

**ТЕОРЕТИЧЕСКАЯ, ПРИКЛАДНАЯ И СРАВНИТЕЛЬНО-СОПОСТАВИТЕЛЬНАЯ ЛИНГВИСТИКА /
THEORETICAL, APPLIED AND COMPARATIVE LINGUISTICS**

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**METAPHORIZATION OF KINAESTHETIC QUALITIES: COMPARISON OF RUSSIAN, ENGLISH AND ITALIAN
LANGUAGES**

Research article

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Abstract

The study analyzes metaphorical meanings of 'heavy' adjectives in English, Russian and Italian languages. Dictionaries and text corpora provide metaphorical meanings of the adjectives, which can be grouped into types based on transfer mechanisms. Links between different types and their distribution in languages reflect metaphorization directions. Languages choose different directions and move with different speed. Among the languages in this research, English explores the potential of 'heavy' metaphorical meanings the most, as it possesses the highest number of types, and it is close to creating a full-fledged intensifier out of its main adjective *heavy*. Italian has a number of unique types, whereas Russian has the most diversified field in terms of physical meanings of the lexemes. The data obtained confirm both universality and linguistic specificity of sensory experience.

Keywords: sensory qualities, quality 'heavy', metaphorization, synesthesia, cross-linguistic research.

**МЕТАФОРИЗАЦИЯ КИНЕСТЕТИЧЕСКИХ КАЧЕСТВ: СРАВНЕНИЕ РУССКОГО, АНГЛИЙСКОГО И
ИТАЛЬЯНСКОГО ЯЗЫКОВ**

Научная статья

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Аннотация

Исследование посвящено переносным значениям лексем с семой «тяжелый» в русском, английском и итальянском языках. Выделенные на основе анализа толковых словарей и текстовых корпусов значения объединяются в типы на основании механизмов переноса. Связь между типами и их распределение по языкам указывают на существование направлений метафоризации. Языки выбирают различные направления и двигаются по ним с разной скоростью. Дальше всего на пути метафоризации качество «тяжелый» продвинулось в английском языке: тут обнаруживается наибольшее количество типов метафор, и основное прилагательное семантического поля 'heavy' вскоре может стать полноценным интенсификатором. Итальянский язык обладает рядом уникальных типов метафор, тогда как номинативные значения прилагательных в русском языке наиболее диверсифицированы. Полученные данные подтверждают как универсальность, так и лингвоспецифичность сенсорного опыта.

Ключевые слова: сенсорные качества, качество «тяжелый», метафоризация, синестезия, кросслингвистическое исследование.

Introduction

Cognitive semantics is a research area on the edge between Linguistics and Psychology. This approach emphasizes semantic rules (or semantic formation rules), which explain the behavior of language units (lexemes, constructions, sentences, etc.). These rules are based on general cognitive mechanisms of the human psyche, in other words, they are anthropocentric [25]. The focus of this article is the analysis of the sense of heaviness, which is a part of sensory experience, in the formation of metaphors or new ideas.

A metaphor is a mechanism of speech that involves the use of a word denoting a certain class of objects to name an object from another class, similar to the first one in some aspect [1]. Metaphors are of paramount importance for understanding the structure of the world, as they connect abstract concepts and everyday experience. After J. Lakoff's and M. Johnson's pioneering work *Metaphors We Live By* first stated that "ordinary conceptual system, within which we think and act, is essentially metaphorical" [16], a significant amount of new research has stated that metaphors shape thinking, structure experience and impact human behavior [32], [15], [20].

Information about the weight of objects and one's own body is provided by proprioceptors, which, in addition to the force of gravity, the position of body parts and movement, assess the intensity of muscle effort necessary to perform any action or hold an object [26]. However, the sense of heaviness is a complex physiological process that involves other types of receptors, so heaviness is perceived not only locally but in the whole human body. As this information enters the central nervous system, the person can assess heaviness of the object they are interacting with [27].

Sensory sensations, including heaviness, belong to *concrete* experience, which is usually the starting point for constructing metaphors when describing more *abstract* spheres of human life [33], [25, P. 143, 360]. The association of heaviness with

complexity and obstacles can be found in many languages of the world [34], and this transfer does not look random. For example, it seems to people that the road is longer or the slope is steeper if they carry a heavy backpack. This perceptual mechanism appears to be based on subconscious understanding that handling heavy objects requires more effort [24]. In addition to complexity, the quality *heavy* can act as a metaphor for importance and intensity, since these concepts are also associated with the application of physical or mental effort [17]. A number of studies have shown that the weight of a tablet that a person holds in their hands can influence the assessment of the importance of the information given on this tablet. Those subjects who held heavier tablets rated exchange rates higher and fair decision-making procedures more important than those who held lighter tablets [7], [12], [35].

Metaphors that rely on sensory experience should be universal, i.e., similar in different languages. As B. M. Galeev notes, metaphors “in many languages ... are close, or even the same, which confirms their universal ontological validity and the fact that they are an essential feature of human mind” [11]. We find the same metaphors, for example, in the Russian and Italian languages: *lyogkaiā bol’* and *dolore leggero* ‘mild pain’, *gorkii vzgliād* and *sguardo amaro* ‘bitter look’, *rezkii zvuk* and *suono acuto* ‘sharp sound’. However, differences are not rare: Italian *legno dolce* ‘soft wood’ lit. “sweet wood” [4], English *crooked deals* ‘dirty deals’ [19], Serbian *ljuta paprika* ‘hot pepper’, lit. “angry pepper” [14], German *blauer Mann* [36] ‘drunk man’, lit. “blue man”.

Whereas the sensory quality *heavy* is the subject of interest of many linguistic works, researchers, however, usually study the features of nominative meanings, for example, the New Explanatory Dictionary of Russian Synonyms [21] or E. Shirshikova’s dissertation on the nominative meanings of ‘heavy’ adjectives in English [27]. As for the figurative meanings of the semantic field “Heavy”, Bubyreva’s and Moiseeva’s paper notes that in French and English the ‘heavy’ lexemes can be used as intensifiers in some contexts. For example, “...French has the phrase *chaleur lourde* (lit. ‘heavy heat’), which is rare for the Russian language” [5, P. 84]. The paper also mentions *lourdes depences* (lit. “heavy expenses”), *lourdes dettes* (lit. ‘heavy debts’), *frais lourds* (lit. ‘heavy costs’). Similar phrases are found in English. According to the authors, this expansion of compatibility may speak of a new meaning for the adjectives under study: “a large number of” [5]. A work on the quality “heavy” in Chinese has a similar conclusion: the main adjective of the field *zhòng* can be used as an intensifier not only with a negative, but also with a neutral connotation [13].

