

ISSN 2218-2926

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE

V.N. KARAZIN KHARKIV NATIONAL UNIVERSITY

COGNITION, COMMUNICATION, DISCOURSE

Series “Philology”

15

International on-line scholarly journal

<http://sites.google.com/site/cognitiondiscourse/>

Published since 2010

**Included in the list of specialized scientific publications in Ukraine
(The order of the Ministry of Education and Science of Ukraine
from 07.10.2016 № 1222)**

**Kharkiv
2017**

The articles in this issue contain the results of studies of Ukrainian and Armenian linguists in the field of cognitive and narrative studies, traditional and cognitive pragmatics on the material of English, Ukrainian, Armenian, Russian literary and psychopathological texts in the aspect of linguistic and translation studies.

For linguists, teachers, graduate students and undergraduates.

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Tel.: (057) 707-51-44

Internet-page: <http://sites.google.com/site/cognitiondiscourse/>

All articles are peer reviewed

Published 2 issues a year

Recommended by the Academic Council of V.N. Karazin Kharkiv National University
(Minutes № 6 of May 28th, 2010)

This open access peer reviewed journal is indexed in ERIH PLUS Index database as
«Kognitsia, kommunikatsia, diskurs».

(<https://dbh.nsd.uib.no/publiseringsskanaler/erihplus/periodical/info?id=491014>)

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ISSN 2218-2926

МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
ХАРКІВСЬКИЙ НАЦІОНАЛЬНИЙ УНІВЕРСИТЕТ
імені В.Н. КАРАЗІНА

КОГНІЦІЯ, КОМУНІКАЦІЯ, ДИСКУРС

Напрямок “Філологія”

№ 15

Міжнародний електронний збірник наукових праць

Започаткований у 2010 р.

Включено до Переліку спеціалізованих наукових видань України
(наказ МОН України від 07.10.2016 № 1222)

Харків
2017

Статті даного випуску містять результати досліджень лінгвістів України та Вірменії в області лінгвокогнітивістики і наративістики, прагматики традиційної та когнітивної на матеріалі англійських, українських, вірменських, російських художніх і психопатологічних текстів в аспекті лінгвістики та перекладознавства.

Для лінгвістів, викладачів, аспірантів та магістрантів.

Затверджено рішенням Вченої ради
Харківського національного університету імені В.Н. Каразіна
(протокол № 18 від 22 грудня 2017 р.)

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Інтернет-сторінка журналу: <http://sites.google.com/site/cognitiondiscourse/home>

Текст подано в авторській редакції.

Статті пройшли внутрішнє та зовнішнє рецензування.

Періодичність – 2 випуски на рік

Журнал «Kognitsia, kommunikatsia, diskurs» індексовано в міжнародній базі даних ERIH PLUS
(<https://dbh.nsd.uib.no/publiseringsskanaler/erihplus/periodical/info?id=491014>)

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імені В.Н. Каразіна, оформлення, 2017

ISSN 2218-2926

МИНИСТЕРСТВО ОБРАЗОВАНИЯ И НАУКИ УКРАИНЫ

**ХАРЬКОВСКИЙ НАЦИОНАЛЬНЫЙ УНИВЕРСИТЕТ
имени В.Н. КАРАЗИНА**

КОГНИЦИЯ, КОММУНИКАЦИЯ, ДИСКУРС

Направление «Филология»

№ 15

Международный электронный сборник научных трудов

Основан в 2010

**Включен в Перечень специализированных научных изданий Украины
(приказ МОН Украины от 07.10.2016 № 1222)**

**Харьков
2017**

Статьи данного выпуска содержат результаты исследований лингвистов Украины и Армении в области лингвокогнитивистики и нарративистики, прагматики традиционной и когнитивной на материале английских, украинских, армянских, русских художественных и психопатологических текстов в аспекте лингвистики и переводоведения.

Для лингвистов, преподавателей, аспирантов и магистрантов.

Утверждено решением Ученого совета
Харьковского национального университета имени В.Н. Каразина
(протокол № 18 от 22 декабря 2017 г.)

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Интернет-страница журнала: <http://sites.google.com/site/cognitiondiscourse/home>

Текст дается в авторской редакции.

Статьи прошли внутреннее и внешнее рецензирование.

Периодичность – 2 выпуска в год.

