COMPLEX COGNITIVE STUDY OF ENGLISH IDIOMS:
A CASE OF EYE-UNITS

Abstract. The paper suggests a complex cognitive model which reconstructs the formation of the idiomatic meaning on the intersection of the human faculties of perception, categorization, reasoning and memory with its two levels: linguistic and conceptual. The linguistic memory underlies the unity of form and meaning entrenched in the human mind enabling the identification of idioms as morphosyntactic constructions. The conceptual memory encompasses frames and concepts storing encyclopedic knowledge which underlies the creation of idiomatic meaning. Categorization establishes the belongingness of the basic-level entities to the same or different classes determining the application of the conceptual metaphor with the projection of the source domain onto the target domain or of the conceptual integration with two input spaces underlying the formation of the emergent semantics. The basic procedures of the creation of the idiomatic meaning are constrained by image schemas, i.e. dynamic recurring patterns of organism-environment interaction: somatic, structuring the space around the human body; perceptual, rendering the changes of images obtained from a varying distance; sensory-motor, coding human handling of the physical objects; dynamic, representing motion and force interaction. The paper finds that in the case of the English eye-idioms the perceptual schemas determine the indication of the number of organs of vision: prototypical, i.e. two, and non-prototypical, represented by one eye or its half versus four eyes or their collection. It results in the formation of the idiomatic meanings which intensify human visual capacity or focus attention on perceived objects. In their turn, the perceptual relations are modified by sensory-motor schemas underlying the use of eyes to represent the inner states of the body and mind: physiological conditions, beliefs, understanding, emotions of pleasure or shock, human soul and imagination. The dynamic schemas underlie the idiomatic meaning based on human interaction with other entities which is accompanied by blocking / unblocking vision to render the concept of ignoring; by attracting viewers’ attention to express the idea of concentration; by symbolizing the opposition between human bodies.

Keywords: idiom, concept, image schema, categorization, conceptual metaphor, conceptual integration.

Research question. The emergence of cognitive linguistics ushers in a new stage in the study of language in general and of idioms in particular since the novel research procedures reveal varying aspects of phraseology. However, time has come to combine the suggested procedures drawing on the general cognitive abilities of perception, attention, memory, categorization and abstraction [Đabrovksa, Divijak 2019, p. 2].

Research overview. The cognitive procedures applied to the study of idioms are reconstructed by a number of models: perception-based, memory-based, and reasoning-based [Potapenko 2013, p. 5].

The perception-based models comprise image schemas, i.e. dynamic recurring patterns of organism-environment interaction [Johnson 2005, p. 19], serving as primes for the formation of rich images. However, image schemas cannot be considered the only means of interpreting the meaning of idioms [Mišenko 2016] being used to explain the semantics of such non-metaphorical units as artless orientating constructions [Talavira 2017, p. 102].

The memory-based techniques of studying idioms draw on two sublevels of storing knowledge which differ in the degree of their connection with language. The linguistic sublevel includes idiom schemes and grammatical constructions [Gibbs 2007, p. 721]. The conceptual sublevel comprises knowledge of three types: basic data, incorporating archetypal models of consciousness and of world modeling; correlation of the idiomatic meaning with its codes (anthropomorphic, somatic, zoomorphic etc.); role acquired by the linguistic sign in describing and perceiving the world [Венжинович 2018, p. 150–151].


This overview reveals two main problems concerning the cognitive investigation of idioms. First, the current theories turn a blind eye on categorization which is important for identifying the initial domains employed for the formation of the idiomatic meaning. Second, none of the procedures discussed can explain idiomatization in its own right prompting the necessity of their synthesis. The first step in this direction has been made by a recent paper combining image schemas with metaphors [Liu, Mo 2020, p. 137], i.e. relating perception- and memory-based models.

The aim of this paper is to prove that the cognitive analysis of idioms should apply a complex procedure combining models of perception, categorization, memory and reasoning. With this in mind, the article sets the following tasks: to propose a methodology integrating the existing approaches to the study of idioms; to apply it to the analysis of English idioms with the eye component.