This study analyzes figurative qualitative meanings of lexemes that denote heaviness in the Russian, Italian and English languages, and identifies general directions of such transfers in a comparative aspect. Definitions and behavior of lexemes in different contexts were analyzed with the help of explanatory dictionaries and text corpora of the languages under study: for the Russian language we used the Small Academic Dictionary (SAD) [10], the Ozhegov Explanatory Dictionary [22], the New Explanatory Dictionary of Russian Synonyms and the National Corpus of the Russian Language [21], for the English language we used the Merriam-Webster Dictionary [18], the Cambridge Dictionary [6], the Britannica Dictionary [31], the Sketch Engine Text Corpus (English) [28], for the Italian language we used the Treccani Dictionary [9], the Garzanti Dictionary [29], the De Mauro Dictionary [8] and the Sketch Engine Text Corpus (Italian) [28].

Main results

Semantic field “Heavy” in Russian

The Russian semantic field “Heavy” has nine adjectives: *tiāzheliyī*, *tiāzhkiī*, *uvesistyī*, *tiāzhelovesnyī*, *gruznyī*, *tiazhelennyī*, *massivnyī*, *veskiī*, *polnovesnyī*. The adjectives *mnogotonnyī*, *mnogopudovyī*, associated with units of weight, are not included in the study, as they are relative adjectives.

Tiāzheliyī is the central lexeme of the semantic field. When used in its nominative meaning, it can collocate with any nouns denoting objects that can be weighed. The explanatory dictionaries of the Russian language give 19 figurative meanings:

1. Dense, thick (*tiāzhelaiā materiīā* ‘heavy cloth’).
2. Giving an impression of heaviness (*tiāzhelye oblaka* ‘heavy clouds’, *tiāzhelye svody* ‘heavy vaults’).
3. Making one’s stomach feel full with something difficult to digest (*tiāzhelaiā eda* ‘heavy food’).
4. Big and overweight (*tiāzheliyī chelovek* ‘heavy person’).
5. Massive, large (*tiāzhēloe litso* ‘heavy face’).
6. Deprived of grace and speed (*tiāzhelye shagi* ‘heavy steps’).
7. Deprived of subtlety and grace; clumsy (*tiāzhelaiā rech’* ‘heavy speech’, *tiāzheliyī stil’* ‘heavy style’).
8. Requiring a lot of work, effort, stress to implement, overcome, understand (*tiāzhelaiā rabota* ‘hard work’, *tiāzhelaiā doroga* ‘heavy road’, *tiāzhēloe dykhanie* ‘heavy breathing’, *tiāzhelye usloviā* ‘difficult conditions’, *tiāzhelaiā obiāzannost’* ‘heavy duty’).
9. Difficult to educate, influence (*tiāzheliyī rebēnok* ‘difficult child’).
10. Full of difficulties, hardship, worries, grief (*tiāzhelaiā zhizn’* ‘hard life’).
13. Intensive, big, deep (*tiāzhelaiā vina* ‘severe guilt’, *tiāzhēloe prestuplenie* ‘serious crime’).
14. Being in a dangerous position, dangerous (*tiāzhelaiā bolezn’* ‘serious illness’, *tiāzhēloe ranenie* ‘heavy injury’, *tiāzheliyī bol’noī* ‘seriously ill’).
15. Associated with unpleasant, painful physical sensations (*tiāzheliyī son* ‘troubled sleep’, *tiāzhēloe pokhmel’e* ‘heavy hangover’).
16. Associated with emotional pain (*tiāzhēloe gore* ‘severe distress’, *tiāzhelye mysli* ‘heavy thoughts’).
17. Expressing a gloomy, depressed mood (*tiāzheliyī vzgliād* ‘heavy stare’).
18. An unpleasant, quarrelsome person (*tiāzheliyī chelovek* ‘difficult person’, *tiāzheliyī kharakter* ‘ill temper’).
19. Unpleasant to smell (*tiāzheliyī zapakh* ‘heavy smell’).

Tiāzhkiī is a formal synonym for *tiāzheliyī* and can also intensify its meaning (“very heavy”), its figurative qualitative meanings coincide with those of *tiāzheliyī*.

Uvesistyĭ is a less common synonym for the adjective *tĭāzhĕlyĭ*. The New Explanatory Dictionary of Russian Synonyms points out that *uvesistyĭ* means a slight weight deviation: a person can hold such an object in their hand without much difficulty. Its figurative meaning: strong, produced with great force (*uvesistyĭ udar* ‘hefty blow’).

Tĭāzhelovesnyĭ is a less common synonym for *tĭāzhĕlyĭ*. It has three figurative meanings:

1. Big and overweight (*tĭāzhelovesnyĭ chelovek* ‘heavy person’).
2. Making an impression of weight with one’s massiveness, proportions (*tĭāzhelovesnoe zdanie* ‘heavy building’).
3. Deprived of grace, speed (*tĭāzhelovesnaiā pokhodka* ‘heavy step’, *tĭāzhelovesnyĭ stil’* ‘heavy style’).

Gruznyĭ is a synonym for the lexemes *tĭāzhelovesnyĭ*, *tĭāzhĕlyĭ*. Definition in the Small Academic Dictionary (SAD): "Plump, clumsy due to excessive weight." Figurative meanings: deprived of lightness, grace, speed (*gruznaiā pokhodka* ‘heavy step’, *gruznye shagi* ‘heavy steps’).

The nominative meaning of **tĭāzhelennyĭ** is "very heavy." The dictionaries do not give figurative meanings, however, in some contexts it can be found as an intensifier to the adjective *tĭāzhĕlyĭ* used figuratively.

The definition of **massivnyĭ** in the SAD: "having a large mass, volume" (*massivnoe zdanie* ‘massive building’), also about a person: "large, overweight" (*massivnyĭ chelovek* ‘massive person’). The dictionaries do not give figurative meanings.

The SAD definition of **veskiĭ** is "having a lot of weight and a small volume", for example: *Zoloto i svinets – veskie metally* ‘Gold and lead are weighty metals.’ Figurative meaning: convincing (*veskiĭ dovod* ‘strong argument’).

