41–42). The significance of the intensity aspect of emotion concepts are seen in such metaphoric expressions which can refer to either LOVE, ANGER, SADNESS or HAPPINESS (cf. example 70), so basically to emotions that are intense.

(70) *śulem žua* (lit. the heart **ignites**) ‘get angry/be in love/be sad/being euphoric’

The source domain FORCE also appeared with all emotion concepts. It is typical to view emotions as forces (cf. EMOTIONS ARE FORCES). The EMOTION IS A LIVING ORGANISM metaphor is attested in relation to all discussed emotion concepts to a higher (SADNESS, ANGER) or lower (HAPPINESS, LOVE, FEAR) degree. These source domains focus on the passivity of the self in relation to the emotion, since emotions are viewed as happening to us (Kövecses 2000: 42).

8. Conclusion

This paper has overviewed the role of body part terms in the conceptualization of HAPPINESS, SADNESS, ANGER, FEAR and LOVE in Udmurt. The results show that, similarly to other languages and cultures, body part terms (and the human body) play a significant role in the conceptualization of emotions.

Taking into account the metaphorical mappings, it can be concluded that the two central metaphors for emotions are EMOTIONS ARE SUBSTANCES IN A CONTAINER and EMOTION IS FIRE. Considering conceptual metonymies, all three types of generic level metonymies are attested in the data: PHYSIOLOGICAL EFFECTS OF EMOTION STANDS FOR THE EMOTION; BEHAVIORAL RESPONSES FOR EMOTION STANDS FOR EMOTION, and EXPRESSIVE RESPONSES FOR EMOTION STANDS FOR THE EMOTION. The proportion of metonymic expressions is not even, for instance, FEAR is rather conceptualized through metonymies, whereas LOVE through metaphors.

Considering body part terms in metaphoric and metonymic expressions in relation to the discussed emotion concepts it can be concluded that the term *śulem* ‘heart’ is substantial in the linguistic expressions of emotion concepts in Udmurt (cf. section 5), therefore LOCUS OF EMOTION IS HEART. This correlates with the typological findings, whereby typically inner body organs are conceptualized for the locus of emotional activity (Sharifian et al. 2008: 13). Inner body organs primarily take part in metaphoric mappings. The occurrence of *śin* ‘eye’ and other terms related to the face and its parts is frequent as well. The face is often viewed as a display of emotions (Kraska-Szlenk 2014: 43) and, because of this, it is usually involved in metonymic expressions.

Finally, although providing a systematic comparison of the conceptual metaphors and metonymies used for certain emotion concepts between Udmurt and other languages is beyond the scope of this paper, the results suggest that several emotion

concepts of Udmurt are characterized similarly to Turkish emotion concepts (cf. SADNESS IS PHYSICAL AGITATION/DAMAGE/FIRE; FEAR IS COLD or conceptualization of ANGER in relation to the head).

References

- Baş, Melike. 2015. *Conceptualization of emotion through body part idioms in Turkish: A cognitive linguistic study*. Ankara: Hacettepe University Graduate School of Social Sciences PhD dissertation.
- Dzjuina, Klavdia N. 1967. *Kratkij udmurtsko-russkij frazeologičeskij slovar*. Izhevsk: Udmurtia.
- Dzjuina, Klavdia N. 1996. *Sredstva obraznovo vyražhenija v udmurtskom jazyke*. Izhevsk: Udmurtia.
- Enfield, Nick. J. and Wierzbicka, Anna. 2002. The body in description of emotion. *Pragmatics and Cognition*, 10(1/2): 1–25.
- Gibbs, Raymond W. 2005. *Embodiment and cognitive science*. Cambridge: Cambridge University Press.
- Kraska-Szlenk, Iwona. 2014. *Semantics of body part terms: General trends and a case study of Swahili*. LINCOS Studies in Semantics 07. LINCOS, Muenchen.
- Kozmács, István. 2002. *Udmurt–magyar szótár* [Udmurt–Hungarian dictionary]. Szombathely: Savaria University Press.
- Kövecses, Zoltán. 1990. *Emotion concepts*. New York: Springer.
- Kövecses, Zoltán. 2000. *Metaphor and emotion*. Cambridge: Cambridge University Press.
- Kövecses, Zoltán. 2010. *Metaphor: A practical introduction*. Oxford: Oxford University Press.
- Kubitsch, Rebeka. 2019. Testrésznevek szerepe az érzelmek és az értelem konceptualizálásában az udmurt nyelvben [The role of body part names in conceptualizing emotions and mind in the Udmurt language]. In: Makarov, A. M. ed. *Материалы XLVII итоговой студенческой конференции*. Izhevsk: Izd-vo «Udmurtski Universitet», 363–366.
- Lakoff, George and Johnson, Mark. 1980. *Metaphors we live by*. Chicago: University of Chicago Press.
- Munkácsi, Bernát. 1896. *A votják nyelv szótára* [Votyak Doctionary]. Reprinted in 1990. Pécs: Az Uralisztikai Tanszék Kiadványai I.
- Sharifian, Farzad; Dirven, Rene; Yu, Ning (eds.). 2008. *Culture, body and language: Conceptualizations of internal body organs across cultures and languages*. Berlin – New York: Mouton de Gruyter.
- Yu, Ning. 2004: The eyes for sight and mind. *Journal of Pragmatics*, 36: 663–686.