Журнал «Kognitsia, komunikatsia, diskurs» индексируется в международной базе данных ERIH PLUS (<https://dbh.nsd.uib.no/publiseringsskanaler/erihplus/periodical/info?id=491014>)

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UDC 81.119

**CONCEPTUALIZATION OF *HAPPINESS*
 BY YOUNG NATIVE SPEAKERS OF KAZAKH
 S.A. Abdramanova (Almaty, Kazakhstan)**

S.A. Abdramanova. Conceptualization of *HAPPINESS* by young native speakers of Kazakh. The present study analyses the way *HAPPINESS* is contextualized by young native speakers of the Kazakh language who were asked to write an essay on “What is happiness?” The object of the research is definitions given to ‘happiness’ by participants of the experiment in their essays. The analysis showed that the basic criteria of *HAPPINESS* are related to participants’ families and their close environment. The analysis also revealed that conceptualization of *HAPPINESS* by respondents is constructed on the basis of conceptual metaphors, conceptual metonymies, and related concepts. As a result, prototypical cognitive models have been derived as “happiness is being glad” and “happiness is making glad”.

Key words: concept, happiness, metaphor, metonymy, perception, speakers of the Kazakh language

С.А. Абдраманова. Концептуалізація ЩАСТЯ у сприйнятті молодих носіїв казахської мови. Стаття аналізує концепт ЩАСТЯ в сприйнятті молодих носіїв казахської мови. Об'єктом дослідження є визначення щастя, дані учасниками експерименту в написаних ними творах на тему «Що таке щастя?» Аналіз показав, що основними критеріями ЩАСТЯ є сім'я і близькі їм люди. Аналіз також показав, що концептуалізація ЩАСТЯ учасниками експерименту ґрунтується на використанні метафор, метонімії та інших схожих поняттях. В результаті були виявлені прототиби когнітивних моделей концепту ЩАСТЯ, такі як «ЩАСТЯ – ЦЕ РАДІСТЬ» і «ЩАСТЯ – ЦЕ РАДУВАТИ ІНШИХ ЛЮДЕЙ».

Ключові слова: концепт, метафора, метонімія, носії казахської мови, сприйняття, щастя.

С.А. Абдраманова. Концептуализация СЧАСТЬЯ в восприятии молодых носителей казахского языка. Данная статья анализирует концепт СЧАСТЬЕ в восприятии молодых носителей казахского языка. Объектом исследования являются определения счастья, данные участниками эксперимента в написанных ими сочинениях на тему «Что такое счастье?» Анализ показал, что основными критериями СЧАСТЬЯ являются семья и близкие им люди. Анализ также показал, что концептуализация СЧАСТЬЕ участниками эксперимента основывается на использовании метафор, метонимии и других схожих понятиях. В результате были выявлены прототипы когнитивных моделей концепта СЧАСТЬЕ, такие как «СЧАСТЬЕ – ЭТО РАДОСТЬ» и «СЧАСТЬЕ – ЭТО РАДОВАТЬ ДРУГИХ ЛЮДЕЙ».

Ключевые слова: восприятие, концепт, метафора, метонимия, счастье, носители казахского языка.

1. Introduction

The notion of happiness is extremely subjective, i.e., its perception varies from one individual to another one. Moreover, it could be culturally motivated, i.e., the notion of happiness can depend on the socio-cultural conditions of people's existence. Though, there are some universal features of 'happiness' due to global economic changes, such as globalization and integration, and technological developments, such as the Internet. The latest studies show that there is a link between happiness and success: positive and successful people tend to be happier [Lyubomirsky,

King, & Diener, 2005]. At the same time, scholars argue that happiness may result in negative consequences, mostly because of the ways people pursue and experience it [Gruber, Mauss, & Tamir, 2011].

In the Kazakh language, the notion of happiness is represented by two words – *бақ* [baқ] and *бақыт* [baқit] – which mean ‘a state of a person being satisfied and pleased with his/her life’; in other words, they denote a person’s satisfaction of having reached and realized the goals, having succeeded in some action and, consequently, experiencing joy and bliss [Kajdar, 2009]. Both of them have a positive connotation: they denote ‘luck, big joy, fortune, a feeling or expression of pleasure, satisfaction, and content’. The basic difference between those two words is that *бақыт* [baқit] is a short-term faculty related to a certain event, while *бақ* [baқ] is a long-term, sustainable, and regular luck that could follow a person even during his/her whole life. It was believed that only God could award happiness as a gift to a selected human being. Happiness itself was associated with a symbol of a fantastic bird which delivered happiness to a person if it landed on him/her head. In Kazakh, the concept of happiness is mostly constituted by conceptual metaphors, e.g., the following expressions have the same meaning as *fig.* ‘he/ she became happy’, but the concepts behind them are different: in *бағы /бақыты жану* [baғi /baқiti janu] *lit.* ‘his/ her happiness caught fire’ the concept is HAPPINESS IS FIRE; in *бақ қону* [baқ қону] *lit.* ‘the happiness landed on his/ her head – HAPPINESS IS A FABULOUS BIRD; in *бақыты ашылу* [baқiti ашылу] *lit.* ‘his/ her happiness is opened/ revealed’ and *бағы асты* *lit.* ‘his/ her happiness overflowed the banks’ – HAPPINESS IS A FLUID IN A CONTAINER; in *бағы артты* *lit.* ‘his/ her happiness increased’ – HAPPINESS IS A PHYSICAL FORCE; in *бағы өрледі* *lit.* ‘his/ her happiness went up/ rose’ the concept is A FORCE DISLOCATING THE SELF.