The main meaning "having a full, normal weight" of **polnovesnyĭ** is slightly different from the rest of the lexemes of the field. However, it is also used in the sense of "having a large, more than usual weight" (*polnovesnye brĕvna* ‘weighty logs’). The word has three figurative meanings:

1. Giving the impression of a large weight (*polnovesnye kapli* ‘weighty drops’).
2. Fully manifested (*polnovesnye udary* ‘powerful blows’).
3. Informative, significant (*polnovesnyĭ reportazh* ‘full-length coverage’).

The whole variety of figurative meanings can be merged into the following groups:

- 1) dense
- 2) giving the impression of a lot of weight
- 3) making your stomach feel full
- 4) deprived of grace, speed
- 5) requiring effort or causing difficulties
- 6) oppressive
- 7) significant.

Semantic field "Heavy" in English

The English semantic field “Heavy” consists of five adjectives: *heavy*, *hefty*, *weighty*, *massive*, *ponderous*.

Heavy is the main lexeme of the semantic field. When used in its nominative meaning, it can collocate with any nouns denoting objects that can be weighed. The adjective has 25 figurative meanings:

1. Serious (*heavy consequences*).
2. Deep, intense (*heavy silence*).
3. Depressing (*He returned with heavy spirit*).
4. Slow or dull (*tired heavy step*).
5. Graceless (*heavy writing style*).
6. Characterized by declining prices (*The market is heavy*).
7. Sleepy (*Eyes were growing heavy*).
8. Greater in quantity than the average of its kind or class (*heavy turnout*).
9. Of great force (*heavy seas*).
10. Threatening to rain or snow (*heavy sky*).
11. Impeding motion (*heavy traffic*).
12. Full of clay and inclined to hold water (*heavy soil*).
13. Coming as if from a depth (*heavy breathing*).
14. Dense, thick (*heavy beard, heavy syrup*).
15. Oppressive (*heavy perfume, heavy weather, rule with a heavy hand*).
16. Steep, sharp (*heavy grade*).
17. Difficult (*heavy going*).
18. Immoderate (*heavy smoker*).
19. Hard to digest (*heavy dessert*).
20. Not properly raised or leavened (*heavy bread*).
21. Relating to theatrical parts of a grave or somber nature (*heavy role*).
22. Possessing something to a large extent (*heavy on ideas*).
23. Important (*heavy politician*).

24. Giving the impression of great weight, heaviness (*a big man with heavy features*). In this sense, the adjective *heavy* collocates with nouns denoting objects that cannot be weighed due to their size (*heavy building, heavy arch*) (examples provided by the text corpus).

25. An accent that is easy to notice (*heavy accent*).

Hefty is a less common synonym for the main lexeme of the field. The figurative meaning: significant (*hefty portions*).

Weighty is a less common synonym for the main lexeme of the field. Its figurative meanings are: significant, powerful (*weighty problem, weighty argument*).

The main meaning of **massive** is “having a very large mass”, as well as size (*massive walls, stars more massive than the sun*). Figurative meanings:

1. Giving the impression of great weight, heaviness (*massive jaw*).
2. Significant (*the feeling of frustration is massive*).
3. Greater in quantity than the average of its kind or class (*a massive dose of penicillin*).
4. Strong, intense (*massive hemorrhage*).
5. Impressive (*the most massive American dramatist of his time*).

Ponderous in two dictionaries (Cambridge, Britannica) does not have the meaning of heavy weight in the physical sense, but has two figurative meanings:

1. Clumsy due to weight and size (*ponderous man*)
2. Boring, lifeless (*ponderous prose*).

All the figurative meanings can be merged into the following groups:

- 1) dense and warm (clothes)
- 2) giving the impression of a lot of weight
- 3) making your stomach feel full
- 4) deprived of grace, speed
- 5) requiring effort or causing difficulties
- 6) oppressive
- 7) intensive
- 8) significant, serious
- 9) full of something
- 10) characterized by declining prices.

Semantic field "Heavy" in Italian

The Italian language has five adjectives in this field: *pesante, grave, greve, gravoso, ponderoso*.

Pesante (heavy) is the central lexeme of the semantic field “Heavy”. When used in its nominative meaning, it can collocate with any nouns denoting objects that can be weighed. The analysis of explanatory dictionaries of the Italian language provides 12 figurative qualitative meanings:

1. Dense (warm) (*abito pesante* ‘warm clothes’).
2. Impeding motion or work (*terreno pesante* ‘viscous earth’).
3. Giving a feeling of heaviness, oppressive (*cibo pesante* ‘heavy food’, *testa pesante* ‘heavy head’, *sonno pesante* ‘troubled sleep’, *buio pesante* ‘heavy darkness’, *suono pesante* ‘heavy sound’, *sguardo pesante* ‘heavy stare’).
4. Strong and unpleasant (*odore pesante* ‘bad smell’), as well as *aria pesante* ‘stale air’.
5. Clumsy (*uomo pesante* ‘heavy person’).
6. Severe (*maniera pesante* ‘heavy manner’, *attitudine pesante* ‘heavy attitude’).
7. Foul play in sports (*gioco pesante* ‘foul play’).
8. Significant (*danno pesante* ‘heavy damage’, *sconfitta pesante* ‘heavy defeat’, *ferita pesante* ‘severe injury’).
9. Requiring effort (*lezione pesante* ‘hard lecture’, *lavoro pesante* ‘heavy work’).
10. Threatening or vulgar (*parole pesanti* ‘offensive words’, *frasi pesanti* ‘threatening phrases’).
11. Giving the impression of a lot of weight (*edificio pesante* ‘heavy building’).
12. Currency with a high exchange rate (*valuta pesante* ‘strong currency’).

The first meaning of **grave** (heavy, serious) is relative: “a body affected by gravity”. The meaning “having a lot of weight” comes second in dictionaries after the relative meaning. There are eleven qualitative figurative meanings:

1. Giving a feeling of heaviness, oppressive (*testa grave* ‘heavy head’, *cibo grave* ‘heavy food’).
2. Air difficult to breathe (*aria grave* ‘stale air’).
3. Requiring effort (*fatica grave* ‘heavy work’, *giogo grave* ‘heavy oppression’).
4. Significant (*argomento grave* ‘convincing argument’, *obiezione grave* ‘serious objection’).
5. Dangerous (*rischio grave* ‘great risk’, *caso grave* ‘dangerous business’).
6. Serious (about negative phenomena) (*dolore grave* ‘severe pain’, *lutto grave* ‘deep mourning’, *perdite gravi* ‘heavy losses’).
7. Full of, laden with (*grave di anni* ‘old’, lit. “heavy with years”).
8. Slow (*persona grave* ‘overweight person’).
9. Authoritarian, authoritative (*tono grave* ‘impressive tone’).
10. Full of worries (*uomo grave* ‘sad man’).
11. Low tone (*nota grave* ‘low note’).