The methodology of the research unites the cognitive models of four levels comprising perception, categorization, memory and reasoning. Though on-
The application of abstract concepts related to the superordinate level, on the sensory-motor schemas, initial and final points of the perceived entities. It is reflected by the distinctions in the form of idioms: basic, superordinate or subordinate [Rosch 1978, p. 126], i.e. mental primitives, which with respect to human orientation in the environs fall into four groups. Bodily schemas structure the space around an individual: FAR – NEAR, UP – DOWN, FRONT – BACK, CENTRE – PERIPHERY. Perceptual schemas reflect the transformation of a mass image perceived from distance into those of separate entities obtained while approaching the scene or moving back: MASS – COLLECTION – COUNT – OBJECT. The sensory-motor schemas reflect an individual’s handling of separate things with the purpose of getting inside: OBJECT – SURFACE / CONTACT – CONTAINER – FULL/EMPTY. Dynamic schemas split into kinetic, denoting motion (PATH), vertical movement (VERTICALITY) or circulation (CYCLE), and those for force: COUNTERFORCE, COMPULSION, ATTRACTION, BLOCKAGE, RESTRAINT REMOVAL, DIVERSION, ENABLEMENT.

With this in mind, the semantics of the idiom a far cry from meaning to be completely different can be related to the bodily image schema FAR – NEAR and the distance component of the PATH schema which is reflected in initial use of this idiom (1752) to denote a long distance [Tréguer, e-ref]. As we see, being pre-conceptual structures [Johnson 1987, p. 13] image schemas explain only the initial idiomatic meaning while the description of its evolution requires the use of other tools.

The third – categorization – step consists in relating the meaning to the idioms to the categorization levels: basic, superordinate or subordinate [Rosch 1978, p. 30]. The images of the basic categorization level, connected with the perception of the environs, are heterogeneous due to the distance between the observer and the perceived entities. It is reflected by the distinctions between the image schemas at the ends of the sequences discussed above – OBJECT and MASS in the perceptual succession, OBJECT and CONTENTS in the sensory-motor schemas, initial and final points of the PATH schema. These differences underlie the process of generalization contributing to the formation of abstract concepts related to the superordinate level, on the one hand, and of the conceptual metaphor which means understanding and experiencing one kind of thing in terms of another [Lakoff, Johnson 1980, p. 5] which is technically considered as a projection from the source to the target domains representing concrete and abstract entities respectively. In this vein, the meaning of the idiom a far cry from is formed by the projection of the basic level concept of DISTANCE onto that of DIFFERENCE at the superordinate level giving rise to the DIFFERENCE IS DISTANCE metaphor.

The categorization relations, underlying the traditional theory of conceptual metaphor, explain the meaning of idioms based on one source domain. However, some phraseological meanings rely on the inputs from several sources which is explained by the theory of conceptual integration involved at the fourth – reasoning – step of analysis. According to this conception the formation of figurative meaning, or an emergent structure, achieved in the blended space is based on two input spaces introducing initial knowledge mapped onto each other in the generic space [Fauconnier, Turner 2006, p. 308-309]. The conceptual integration approach explains the formation of the two meanings of the idiom fish eye: a type of wide-angle camera lens in photography and a menacing look. These senses draw on two different pairs of input spaces. The photography meaning is based on the input spaces introducing two objects, namely a camera and a fish body; the generic space identifies their common features, i.e. similarities between the eye and the lens; due to the operation of composition [Fauconnier, Turner 2006, p. 310] the blended space offers the emergent meaning equating a large lens with a fish eye. In the look meaning of the fish eye idiom the input spaces introduce the bodies of a human and a fish; the generic space compares the eyes of those two species and their look; the blend composes the emergent meaning of a menacing look.

To sum up, the complex procedure of analyzing idioms includes four steps: memorizing, coding relations between form and meaning of idioms as morphosyntactic constructions and giving access to concepts and frames containing encyclopedic knowledge; perceptual, placing constraints on the formation of the idiomatic meaning; categorizing, underlying conceptual metaphor; reasoning, concerning conceptual integration.

Results and Discussion. The application of the complex cognitive procedure to the analysis of the English eye-idioms results into their division into perceptual, denoting different kinds of seeing; sensory-motor, connected with the activity of the human body; dynamic, representing interaction with other entities via motion and relations of force.