The present study aims to find out how young Kazakh people perceive *Бақыт/ Бақ* [baқit/ baқ] ‘happiness’ and whether this notion evokes positive or negative feelings. For this purpose young people from the age of 19 to 22 were asked to write an essay on the way they understand ‘happiness’. Their written works were analyzed and the key parameters of HAPPINESS in young Kazaks’ worldview have been elaborated.

2. Literature review

It is commonly accepted that individual’s experiences are formed on the basis of the content; thought is developed through the content. In its turn, thought generates concepts which are numerous in their variety, for example, there are concepts that reflect spatial, causal, temporal, and quantitative relations [Zurif & Blumstein, 1978]. Concepts are not the same as thoughts; thoughts subsume concept. Kecskes [2007] gives a definition of a concept as “a construct that blends knowledge gained from actual situational contexts in an individual-centered way” (p. 36). Concepts are subjective by nature; they vary from one individual to another – an identification of an object, a phenomenon or a situation is conducted by individuals and evaluated by them on the basis of their personal experience [Schnelle, 2010]. The experience obtained by people also determines the way they process words in the language. According to Libben [2008], words themselves do not have meanings; meanings are psychological properties of people. At the same time, in the community people can have the similar meaning because they share the same experience with others.

A study of individual perception of the surrounding world is one of the main research directions of contemporary linguistics. A linguistic personality («языковая личность») has become one of the sources of data collection because linguistic personalities are able to understand, reproduce, and create narratives/ texts which could be analyzed to learn the ways they perceive and categorize the world [Pimenova, 2012]. The word ‘happiness’ is an abstract one; it is not an object that can be seen, heard, smelled, tasted, and touched. People tend to believe in the existence of objects and subjects, if they can perceive them by their sense organs. The meaning of happiness cannot be clearly defined; it is subjectively motivated. Also, cultural background of respondents could impact the perception of the word. Then, definitions given to abstract words people of

different ages, genders, and culture can be determined by the ways they perceive, conceptualize, and categorize the surrounding world. Another issue which should be taken into consideration in such kind of research is whether respondents speak two or more languages because “in a person who is bicultural, certain concepts may be more relevant or more accessible in one cultural context than in the another” [Francis, 2005, p. 251]. Thus, subjective worldview, cultural background of an individual, and his/ her mastership of more than one language should be taken into consideration when analyzing the concept of HAPPINESS. At the same time, it should be noted that there is some general base that underlines its conceptualization. McMahon [2006] observed definitions of ‘happiness’ through history and came to the conclusion that the notion of happiness is basically constituted by good luck and fortune. She also noted that if previously people considered themselves dependent on external circumstances, now they perceive happiness as something they can pursue and catch.