Greve (heavy) is used only figuratively:

1. Oppressive (*aria greve* ‘stale air’).
2. Painful (*silenzio greve* ‘heavy silence’).
3. Graceless, vulgar (*espressione greve* ‘rude expression’, *film greve* ‘vulgar film’).

4. In some regions of Italy, it replaces the adjective *grave* with the physical meaning “heavy” and the figurative meanings “slow” and “boring”.

Gravoso (burdensome) is used mainly in the figurative meaning: requiring tension (*incarico gravoso* ‘heavy task’, *obbligo gravoso* ‘heavy obligation’, *condizioni gravose* ‘harsh conditions’).

Although **ponderoso** (ponderous) has the meaning “heavy weight”, the figurative meaning “requiring tension” is more frequent.

All the figurative meanings can be merged into the following groups:

- 1) dense and warm (clothes)
- 2) giving the impression of a lot of weight
- 3) making one's stomach feel full
- 4) deprived of grace, speed
- 5) requiring effort or causing difficulties
- 6) oppressive
- 7) offensive, unpleasant
- 8) significant
- 9) authoritative
- 10) full of something
- 11) low tone.

The analysis of nominative meanings shows that, although in all analyzed languages the semantic fields belong to the dominant type (one central adjective and a number of additional adjectives with a limited number of collocations), they have a slightly different structure. In Russian, the semantic field is the most abundant (nine adjectives), whereas its peripheral lexemes are more specific than in English and Italian: for example, *gruznyĭ* is used mainly with people and *uvesistyĭ* is used for small objects. Italian has only five adjectives in this field, and only for the central lexeme *pesante* the meaning of large weight is primary and most common, the meanings of the peripheral lexemes have become mostly metaphorical. English occupies an intermediate position between Russian and Italian: although its semantic field is relatively poor (five lexemes), it has its own specifics (for example, *massive* denotes both a heavy and large object). The adjectives of all three languages have a developed system of figurative meanings.

Discussion

Figurative meanings can be grouped into types based on the transfer mechanism.

The basis of the transfer type HEAVY IS DIFFICULT TO DIGEST is synesthesia between proprioceptors and specific receptors of the stomach: the feeling of heaviness in the stomach is similar to the weight of an object felt by the hand. Such similarity allows the use of adjectives of the semantic field "Heavy" to denote food that requires intense stomach activity. An extra basis here is the transfer HEAVY IS REQUIRING EFFORT. This type is present in all three languages (Russian *tĭāzhĕlaiā eda* = English *heavy food* = Italian *cibo pesante*).

Another synesthetic transition is based on the association between a large weight and a sound (transfer HEAVY IS LOW). It is observed only in Italian in relation to the tone of sound: *nota grave* 'low note'.

Synesthesia is also involved in the type of transfer HEAVY IS LARGE. Here, kinesthetic sense is associated with vision: heavy clouds, heavy facial features, or a heavy building cannot be weighed by a person (their weight can only be calculated), but their size allows people to imagine that they should be heavy (Russian *tĭāzhĕloe zdanie* = English *heavy building* = Italian *edificio pesante*). The transfer HEAVY IS LARGE is the basis for the transfer HEAVY IS GRACELESS. Clumsiness is associated with heaviness, hence the following phrases are possible: Italian *passo pesante* or Russian *tĭāzhĕlyĭ polĕt ptits*, then the quality "heavy" can be ascribed to non-physical objects: English *heavy writing style* and Russian *tĭāzhĕloe ostroumie* 'heavy type of wit'. An alternative explanation may be a metonymic transfer of a quality from the object to its action: a heavy step is the step of a heavy person, a heavy clatter of wheels is the clatter of heavy wheels [4]. Both of the above types of transfer are common to all three languages.

In the type HEAVY IS DENSE, transfer is based on metonymy: if something (for example, fabric) is heavy, it should also be dense (Russian *tĭāzhĕlaiā materiĭā* 'heavy fabric'). The English language makes the next step: liquid can also be heavy (English *heavy syrup*). In addition, the English and Italian languages employ the transfer HEAVY IS DENSE IS WARM and the central "heavy" lexemes of these languages *heavy* in English and *pesante* in Italian are used to describe warm (winter) clothes.

Italian and English have a transfer HEAVY IS FULL OF SOMETHING. In these languages, constructions like $N_1 + A + \text{prep} + N_2$ are possible, where N_1 is the defined noun, A is the adjective with the meaning "full" (*heavy* in English, *pesante* in Italian), *prep* is a preposition with the meaning "consisting of, including" (*with* or *on* for English, *di* for Italian), and N_2 is a noun denoting the object or objects that are part of the object denoted by the defined noun. Whereas English uses this construction very widely (English *air heavy with smoke*), Italian usually employs it only in a metaphorical sense (Italian *una persona grave di vino* 'a person who drank a lot of wine', literally "a person loaded with wine").

The basis of the transfer HEAVY IS SIGNIFICANT is, apparently, the association of the importance of the object with its weight (see introduction). This type is inherent in the languages under study to varying degrees. If Russian explores it only thanks to the lexeme *polnovesnyĭ*, which has a positive connotation (Russian *polnovesnyĭ argument* 'weighty argument'), Italian and English take metaphorization to the next level, adding the meaning "solid", "authoritative": Italian *tono grave* 'impressive tone', English *heavy politician* (the transfer HEAVY IS AUTHORITATIVE).

The transfer HEAVY IS REQUIRING EFFORT is based on the fact that lifting and carrying heavy things requires effort. This transfer turns out to be more productive than the previous ones. This type includes such phrases as Russian *tĭāzhĕlyĭ pod"ĕm* 'heavy ascent', English *heavy breathing*, Italian *fatica grave* 'hard work'.

