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## PRINCIPLES OF METAPHOR-ARTIFACTS FORMATION BASED ON CONCEPTUAL INTEGRATION PROCESS

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### **Abstract**

*This typological study presents the description of the concept Modern Woman as cognitive and analyses the key provisions of the conceptual integration theory of Fauconnier and Turner. In particular, it explains the effect of its principles based on the examples of metaphor-artifacts in Ukrainian and English. The metaphorisation as the classical semantic transposition process is to be proved to be dealt with this theory.*

*According to this statement, the semantic level of language is considered as a kind of interface that connects the language system with the conceptual one, i.e. the semantic unit corresponding to a language unit has two directions of connections: the lexical and cognitive systems.*

*The idealized model of conceptual integration is described in details, in which two initial mental spaces take part. There is an operation of connection of elements of their structures between them that are based on the identity, similarity, analogy. The particular attention is paid to the general laws of the conceptual integration process and the formation of a new blend based on a group of two principles: constitutive and control ones. The emphasis is made on the fact that the constitutive principles impose some restrictions on the integration process, the further course of which is optimized according to the control principles. They are divided into the principles of relationship compression and the principles of optimality. The important conclusion is drawn for the necessity to further study of the mechanisms of polysemy not only from the standpoint of the theory of lexical semantics, but also in close connection with the achievements of the theory of cognitive semantics.*

**Keywords:** *metaphors-artifacts, semantic transposition, conceptual integration, lexical semantics, cognitive semantics, polysemy.*

### **1. Introduction.**

Anthropocentrism as a main principle of modern scientific knowledge no longer needs arguments to prove that it is a motivator of linguistic semiosis. According to it the signs denoting a person and his / her behaviour are formed as a result of their transfer from other

subject areas. Most of these signs are artifacts of material and spiritual cultures.

In the theory of nomination, the semiosis process of cultural artifacts is considered through the prism of mechanisms of metaphorisation in the lexicosemantic spaces of language and from the standpoint of conceptual integration of mental spaces according to the theory of Fauconnier and Turner.

According to Zalevskaya, the internal lexicon is an extremely complex system of “multi-tiered fields (spaces), which are infinitely intersected and with the help of which ... the information about the objects and phenomena of the surrounding world is organised and stored” (Zalevskaya, 1992: 62). The scholars still do not agree on the nature of the connections between the units that make up the mental lexicon, so the discussion about the general “architecture” of the mental lexicon remains inexhaustible. Frequently the following question is discussed: the distinguishing between a purely linguistic level of meanings and a non-linguistic level of their conceptual representation.

Based on the example of metaphor-artifacts let us try to join this discussion and prove that these formations of the mental lexicon of the native speaker are the result of extremely complex human activity both linguistic and cognitive (Demyankov, 1999; Kubryakova, 1986). Both processes and the interaction of their mechanisms should be explained altogether, because there are the objective prerequisites for this.

## **2. Aim.**

**The aim of the article** is to reveal the cognitive and onomasiological essence of metaphors-artifacts and to prove that they are the result of the semantic transposition and conceptual integration processes.

## **3. Results and Discussion.**

The interpretation of metaphor as a category (Lakoff, 2004) of cognitive semantics as a way of reflecting the world (Kochergan, 2000: 39–42) is based primarily on the mental operations of a human being as a language person, i.e. a representative of a particular culture, in particular his / her ability to choose a basis for comparison. This mental operation actualises metaphorisation, i.e. the semantic transposition process. In the cognitive level it determines the action of the mechanisms of the conceptual integration process. In this regard, the semantic level of language is a kind of interface that connects the language system with the conceptual one: the semantic unit corresponding to a language unit has two directions of connection: towards the lexical and cognitive systems (Taylor, 1995). According to Schwartz, semantics is a modal-specific component of conceptual knowledge, through which the specific parts of conceptual information are lexicalised. It explains the possibility of lexicalisation of concepts in different ethnocultures in different ways (Schwarz, 1995).