There are few studies related to the conceptualization of happiness done on the basis of different languages or with respondents of different nationalities. Oishi, Graham, Kesebir, and Galinha [2013] investigated definitions of ‘happiness’ in 30 languages and confirmed MacMahon’s [2006] provision that most cultures define ‘happiness’ as ‘luck and fortune’. It was noted by them that nations which reside far from the equator are more inclined to rely on luck and fortune because of unfavorable climatic conditions. They also found out that speakers of American variant of English mostly define ‘happiness’ in reference to internal beneficial conditions while other nations rely on favorable external circumstances. A research by Chen [2010] explores metaphors of happiness in English and Chinese idioms. The article reveals the basic similarities and differences of the ‘happiness’ metaphors in two languages and concludes that “compared with English people, the Chinese people are relatively reserved and tend suppress their feelings” [Chen, 2010, p. 174], i.e., a feeling of happiness at the Chinese is inwardly directed, it is related to internal organs of the body, while the English people express their happiness outwardly, through their external body parts. Another research done by Uchida and Ogihara [2012] gives an extended review of works related to the issue of happiness and investigates cross-cultural differences in the meaning of happiness between European-American and East-Asian cultures. They found out that representatives of Western countries evaluate independence; that is why their meaning of happiness is related to human rights and freedom. Furthermore, their perception of happiness has a positive connotation, and it is connected with a sense of self-realization and personal achievement. In contrast, Asian people are interdependent because social relations play a big role in their life; that is why, their meaning of happiness is revealed through a harmony with the world and social balance. Their perception of happiness has both positive and negative meaning because Eastern people highly appreciate equality of status in the society: they prefer harmonious relations rather than a situation where some people are happier than others. The conclusion done by Uchida and Ogihara confirms Hofstede’s [1984] provision on collective nature of Asian communities where parents care and support their children if they need their help.

On the basis of the Russian language, Vorkachev [2001; 2004] defines ‘happiness’ as a multidimensional mental category of bliss, joy, and satisfaction that consists of intellectual axiological evaluation and emotional assessment. To be more exact, he investigates the functions of the word “happiness” in poetic and religious context and describes linguistic and socio-linguistic characteristics of the concept it appeals to. Kövecses [1991; 2008] conducted a thorough analysis of the English word ‘happiness’ as a name for the concept of emotion which is constructed on the basis of conceptual metaphors, conceptual metonymies, and related concepts. Those three categories, in their turn, form prototypical cognitive models of HAPPINESS. Kövecses identifies three basic prototypes that constitute the notion of happiness, and they are the following: “happiness as an immediate response”, “happiness as a value”, and “happiness as being glad” [Kövecses, 2008, p. 21]. He acknowledges that there are many non-prototypical cognitive models, but the above mentioned prototypes mainly contribute to the meaning of ‘happiness’.

3. Methodology

I conducted an experiment was to find out how young native speakers of Kazakh understand HAPPINESS. Eighteen respondents – 13 females and 5 males – of Kazakh nationality were asked to write an essay on “What is happiness?” The written essays were rather extended; their structure was mostly coherently and cohesively built up. By content, they were argumentative ones: the main ideas were provided with provision of support and lengthy explanation. The mean age of participants is 19.6. All of them are bilinguals: they know three languages at different levels – Kazakh, Russian, and English. To define the concept of HAPPINESS, a qualitative method of analysis was applied: the essays were re/read, the key words were identified, categorized, and codified. This article does not aim to analyze the differences in perception of happiness in relation to gender of participants and the language(s) they master.

4. Results

The experimental data show that three participants agreed that happiness is an individual phenomenon: “*Happiness is different thing for everyone*” (personal correspondence, April 2, 2015). Three respondents emphasized that happiness consists of some “*little, simple, and easy*” things: “*Sometimes simple things can make us happy. For example, flowers, sun shine, music, freedom, dance, etc.*” (personal correspondence, April 2, 2015). A number of these different things that make people happy varies from one participant to another, but, generally, seven respondents named one thing; two young people – two things, and the remaining nine participants named three things.

I am going to analyze the answers, first, of each group separately, and then all participants as a whole.

- a) The first group comprises the respondents who named one thing:
 - FAMILY (support and appreciation) (one participant – 1P);
 - OTHER PEOPLE (relatives, close people, to make them happy) (2Ps)
 - LIFE (care of parents) (1P);
 - PERSONAL ACHIEVEMENTS/ DEVELOPMENT (realization of dreams) (2Ps);
 - HOBBY (watching movies, reading, singing, listening to music, and raveling) (3Ps).
- b) The second group comprises the respondents who named two things:
 - HOBBY (in connection with a family – going to the cinema/ elsewhere together) (1P);
 - HEALTH (ability to see) (1P).
- c) The third group comprises the respondents who named three things:
 - FAMILY (5Ps);
 - HOBBY (6Ps);
 - PERSONAL ACHIEVEMENTS (study at the best university, learning new things) (2Ps);
 - FRIENDS (including pets) (4Ps)
 - FUN (holidays, vacation, joys such as sun, chocolate, ice-cream, sea, beach, new clothes, presents, etc.) (3Ps)
 - HEALTH (1P)
 - PEACE (clean sky) (1P)
 - IDLENESS/IRRESPONSIBILITY/FREEDOM (1P).