The perceptual basis of meaning of eye-idioms is reflected in the degree of deviation from the prototypical dual number of these visual organs in the direction of increase or decrease of their quantity determined with respect to the perceptual image schemas OBJECT – COUNT – COLLECTION – MASS. In this succession the prototypical quantity of eyes correlates with the COUNT position while deviation is accompanied by motion towards OBJECT or COLLECTION position representing one or several eyes.
The idioms implying the use of both eyes express an intensified meaning. Two of them – somebody’s eyes fall on something and to fasten one’s eyes base their idiomatic semantics on intensified perception while the other two – eyes like gimlets and eyes are bigger than one’s belly – build up their meaning through comparison with other entities. The meanings of the units somebody’s eyes fall on something and to fasten one’s eyes are formed with the help of the conceptual metaphor procedure consisting in the projection of the source domain of seeing to the target domain of focusing. The verb fall and the preposition on in the unit somebody’s eyes fall on something indicate the downward direction of a person’s look at the basic categorization level which is projected into the target domain of noticing something. The meaning of a steady look expressed by the idiom to fasten one’s eyes derives from the semantics of the verb fasten denoting attachment which is transferred to the target domain of focusing. The meaning of the comparative idioms of this group is formed by way of conceptual integration with the input spaces introducing two different entities. In the eyes like gimlets idiom the meaning of looking carefully is intensified by reference to gimlets, i.e. small T-shaped tools with a screw tip for boring holes. At the basic categorization level the input spaces introduce eyes and gimlets. In the generic space they are compared with respect to their size and the activity performed while in the blend eyes are endowed with the penetrating features of the instrument. A different kind of conceptual integration within a larger domain underlies the formation of the meaning of the idiom eyes are bigger than one’s belly. During idiomatization the input spaces of eye and belly are compared in the generic space with respect to their size against the background of the entire body structured by the corresponding frame in which eyes are usually smaller than the belly. In the blend the locations of those two organs change which results into the formation of an emergent meaning.

The other eye-idioms denoting intensification refer to the number of eyes exceeding the prototypical quantity by the numeral four, e.g. four eyes see more than two, and the quantifier all, cf. to be all eyes which means watching attentively, and with all eyes, meaning to watch something intently. In the examples with the quantifier all, idioms imply an increase in the capacity of human vision which is indicated by the perceptual image schemas COLLECTION underlying the semantics of the quantifier [Radden, Dirven 2007, p. 121], i.e. all-eyes-idioms intensify the perceptual activity of individuals collecting all eyes though their number is not specified. The meaning of the idiom four eyes see more than two implying that observation by two people is more powerful than by a single individual is based on two successive operations: metonymy, according to which two eyes stand for one head, and intensification, marked by the adverb more referring to the VERTICALITY schema representing an increase in quantity [Johnson 1987, p. 122].

The intensifying meaning of the unit eyes in the back of the head derives from adding organs of vision to the back of the head which results in the elimination of the bodily schema FRONT – BACK and in an increase in the number of eyes to four giving way to the CYCLE schema bringing about the development of the sense of noticing everything that is happening around.

The reference to vision concentration is rendered by idioms referring to one eye with the exception of the unit black eye indicating the discoloration in the area surrounding the eye due to an accumulation of blood. It is formed at the basic level of categorization due to the combination of the color term black and the noun eye with the body concept serving as the background. However, the more general idiomatic meaning of a blemish to one’s reputation is formed by way of conceptual metaphor relating the source domain of appearance to that of reputation.

The majority of one-eye-idioms denote an individual’s concentration on certain entities against the background of performing other activities. In those idioms, the meaning of focusing is rendered by two linguistic means. First, it is the indefinite article singling out a separate entity. Second, it is the prepositions indicating the perception angle employed for the conceptual metaphor projection: the idiom with an eye for means watchful due to the preposition on; the phraseological unit keep an eye on somebody stands for watching somebody or something carefully due to the preposition on; the unit to have an eye out expresses the meaning of remaining vigilant or careful by the preposition out emphasizing the activity of watching.

Conceptual integration underlies the formation of idioms comparing human perceptual abilities with those of other species or inanimate objects to commend people with exceptional eyesight, cf. eagle-eyed and hawk-eyed / to get eyes like a hawk. In the idioms like this, in the input spaces humans are distinguished at the basic categorization level from birds while the generic space compares their eyesight capacity with the blend endowing some people with the unique vision of birds of prey. A similar procedure determines the formation of the idiomatic meaning of the unit a keen / sharp eye implying human ability to notice or recognize a particular thing or quality. In this case, input spaces represent humans and knives with sharpness singled out in the generic space and attached to human vision in the blend.

Positive or negative interpretation of idioms with further deviation from one eye to its half depends on the consequences of the activity performed, cf. see with half an eye, i.e. to be able to see, notice, or understand something as being plainly obvious or true, and if you had half an eye, meaning to watch someone or something intermittently or half-heartedly while something else is happening. The former idiom claims that half an eye, or in other words, half of the necessary attention, is sufficient to comprehend the situation while the latter unit states that half of the required attention lacks creating a negative sense.