The transfer HEAVY IS OPRESSIVE is close to the transfer HEAVY IS REQUIRING EFFORT, but the key role in this transfer is the ability of heavy objects to put pressure on a person (for example, you can carry a heavy bag on your back) or on other objects. The variety of expressions in this type is especially great: Italian *testa pesante* 'heavy head', *sonno pesante* 'troubled sleep', *condizioni gravose* 'harsh conditions'; English *heavy perfume*, *heavy weather*, *heavy spirit*; Russian *tĭāzhĕlye mysli* 'heavy thoughts', *tĭāzhĕlaiā bolez'n* 'serious illness', *tĭāzhĕloe pokhmel'e* 'severe hangover'. This transfer seems to be the most natural for field lexemes, since it is the most productive for all the languages under study. Most of the meanings of this type can also be attributed to the transfer HEAVY IS REQUIRING EFFORT, however, some are unique representatives of

the transfer HEAVY IS OPPRESSIVE: Russian *tīāzhēlaīā vina* ‘severe guilt’, English *heavy silence*, Italian *sguardo pesante* ‘heavy stare’. In addition, this transfer is the source for several other transfer types.

The meaning "oppressive" has a negative connotation, which becomes the basis for the transfer HEAVY IS UNPLEASANT. This transfer is widespread in Italian: *parole pesanti* 'offensive words', *odore pesante* 'bad smell', *alito pesante* 'bad breath'. It is worth noting the difference between the Italian language, on the one hand, and the Russian and English languages, on the other. For example, the adjective *heavy* can collocate with the noun *word* in English, too, but this collocation refers to the transfer HEAVY IS OPPRESSIVE and means “serious words”, “words that will have serious consequences”. A similar distinction exists between the Italian phrase *odore pesante* 'bad smell' and the Russian phrase *tīāzhēlyī zapakh* ‘heavy smell’. Although this feeling can be described in Russian as "oppressive", this phrase does not always have a negative connotation (for example, *sladkiī i tīāzhēlyī zapakh svezhego khleba* "sweet and heavy smell of fresh bread"), while in Italian this phrase denotes an unpleasant smell, not necessarily causing an "oppressive" feeling. The word combination *alito pesante* in Italian also, unlike in Russian and English, means “bad smell” but not difficulties with breathing (cf. English *heavy breathing* and Russian *tīāzhēloe dykhanie* ‘heavy breathing’).

One of the types associated with the transfer HEAVY IS OPPRESSIVE is the transfer HEAVY IS FALLING. This transfer, however, can be found only in English and only in collocations with the noun *market* and alike (*The market is heavy*).

As besides the weight the quantity can be the basis for the transfer HEAVY IS OPPRESSIVE, another transfer type is possible: HEAVY IS IN TOO LARGE NUMBERS. This type of transfer can be found in English, where rain, snow, wind and traffic can be heavy. In this type, the negative connotation is, however, retained. The phenomenon or object is excessive and therefore unpleasant. However, the metaphorization in English goes even further: The type HEAVY IS IN TOO LARGE NUMBERS in some cases loses negative connotation, and it is reinterpreted simply as HEAVY IS IN LARGE NUMBERS. These metaphors can only be found in English: *heavy reliance*, *heavy thinker*, *heavy reading*. If this meaning of the adjective is applied to a greater number of collocations with nouns, the adjective *heavy* could become a full-fledged intensifier.

English *heavy* may be compared to the Russian adjective *sil'nyi* ‘strong’, which in many contexts may also be used as an intensifier (*heavy heat* = *sil'naīā zhara*; *heavy wind* = *sil'nyi veter*). A similar semantic shift has also been recorded, for example, in the lexeme *sehr* in German, which in Old German meant "with difficulty" or "painfully," but since the Middle German period it has been used to mean "very". The English adverb *very* has experienced a similar change, as in Middle English it meant "real". Both words lost their primary meaning, which is a necessary condition for a word to become a full-fledged intensifier, since the function of such words is only to strengthen the meaning of the word to which they refer, rather than to add its own meaning [2]. This process has been called by G. Paul an impoverishment of the content of a concept linked to expansion of its volume [23]. This could be considered the final point in the semantic shift of a word, after which further metaphorization becomes impossible.

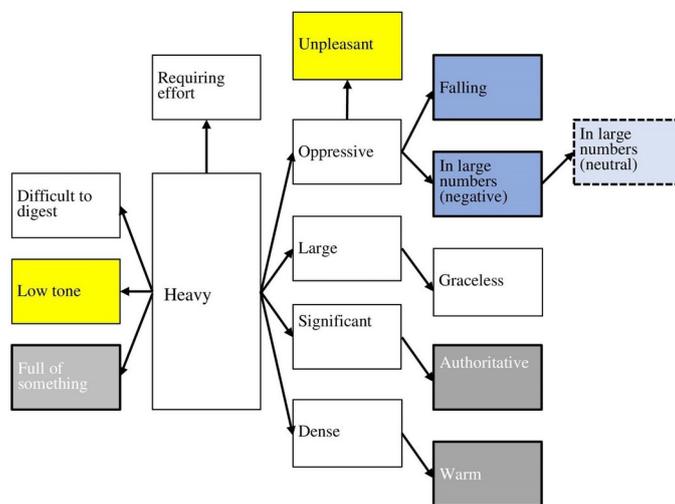


Figure 1 - Types of figurative meanings of the field “Heavy”
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Note: types belonging to Russian, English and Italian are white; types belonging to English and Italian are grey; English types are blue; Italian types are yellow; the frame with a dashed line is a not fully formed type in English

All transfer types and the connections between them are shown in Figure 1. Among the languages under study, Russian is the least prone to the creation of figurative meanings out of the quality "heavy". Only 8 of the 16 transfer types are observed in Russian. The most productive language in terms of creating figurative qualities is English (14 types of transfer), besides, English is the closest to using the main adjective of the field (*heavy*) as a true intensifier, a stage after which no further metaphorization is possible. English also possesses two other unique transfer types, HEAVY IS IN TOO LARGE NUMBERS (negative connotation) and HEAVY IS FALLING. The intermediate position between Russian and English is occupied by

Italian (13 transfer types), which is still far from using field lexemes as intensifiers but has two unique transfer types (HEAVY IS LOW TONE and HEAVY IS UNPLEASANT).