The perception of the ethnos of the surrounding world takes place under the influence of the syncretic space-time continuum that was segmented by previous generations of ethnic language personalities. The classification activity of the ethnos, in particular the nominative one, is conditioned by the ethnically determined cognitive activity of generations (Shvetsova, 2000: 123–134). By naming an object or phenomenon, the representatives of a particular ethnic group make it the property of ethnic thinking, national consciousness, segmenting the world in accordance with the subjective classification features that are very important to them (Cherneyko, 1990: 72–82).

Due to the fact that the focus of a human being is himself / herself, hence his / her constant attempt deals with verbal reproduction of the real picture of the world like himself / herself. Such language anthropocentrism is not only a relic of primitive thinking, but a general law of semiosis (Gak, 1988: 11–26).

If to consider the parameter of anthropocentricity in the model of metaphor-artifacts, it allows to analyse the metaphorical process as the activity of a human being who compares himself / herself and the world in the range of his / her mental lexicon. The function of synthesis in the metaphor is performed by the language personality, because it is he / she who chooses the auxiliary essence.

However, as it has been mentioned above, no unambiguous answers have been found yet regarding the mental lexicon and, in particular, the new word-formation process. The remark that its replenishment should be organized in such a way as to facilitate the speaker's access to information does not lose its perspective. It simplifies the ways of storing and accumulating information and provides unimpeded access to this information.

According to Zalevskaya, the lexicon is not a passive repository of information about language, but a dynamic functional system that is being self-organized due to the constant interaction between the process of processing and organising language experience and its products. Because it is explained by the new experience in language that does not fit system, it serves as a basis for comparison in the further processing of language experience (Zalevskaya, 2000).

The lexicon is updated both in the assimilation of new units, previously absent in it and in the enrichment of existing units with new content, in the construction of new associative links within the tiers of the lexicon and between them, restructuring knowledge schemes, in the formation of new individual meanings. Finally, it leads to the formation of new individual knowledge, and in the future, if it becomes socially significant, then to a new collective knowledge.

The creation of human information base is represented through the formation and assimilation of a new word. It begins to serve as a means of access to a single information thesaurus and it becomes a centre of connections that reach the artifacts of deep predication (as "minimal acts of knowledge", the term of Melnikov), which as signs of bilateral nature reveal a multidimensional system of connections (Zalevskaya, 1982: 55).

If it is necessary to denote a new reality, there are the following main options: to create a new word *ex nihilo*; to form a new meaning in an existing word; to form a new word from the word-forming means that are available in the language (actually the word-formation process). These models have different degrees of performance.

In this article, we are interested in the second way that is the formation of a new meaning in an existing word, which is the most productive. And although up to this time there is considerable experience in studying the cognitive aspects of polysemy, the study of the cognitive foundations of this phenomenon is only gaining momentum.

The cognitive semantics considers meaning as human knowledge, which is determined by all its cognitive experience and the created structures of this knowledge. However, according to Kubryakova, no less important is that the meanings are directly related to the language forms in which they are embodied and which show how exactly a particular meaning is "structured" (Kubryakova, 2004).

The resonance of these assumptions is found in the Fauconnier and Turner' conceptual integration theory. Now it is one of the central in cognitive semantics, gaining interpretations on new data material (Fauconnier, Turner, 2002). The results of many works in this field have shown that the merging of mental spaces can be applied to the widest range of processes: linguistic and extralinguistic ones. It gives the process of generating integrated spaces the status of universal operation, which is inherent in all cognitive processes (Iriskhanova, 2000: 64).

Let us consider the mechanism of merging mental spaces, as well as the possibility of applying the conceptual integration theory to various phenomena, including the semantic

transposition process.

According to the Fauconnier and Turner' model, the conceptual integration is an instantaneous process of creative connection of informative elements in the system of mental spaces. Mental spaces are understood as small conceptual constructions consisting of certain elements and relations between them. They are formed in the process of thinking and speaking to perform local tasks of discourse. Mental spaces are structured with the help of different cognitive models (frames, image-schemes, etc.) (Fauconnier, Turner, 2002: 104).