The meanings of intensification and focusing underlie other idiomatic senses related to the bodily activities or blocking vision.

The sensory-motor foundation of idiomatic meaning is represented by the image schemas OBJECT – SURFACE / CONTACT – CONTAINER – FULL /
EMPTY. The perception of things from the outside is captured by the schemas OBJECT – SURFACE / CONTACT and from the inside by the schemas CONTAINER – FULL/EMPTY. Eyes reflect thoughts, ideas, feelings which according to the naive worldview reside within the human body regarded as a CONTAINER [Johnson 1987, p. 21] which may be placed into larger three dimensional spaces. This very configuration underlies the meaning of the idiom up to one’s eyes. The semantics of this unit draws on the input spaces of human body and a body of water. In the generic space, the former is fit into a reservoir full of liquid which is associated with human occupation. Consequently, the blended space represents a person deeply involved in or with something.

In idioms the noun eye used in the singular or in the plural serves as a signal of the CONTENTS placed inside the body or mind / head: physiological condition, beliefs, understanding, emotions, imagination, soul.

The plural form of the noun eye renders a high degree of the manifestation of a certain human quality. The noun eye in the plural occurs in the units denoting opinion, e.g. in somebody’s eyes; the reality of what is seen, e.g. believe one’s eyes; awareness of what could happen, e.g. with one’s eyes open. The prototypical number of eyes gives access to the human soul, e.g. eyes are the mirror of the soul, or denotes emotions: pleasure from gazing at something, e.g. eyes shine. The input spaces introduce the states of slumber and activity, the generic space compares close and open eyes as signals with certain symbolic senses while the blend represents the idea of staying awake or sleeping very lightly.

The negative impressions of humans denoted by the one-eye-idioms evil eye and jaundiced eye are formed via the input spaces of eyes and morally bad behavior, on the one hand, and eyes and color, on the other hand. The generic spaces ascribe separate eyes with certain symbolic senses while the blend represents the meanings of a look capable of inflicting injury / bad luck or prejudice.

The one-eye-idioms denoting positive emotions underscore the swiftness of the look, transforming the idea of joy into that of friendly or interested glance e.g. the glad eye.

One-eye-idioms also denote single image phenomena represented by remembering and imagining: the singular noun in the idiom camera eye focuses on the specific memory capacity for reporting something that is as detailed and detached as a photograph while the singular noun in the idiom to have in one’s mind eye represents coherence of imagination.

The idioms with dynamic meaning indicate inability / ability to see, visual concentration or confrontation of entire bodies drawing on three image schemas for force: BLOCKAGE / RESTRATEMENT REMOVAL, ATTRACTION, COUNTERFORCE.

The meaning of the units denoting the inability to see is based on the BLOCKAGE image schema represented as a force vector encountering a barrier [Johnson 1987, p. 45] which in case of perception serves as an impediment for vision. According to the conceptual metaphor the source domain of BLOCKAGE transforms at the superordinate level into the target domain of ignoring something in two different ways: a viewer shuts his / her own eyes which results in the inability to see, rendered by the idiom close one’s eyes to something, or uses one dysfunctional eye as in the idiom turn a blind eye on which denotes ignoring some wrongdoing. The meaning of deceit expressed by the idiom throw dust in (one’s) eyes rests on the projection of vision obstruction on the basic level to the concept of deception at the superordinate level which is also characteristic of the idiom wipe smb’s eyes meaning to outwit somebody.

The semantics of the idioms denoting a return of the ability to see is based on the image schema RESTRAINT REMOVAL representing the deletion of a barrier [Johnson 1987, p. 46] forming an opposition with the BLOCKAGE schema. The units of this group denote the ability to perceive a denoted entity, cf. appear to somebody’s eyes and burst upon the eye, or the viewer’s actions when s/he sees someone or something unexpectedly, e.g. clap eyes on somebody.

The idiomatic meaning of concentration rests on the ATTRACTION image schema [Johnson 1987, p. 47] combined with the perceptual schemas representing the prototypical and non-prototypical number of eyes. Like the nominal units denoting concentration ATTRACTION underlies the idioms with the noun eye in the singular and in the plural. They refer to the initial stage of focusing, cf. catch somebody’s eye and collect eyes, or to its progress, cf. to be in the public eye and all eyes are on somebody. The basic meanings of these idioms rest on motion in opposite directions from the prototypical number of organs of vision: to one eye to render concentration and to several eyes to represent the concept of attention.