It is worth noting that seven transfer types are a development of other types. One type belongs to all three languages, one type belongs only to Italian, two types belong both to Italian and English and three types belong only to English. This can be considered as evidence of the directions of metaphorization, with languages occupying different stages on them. If we consider the transformation of lexemes into intensifiers to be the end point, then English has followed the path of metaphorization of the quality "heavy" almost to the end.

Conclusion

The invariant quality of the semantic field "Heavy" is generated by proprioceptive sensitivity. Such qualities often become the source for figurative meanings (both metaphorical and metonymic), and in this aspect the semantic field "Heavy" is very productive in Russian, English and Italian. The explanatory dictionaries in each of the languages give from 15 unique transfers in Italian to 21 transfers in Russian and 25 transfers in English. However, all the variety of figurative meanings found in the dictionaries can be reduced to a limited number of types, based on the transfer mechanism. This approach allows us to understand the functioning of metaphorization and to highlight the directions in which it moves.

The performed analysis has demonstrated the presence of universal and linguospecific directions of metaphorization. It has identified 16 transfer types in the semantic field "Heavy", with eight types existing in all three languages, which form a universal semantic core. These transfers, on the one hand, provide the basis for understanding different aspects of human life, and, on the other hand, show the characteristics of sensory experience. It is also important to emphasize that the sensory experience manifests differently in different languages and cultures, giving rise to linguistically specific metaphors. It is interesting to note that in Italian the quality "heavy" is ascribed to sounds, earlier we were able to demonstrate the importance of sound characteristics for Italian culture [3].

This paper has identified dynamic shifts in the formation of metaphors. It has found seven transfer types, which are the development of other (basic) transfer types. These (advanced) types are unevenly distributed among the examined languages: while Russian has only one type and Italian has four, English has seven (one type is common to all three languages, and two are common to English and Italian). Not only has English the greatest number of types in general, and of advanced types in particular, but it is also closer than the other languages to the final stage of metaphorization, i.e., the creation of an intensifier from *heavy*, the central lexeme of its field.

This study shows that it is possible to identify the features and directions of metaphorization even on the basis of only three languages. The further investigation should be focused on expanding the sample and testing the hypotheses about the directions of metaphorization which are put forward in this paper.

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Список литературы / References

1. Арутюнова Н.Д. Метафора и дискурс / Н.Д. Арутюнова // Теория метафоры. — М.: Прогресс, 1990. — С. 5–32
2. Benzinger E.M. Intensifiers in current English / E.M. Benzinger. — University of Florida, 1971. — URL: <http://www.archive.org/details/intensifiersincu00benz> (accessed: 01.12.2022)
3. Blinnikov G.B. Conceptualization of the Sensory Experience: A Frame-Based Approach / G.B. Blinnikov // Psychology in Russia: State of the Art. — 2019. — № 12 (1). — P. 147-162
4. Блинников Г.Б. Лексическая сочетаемость качественных прилагательных современного итальянского языка, репрезентирующих сенсорный опыт : дис. канд. филол. н. / Г.Б. Блинников. — М., 2017. — 294 с.
5. Бубырева Ж. А. Пути метафоризации признаков «тяжелый» и «легкий» в русском, французском, английском языках / Ж.А. Бубырева, С.А. Моисеева // Научные ведомости. Серия Гуманитарные науки. — 2013. — № 20 (163). Выпуск 19. — С. 81-87
6. Cambridge Dictionary. — Cambridge: Cambridge University Press, 2020. — URL: <https://dictionary.cambridge.org/dictionary/english/> (accessed: 21.12.2022)
7. Chandler J. J. To judge a book by its weight you need to know its content: Knowledge moderates the use of embodied cues / J. J. Chandler, D. Reinhard, N. Schwarz // Journal of Experimental Social Psychology, 48(4). — 2012. — P. 948-952
8. De Mauro T. Il Dizionario della Lingua Italiana / De Mauro T. — Milano: Paravia, 2000. — 2998 p.
9. Duro A. Il vocabolario Treccani / A. Duro, V. Della Valle. — Roma: Istituto della Enciclopedia Italiana, 2008. — 1169 p.
10. Словарь русского языка: в 4 т. / под ред. А.П. Евгеньева. — М.: Русский язык, 1999. — 702 с.
11. Галеев Б.М. Синестезия в мире метафор // Обработка текста и когнитивные технологии / Б.М. Галеев. — М.: Варна: Учеба, 2004. — С. 33-42