The idealized model of conceptual integration involves two initial mental spaces, between which there is an operation of mapping the elements of their structures based on the identity, similarity, analogy. All that unites the source spaces is projected into the so-called generic space, which is a special coordination mechanism. Generic space contains lower-level conceptual structures and it serves as a mediator between the meanings of the source spaces. During the development of the process of conceptual integration, the structure of the generative space is transferred to each of the source spaces, ensuring the structural coherence of their elements. Further, there is a process of integration of structures and elements of the source spaces to form a new mixed space, i.e. aperture, which is the result of an integrated structure. The emergence of a new structure occurs through the action of the mechanisms of three additional operations: 1) combination of elements of the source spaces and the establishment of relations between them that do not exist in their separate consideration; 2) termination, which involves addition of background conceptual structures and knowledge to these relations; 3) correction, during which there is a mental adaptation of the new structure to perform its functions.

It should be added that the conceptual integration operation is performed instantly (in the on-line mode), so the sequence of selection of the course of these three operations is of conditional nature.

The described process of conceptual integration takes place in the cognitive level. It reflects the procedure of metaphorical modelling. Kravtsova defines metaphorical modelling as the process and result of constructing models of metaphors that reflect national stereotypes of image-associative thinking of the language and cultural community. The metaphorical model is the scheme of verbalization of correlatively associative concepts that are available in the minds of native speakers, i.e. the scheme of connection between conceptual areas (something that is described above in the idealized model of conceptual integration). The metaphorical one contains the original and new conceptual areas of metaphorical projection and the semantic-cognitive formant that integrates these areas. The ideographic way of denoting the spheres of metaphORIZATION provides an opportunity to understand the system of logical-conceptual connections between motivating and motivated meanings (Kravtsova, 2011: 43–49).

Let us demonstrate this with the help of the examples of metaphors-artifacts. The artifact of material culture of the Ukr. *веретено* (lit. *spindle*) in the Ukrainian language culture through conceptual integration and metaphORIZATION has acquired a new meaning “too active human movement” that is motivated by human behaviour. In the process of creating such a meaning, the motivator was a way to work with the Ukr. *веретено* (lit. *spindle*), i.e. using it to scroll the hole, winding something on it. The following semes: Ukr. ‘крутити’, ‘накручувати’ (lit. ‘to twist’ in both examples) are the motivated features for the metaphor-artifact the Ukr. *веретено* (lit. *spindle*).

In the process of study of anthropic metaphors in general and this Ukrainian symbol in particular Talko provides the following information about this artifact. The Ukr. *веретено* (lit. *spindle*) in Ukrainians is a symbol of life, a symbol of the Great Goddess of sacrifice, which nourishes the innate force. In pagan times it is an attribute by which a magical act of

reproduction of the universe, the rod on which the sky rotates. It is obvious that these associations played a role in creating the meaning of “mobile, fast person” in italics (Talko, 2009: 113).

The emergence of artificially made, mostly with not quite clear, smooth forms of objects was a motivator or in terms of the theory of conceptual metaphor – the generative space for the formation of such a metaphor-artifact as Ukr. *опудало* (lit. scarecrow) in Ukrainian language culture. Accordingly, the new blend for the Ukr. *опудало* (lit. scarecrow) metaphor is the meaning of Ukr. “грубість, незграбність, неохайність” (lit. “rudeness, awkwardness, slovenliness”).

In English, there is a metaphor-artifact stick (lit. stick), which as a result of the conceptual integration of its mental spaces (artifact – a human being) has acquired a new meaning / new blend “clumsy, wavy man”.

Based on the Fauconnier and M. Turner’s theory and its main provisions let us try to substantiate the laws and principles that are the generation of new knowledge and its fixation in the mental lexicon of the native speaker.

The scholars write that despite the general laws of the conceptual integration process and the formation of a new blend, they are still characterised by two groups of principles: constitutive and control ones (Fauconnier, Turner, 2002: 309).

The constitutive principles are structural modelling of the integration network and its dynamic development (it is described above): establishment of correspondences between initial spaces and generative space, selective design in a blend, formation of structure of a blend. It should only be added that the constitutive principles impose some restrictions on the integration processes, the further course of which is optimized based on the control principles, which are divided into the principles of relationship compression and the principles of optimality.

Regularities of relationship compression are based on the following possibilities: compression of the same relations, compression of one relations in others, establishment of new relations as a result of compression (for example, relations of uniqueness), designing compression from initial spaces in a blend, compression of key moments of any scenario.