The confrontation of entire human bodies is expressed by the idiom eye for an eye synonymous to the unit tooth for tooth rendering the principle of retaliation based on COUNTERFORCE. This idiomatic meaning derives from the metonymic relations between the eye and the whole body at the basic categorization level to the concept of retaliation at the superordinate level due to the conceptual metaphor.

Conclusion. The complex approach to the study of idioms reveals how their semantics depends on the interaction of perception, categorization, reasoning and linguistic vs conceptual memory. The linguistic memory underlies the unity of form and meaning of idioms providing for their entrenchment in the speakers’ minds as morphosyntactic constructions while the conceptual memory encompasses concepts and frames serving as sources of initial knowledge necessary for the formation of idiomatic meanings. Its creation is constrained by image schemas as dynamic recurring patterns of organism-environment interaction. In case of the English eye-units perceptual schemas serve as the basis for the formation of the idiomatic meaning with respect to the
indicated number of organs of vision to render focusing on perceived objects or intensification of visual capacity. That number can be prototypical, i.e. two eyes, or non-prototypical, reduced to one eye or its half and increased to four or all eyes. The perceptual relations are modified by sensory-motor schemas underlying the use of eyes to represent the inner state of a human body and mind as well as by dynamic schemas referring to blocking / unblocking perception by the observer or some other party, attraction of attention or counterforce of bodies. The categorization step determines the formation of the idiomatic meaning via the conceptual metaphor based on one input entity or vie the conceptual integration integrating common features of the input entities belonging to different classes.

The future perspective of the study consists in applying the suggested complex procedure to the idioms of other semantic groups.

LITERATURE

REFERENCES

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КОМПЛЕКСНЕ КОГНІТИВНЕ ВИВЧЕННЯ ФРАЗЕОЛОГІЗМІВ АНГЛІЙСЬКОЇ МОВИ: НА МАТЕРІАЛІ ОДІНИЦЬ ІЗ КОМПОНЕНТОМ EYE "ОКО"

Анотація. Стаття пропонує комплексну когнітивну модель, яка реконструює фразеологізацію значення на перетині здібностей до сприйняття, категоризації, мислення й пам'яті з її двома рівнями: мовним і концептуальним. Мовна пам'ять забезпечує єдність форми і значення, укорінених у свідомості людини, що дозволяє розглядати фразеологічні одиниці як морфосинтаксичні конструкції. Концептуальна пам'ять включає фрейми і концепти, які містять енциклопедичні знання, що слугують основою для творення фразеологічного значення. Категоризація встановлює належність одиниць базового рівня до певних класів, що зумовлює використання концептуальної метафори, яка забезпечує проекцію сфери-джерела, представленої окремим референтом, на сферу-ціль, чи концептуальної інтеграції, за якої два ввідних простори представляють різні референти, що слугують основою для фразеологізації значення. Обмеження на застосування процедур його творення накладають образ-схеми, динамічні повторювальні моделі взаємодії організму людини з навколишнім середовищем: соматичні, які структурують простір навколо людини; перцептивні, що відтворюють зміни образів, отримуваних із різної відстані; сенсомоторні, котрі кодують наші дії з фізичними об’єктами; динамічні, що узагальнюють взаємодію позначуваних сутностей через рух і сили.

Аналіз англійських одиниць з елементом eye «око» засвідчив, що перцептивні образ-схеми зумовлюють фразеологізацію значення, що відбуває інтенсифікацію здібностей людини до фокусування на видимих об’єктах через позначення кількості органів сприйняття: прототипової, тобто двох очей, і непрототипової, за якої їх кількість зменшується до одного ока чи його половини або збільшується до чотирьох і більше. Перцептивні відношення модифікуються сенсомоторними образ-схемами, які зумовлюють використання очей для відображення внутрішнього стану тіла й мозку, а саме: фізіологічних умов, розуміння, емоцій задоволення й шоку, надання доступу до людської души й уяв. Динамічні образ-схеми визначають фразеологізацію значення в аспекті взаємодії людини з іншими сутностями через блокування чи розблокування зору задля активізації концептів ігнорування і сприйняття, привернення уваги задля відтворення ідеї фокусування чи символізації протиборства людей.

Ключові слова: фразеологічна одиниця, концепт, образ-схема, категоризація, концептуальна метафора, концептуальна інтеграція.

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