12. Jostmann Nils B. Weight as an Embodiment of Importance / Jostmann Nils B., Lakens Daniël, Schubert Thomas W. // *Psychological Science*, 2009. — Vol. 20, No. 9. — P. 1169-1174
13. Холкина Л. С. Признаковая лексика китайского языка в типологической перспективе: поля гладкий, твердый и тяжелый / Л.С. Холкина // *Acta Linguistica Petropolitana. Труды института лингвистических исследований*. — 2014. Том. X, №1. — С. 879-888
14. Кюсева М. В. Признаковая лексика: прилагательные 'острый' и 'тупой' в типологической перспективе / М.В. Кюсева, Д.А. Рыжова // *Acta Linguistica Petropolitana. Труды института лингвистических исследований*. — 2010. — VI (3). — С. 90-93
15. Lakoff G. *Women, fire, and dangerous things* / G. Lakoff. — Chicago, IL: University of Chicago Press, 2008. — 632 p.
16. Lakoff G. *Metaphors We Live By* / G. Lakoff, M. Johnson. — University of Chicago Press, 2004. — 242 p.
17. Landau M. J. A metaphor-enriched social cognition / M. J. Landau, B. P. Meier, L. A. Keefer // *Psychological Bulletin*. — 2010. — 136(6). — P. 1045-1067
18. Merriam-Webster's Collegiate Dictionary (10th ed.). — Merriam-Webster Incorporated, 2016. — 960 p.
19. Наний Л. О. Направления развития переносных значений атрибутивных лексем семантического поля кривизны (в русском, английском и китайском языках) / Л.О. Наний // *Вестник РГГУ. Серия: Литературоведение. Языкознание. Культурология*. — 2015. — С. 32-48
20. Niebert K. Understanding starts in the mesocosm: conceptual metaphor as a framework for external representations in science teaching / K. Niebert, H. Gropengießer // *International Journal of Science Education*. — 2015. — 37 (5-6). — P. 903-933
21. Новый объяснительный словарь синонимов русского языка / под общ. руководством акад. Ю.Д. Апресяна. — М.: Школа языка славянской культуры, 2003. — 1417 с.
22. Ожегов С. И. Толковый словарь русского языка: 80 000 слов и фразеологических выражений / С.И. Ожегов, Н.Ю. Шведова. — 4-е изд. — М., 1997. — 944 с.
23. Paul H. *Principles of the History of Language* / H. Paul. — Andesite Press. — 550 p.
24. Proffitt D. R. Embodied Perception and the Economy of Action / D. R. Proffitt // *Perspectives on Psychological Science*. — 2006. — 1(2). — P. 110-122
25. Рахилина Е.В. Когнитивный анализ предметных имен: семантика и сочетаемость / Е.В. Рахилина. — М.: Русские словари, 2000. — 416 с.
26. Schmidt Robert F. *Fundamentals of Sensory Physiology* / F. Schmidt Robert. — Berlin: Springer, 1984. — 300 p.
27. Ширшикова Е.А. Категоризация признаков «Тяжелый»/«Легкий» в английском языке: дисс.. канд. филол. н. / Е.А. Ширшикова. — Воронеж, 2013. — 250 с.
28. Kilgarriff A. *Sketch Engine* / A. Kilgarriff [et al]. — 2004. — URL: <http://www.sketchengine.co.uk> (accessed: 21.12.2022)
29. Stoppelli P. *Dizionario Garzanti Italiano* / P. Stoppelli. — Milano: French and European Publications Inc., 2007. — 1584 p.
30. Stroch Ch. "Heavy of Mouth" and "Heavy of Tongue": Weight as a Conceptual Metaphor of Disability / Ch. Stroch, R. Nussinson, S. Mentser [et al.] // *Metaphor and Symbol*, *Metaphor and Symbol*. — 2019. — Vol. 34. — Issue 4. — P. 197-208
31. *The Britannica Dictionary*. — 2022. — URL: <https://www.britannica.com/dictionary> (accessed: 21.12.2022)
32. Thibodeau P.H. Metaphors we think with: the role of metaphor in reasoning / P.H. Thibodeau, L. Boroditsky // *PLOS One* 6(2): e16782. 2011. — URL: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0016782> (accessed: 21.12.2022)
33. Успенский В.А. О вещных коннотациях абстрактных существительных / В.А. Успенский // *Семиотика и информатика*, вып. 11 (перепечатано в *Семиотика и информатика*, 1997, вып. 35). — 1979. — С. 142-148.
34. Yu Ning. Primary Metaphors across Languages: Difficulty as Weight and Solidity / Yu Ning, Huang Jie // *Metaphor and Symbol*. 2019. — Issue 2. Volume 34. — P. 111-126.
35. Zestcott C. A. The role of conscious attention in how weight serves as an embodiment of importance / C. A. Zestcott, J. Stone, M. J. Landau // *Personality and Social Psychology Bulletin*. — 43(12). — 2017. — P.1712-1723.
36. Цвиллинг М.Ю. Русско-немецкий словарь общей лексики. 150 тысяч слов и словосочетаний / М.Ю. Цвиллинг — Русский язык-Медиа, 2005.

Список литературы на английском языке / References in English

1. Arutyunova N.D. *Metafora i diskurs [Metaphor and discourse]* / N.D. Arutyunova // *Teoria metafory [Theory of the Metaphor]*. — М.: Progress, 1990. — P. 5-32 [in Russian]
2. Benzinger E.M. *Intensifiers in current English* / E.M. Benzinger. — University of Florida, 1971. — URL: <http://www.archive.org/details/intensifiersincu00benz> (accessed: 01.12.2022)
3. Blinnikov G.B. Conceptualization of the Sensory Experience: A Frame-Based Approach / G.B. Blinnikov // *Psychology in Russia: State of the Art*. — 2019. — № 12 (1). — P. 147-162
4. Blinnikov G.B. *Leksicheskaya sochetayemost' kachestvennykh prilagatel'nykh sovremennogo ital'yanskogo yazyka, reprezentiruyushchikh sensornyy opyt [Lexical Compatibility of Italian Adjectives Denoting Sensory Qualities]* : dis. ... PhD in Philology. — М., 2017. — 294 p. [in Russian]
5. Bubyreva Zh. A. *Puti metaforizatsii priznakov «tyazhelyy» i «legkiy» v russkom, frantsuzskom, angliyskom yazykakh [Ways of metaphorization of qualities "heavy" and "light" in Russian, French, English]* / Zh.A. Bubyreva, S.A. Mioseeva //