The second set of optimality control principles describes the structurally correct use of the conceptual integration scheme. These conditions are not ontological, so they are not necessarily met in every particular integration.

Scholars include the following principles of optimality (Fauconnier, Turner, 2002: 346):

– the principle of topology, according to which the topology of the source spaces and the relationship between them must be preserved in the relationship between the elements of the structure of the aperture;

– the pattern completion principle, which allows the use of ready-made cognitive models for the formation of the aperture structure that is stored in the memory of the native speaker (usually frames);

– the integration principle, according to which the combined elements should be easily represented as a common conceptual object, but the blend should be a fixer of closely related elements of the structure;

– the principle of maximization of vital relations principle, which provides the widest possible use of conceptual relations both within the blend and between all mental spaces of the integration network;

– the intensification of vital relations principle, which reflects the necessity for stability of conceptual relations within the blend and between the mental spaces of the integration network;

– the reintegration principle, which provides the opportunity to restore the entire

integration network and connections between mental spaces;

– the relevance principle, on the basis of which the appearance of any element or relationship in the structure of the aperture must be motivated by its significance.

The set of these principles is subordinated to the main goal, i.e. the possibility of creating a new metaphorical blend on a scale accessible to human understanding and perception (Fauconnier, Turner, 2002: 312) – a representative of a particular language and culture. When this condition is met, the conceptual integration process contributes to the experience of the insight of the birth of new knowledge and, accordingly, of a new metaphorical meaning.

For example, in the Ukrainian language an artifact of human life such as Ukr. ганчірка (lit. rag) has acquired a new metaphorical meaning due to the similarity of a Ukr. ганчірка made of soft material (mostly fabric) with certain features of human character. There was an integration of the meaning of “softness” from the original space “household artifacts” with the meaning of the original space “character and actions of a human being”, creating a new blend, i.e. the metaphorical meaning of “indecisive human behaviour” as a result of a set of conceptual integration principles.

In English, the equivalent is the artifact milksop “permeability, water-soaked household items”, which is served as a motivating basis for the formation of a new metaphorical meaning “sluggish, frivolous, insecure man”. Milksop is an obsolete word that was formerly used in English meaning “a piece of bread soaked in milk”. It is this suppression that has become the generative space for the integration of the next two original mental spaces and the formation of a new blend, i.e. the metaphorical one.

#### 4. Conclusions.

To conclude the demonstration of the formation of the metaphors-artifacts principles based on the conceptual integration process, it should be noted that they generally reflect the most important process of lexical semantics theory, i.e. the semantic transposition process. It reveals the mechanisms of polysemy, deepening the classical theory of lexical semantics and the theory of cognitive semantics.

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### Анотація

У статті аналізуються ключові положення теорії концептуальної інтеграції Ж. Фоконьє і М. Тернера, зокрема пояснюється дія її принципів на прикладах метафор-артефактів в українській та англійській мовах. Доводиться, що класичний процес семантичної транспозиції, зокрема метафоризації, лежить в основі цієї теорії.

Виходячи з цього твердження, семантичний рівень мови розглядається як своєрідний інтерфейс, що пов'язує мовну систему з концептуальною системою: семантична одиниця, що відповідає мовній одиниці, має два напрями зв'язків: напрям лексичної системи і напрям когнітивної системи.

Докладно описується ідеалізована модель концептуальної інтеграції, в якій беруть участь два вихідні ментальні простори, між якими відбувається операція з'єднання елементів їх структур на основі тотожності, подібності, аналогії. Звертається особлива увага на загальні закономірності перебігу процесу концептуальної інтеграції й утворення нового бленду, що базуються на групі двох принципів: конститутивних й контрольних. Робиться акцент на тому, що конститутивні принципи накладають деякі обмеження на процеси інтеграції, подальший перебіг яких оптимізується на основі контрольних принципів, що поділяються, у свою чергу, на принципи компресії відношень і принципи оптимальності. Зроблено важливий висновок для необхідності подальшого вивчення дії механізмів полісемії не лише з позицій теорії лексичної семантики, а й у тісному зв'язку зі здобутками теорії когнітивної семантики.

**Ключові слова:** метафори-артефакти, семантична транспозиція, концептуальна інтеграція, лексична семантика, когнітивна семантика, полісемія.