- Nauchnye vedomosti. Seriya Gumanitarnyye nauki. [Scientific Bulletin. Humanities Series]. — 2013. — № 20 (163). Issue 19. — P. 81-87 [in Russian]
6. Cambridge Dictionary. — Cambridge: Cambridge University Press, 2020. — URL: <https://dictionary.cambridge.org/dictionary/english/> (accessed: 21.12.2022)
7. Chandler J. J. To judge a book by its weight you need to know its content: Knowledge moderates the use of embodied cues / J. J. Chandler, D. Reinhard, N. Schwarz // *Journal of Experimental Social Psychology*, 48(4). — 2012. — P. 948-952
8. De Mauro T. *Il Dizionario della Lingua Italiana [The Dictionary of the Italian Language]* / De Mauro T. — Milan: Paravia, 2000. — 2998 p. [in Italian]
9. Duro A. *Il vocabolario Treccani [The Treccani vocabulary]* / A. Duro, V. Della Valle. — Rome: Institute of the Italian Encyclopedia, 2008. — 1169 p. [in Italian]
10. Slovar' russkogo yazyka [Dictionary of the Russian Language] : in 4 vol. / A.P. Evgen'yeva. — M.: Russian language, 1999. — 702 p. [in Russian]
11. Galeev B.M. *Sinesteziya v mire metafor [Synaesthesia in the World of Metaphor]* / B.M. Galeev // *Obrabotka teksta i kognitivnyye tekhnologii [Text Processing and Cognitive Technologies]*. — M.: Varna: Ucheba, 2004. — P. 33-42 [in Russian]
12. Jostmann Nils B. *Weight as an Embodiment of Importance* / Jostmann Nils B., Lakens Daniël, Schubert Thomas W. // *Psychological Science*, 2009. — Vol. 20, No. 9. — P. 1169-1174
13. Kholkina L. S. *Priznakovaya leksika kitayskogo yazyka v tipologicheskoy perspektive: polya gladkiy, tverdyy i tyazhelyy [Attributive Vocabulary of the Chinese Language from a Typological Perspective: Smooth, Hard and Heavy Fields]* / L.S. Kholkina // *Acta Linguistica Petropolitana. Trudy instituta lingvisticheskikh issledovaniy [Proceedings of the Institute of Linguistic Research]*. — 2014. — Volume X, No.1. — P. 879-888 [in Russian]
14. Kyuseva M. V. *Priznakovaya leksika: prilagatel'nyye 'ostryy' i 'tupoy' v tipologicheskoy perspektive [Attributive Vocabulary: Adjectives 'Sharp' and 'Blunt' from a Typological Perspective]* / M.V. Kyuseva, D.A. Ryzhova // *Acta Linguistica Petropolitana. Trudy instituta lingvisticheskikh issledovaniy [Acta Linguistica Petropolitana. Proceedings of the Institute of Linguistic Studies]*. — 2010. — VI (3). — P. 90-93 [in Russian]
15. Lakoff G. *Women, fire, and dangerous things* / G. Lakoff. — Chicago, IL: University of Chicago Press, 2008. — 632 p.
16. Lakoff G. *Metaphors We Live By* / G. Lakoff, M. Johnson. — University of Chicago Press, 2004. — 242 p.
17. Landau M. J. *A metaphor-enriched social cognition* / M. J. Landau, B. P. Meier, L. A. Keefer // *Psychological Bulletin*. — 2010. — 136(6). — P. 1045-1067
18. Merriam-Webster's Collegiate Dictionary (10th ed.). — Merriam-Webster Incorporated, 2016. — 960 p.
19. Naniy L. O. *Napravleniya razvitiya perenosnykh znacheniy atributivnykh leksem semanticheskogo polya krivizny (v russkom, angliyskom i kitayskom yazykakh) [Directions of Development of Figurative Meanings of Attributive Lexemes in the Semantic Field of Curvature (in Russian, English and Chinese)]* / L.O. Naniy // *Vestnik RGGU. Seriya: Literaturovedeniye. Yazykoznaneniye. Kul'turologiya. [Bulletin of Russian State University of Humanities. Series: Literary criticism. Linguistics. Culturology]*. — 2015. — P. 32-48 [in Russian]
20. Niebert K. *Understanding starts in the mesocosm: conceptual metaphor as a framework for external representations in science teaching* / K. Niebert, H. Gropengießer // *International Journal of Science Education*. — 2015. — 37 (5-6). — P. 903-933
21. *Novyy ob'yasnitel'nyy slovar' sinonimov russkogo yazyka [New Explanatory Dictionary of Synonyms of the Russian Language]* / under a management of Y.D. Apresyan. — M.: Shkola yazyki slavyanskoy kul'tury, 2003. — 1417 p. [in Russian]
22. Ozhegov S. I. *Tolkovyy slovar' russkogo yazyka: 80 000 slov i frazeologicheskikh vyrazheniy [Explanatory Dictionary of the Russian Language: 80,000 Words and Phraseological phrases]* / S.I. Ozhegov, N.Yu. Shvedova. — 4th ed. — M., 1997. — 944 p. [in Russian]
23. Paul H. *Principles of the History of Language* / H. Paul. — Andesite Press. — 550 p.
24. Proffitt D. R. *Embodied Perception and the Economy of Action* / D. R. Proffitt // *Perspectives on Psychological Science*. — 2006. — 1(2). — P. 110-122
25. Rakhilina E.V. *Kognitivnyy analiz predmetnykh imen: semantika i sochetayemost' [Cognitive Analysis of Subject Names: Semantics and Compatibility]* / E.V. Rakhilina. — M.: Russkiye Slovary, 2000. — 416 p. [in Russian]
26. Schmidt Robert F. *Fundamentals of Sensory Physiology* / F. Schmidt Robert. — Berlin: Springer, 1984. — 300 p.
27. Shirshikova E.A. *Kategorizatsiya priznakov «Tyazhelyy»/«Legkiy» v angliyskom yazyke [Categorization of Qualities "Heavy"/"Light" in English]: diss. ... of PhD in Philology.* — Voronezh, 2013. — 250 p. [in Russian]
28. Kilgarriff A. *Sketch Engine* / A. Kilgarriff [et al]. — 2004. — URL: <http://www.sketchengine.co.uk> (accessed: 21.12.2022)
29. Stoppelli P. *Dizionario Garzanti Italiano [Dictionary Garzanti English]* / P. Stoppelli. — Milan: French and European Publications Inc., 2007. — 1584 p. [in Italian]
30. Stoch Ch. *"Heavy of Mouth" and "Heavy of Tongue": Weight as a Conceptual Metaphor of Disability* / Ch. Stoch, R. Nussinson, S. Mentser [et al.] // *Metaphor and Symbol, Metaphor and Symbol*. — 2019. — Vol. 34. — Issue 4. — P. 197-208
31. *The Britannica Dictionary*. — 2022. — URL: <https://www.britannica.com/dictionary> (accessed: 21.12.2022)
32. Thibodeau P.H. *Metaphors we think with: the role of metaphor in reasoning* / P.H. Thibodeau, L. Boroditsky // *PLOS One* 6(2): e16782. 2011. — URL: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0016782> (accessed: 21.12.2022)

33. Uspenskiy V.A. O veshchnykh konnotatsiyakh abstraknykh sushchestvitel'nykh [On Concrete Connotations of Abstract Nouns] / V.A. Uspenskiy // *Semiotics and Informatics*, vol. 11 (reprinted in *Semiotics and Informatics*, 1997, No. 35). — 1979. — P. 142-148. [in Russian]
34. Yu Ning. Primary Metaphors across Languages: Difficulty as Weight and Solidity / Yu Ning, Huang Jie // *Metaphor and Symbol*. 2019. — Issue 2. Volume 34. — P. 111-126.
35. Zestcott C. A. The role of conscious attention in how weight serves as an embodiment of importance / C. A. Zestcott, J. Stone, M. J. Landau // *Personality and Social Psychology Bulletin*. — 43(12). — 2017. — P.1712–1723.
36. Zwilling M.Y. Russko-nemeckij slovar' obshchej leksiki. 150 tysyach slov i slovosochetaniy [Russian-German Dictionary of General Vocabulary. 150 thousand words and word combinations] / M.Y. Zwilling. — *Russkiy Yazyk-Media*, 2005 [in Russian]