Generally, the following domains of HAPPINESS could be elaborated from the essays of participants of the experiment:

FAMILY (10Ps)

Four people placed a family on the first place: “*My family – this is what makes me happy person*” (personal correspondence, April 2, 2015). The participants love their family because it gives them

help/ support/ appreciation/ care/ positive feelings, understanding, and love. Also, one person considers that whatever they achieved in their life, she owes to her parents. One male thinks that life is happiness, and he relates the fact of his living to his parents: *“The fact that we live, from our first moment, from moment that we born, it is happiness for our parents”* (personal correspondence, April 2, 2015). Another female, along with other things, names a smile of her Mom and Dad to be happiness. Three respondents emphasize that they are happy when they spend time with their families. Two people include their family into the list of other or close people who make them happy or whom they want to make happy. Two girls reveal absolutely altruistic features by stating that *“making people happy makes me happy”* (personal correspondence, April 2, 2015). They like to see the reaction of people to the good things they do for them.

HOBBY (8 Ps)

Five respondents placed hobby on the first place, three – on the second, and one – on the third. There were mentioned different hobbies, but it is more important to learn the justification behind the participants’ interests. They become happy when they engage with their hobbies because they 1) love doing it (2Ps); 2) learn new things and obtain new experience (4Ps); and 3) become relaxed, confident, and free (2Ps).

FRIENDS (5Ps)

Two people placed friends on the first place: one respondent emphasizes the importance of friends because he is not alone with them; another one mentions friends in connection with the family. Two people placed friends on the third place: one receives support from them; another one includes friends into his hobby of traveling. Finally, one female writes about pets as her friends: *“Pets are our little friends, which sometimes do some funny things”* (personal correspondence, April 2, 2015).

PERSONAL ACHIEVEMENT/ PERSONAL DEVELOPMENT (3Ps)

The achievement that all three respondents named was their study in the university: *“Today, I study at one of the best universities in my country, and it was my dream”* (personal correspondence, April 2, 2015). Two participants are happy that they realized their dreams. All three respondents mentioned that they develop themselves by engaging in students’ organizations, managing their time, obtaining new experience, meeting interesting and smart people. One of them also wrote that she appreciates the possibility to choose subjects and teachers and take independent decisions.

FUN/ HAVING FUN (4Ps)

Two people mentioned vacation/ holiday because on holiday they have freedom, idleness, and fun. One person named several things under the title ‘Joys’, one female wrote about being happy in spring, her favorite season.

HEALTH (2Ps)

Two females named health: *“Be healthy is real happiness, and I wish it to everyone”* (personal correspondence, April 2, 2015). One of respondents has a bad vision: *“Being able to see everyone and everything – it may be regular for somebody, but for me it is happiness”* (personal correspondence, April 2, 2015). She links the ability to see well with the possibility of maintaining peace in the world: *“If people would be able to notice happiness in details as it is, there were less wars in the world and much more happy people”* (personal correspondence, April 2, 2015).

5. Discussion

The analysis showed that young native speakers of Kazakh mostly relate happiness to their families and spending time with them. There may be three reasons to that perception: 1) some of respondents are originally from other parts of the country; they stay in dormitories, and, consequently, miss their families; 2) most of respondents depend financially on their parents, even if they work, they cannot cover all other expenses because the study fee is comparatively high; 3) traditionally, there are close relations within the families and between relatives in the society. This confirms Hofstede’s [1984] provision on collective nature of Asian society.

Another big group of participants is young people who try to seek their vocation by engaging in different hobbies and who enjoy exercising their creative abilities and talents. Though there were only three people who related happiness to their personal success, achievements, and development, this tendency may increase on the account of those who enjoy dealing with their hobbies. Such understanding of happiness is more relevant to representatives of Western culture [Uchida & Ogihara, 2012], but due to globalization and contemporary means of communication young people of Kazakhstan may generate the idea of associating happiness with own success and achievements. On the whole, the analysis showed that in the perception of young native speakers of the Kazakh language happiness has a positive connotation. It did not reveal any negative feeling in relation to happiness which refutes Uchida and Ogihara's [2012] conclusions that Asian people have both positive and negative meaning of happiness due to their appreciation of equality in the society. This could be explained by the age of the sampled participants in the present research: the younger people are, the more positive outlook and perception they have.

The analysis also revealed that the conceptualization of HAPPINESS by young native speakers of Kazakh is mostly based on the frame of conceptual metaphors, such as:

HAPPINESS IS WARMTH *So, why spring makes me happy? Maybe, because it is a very warm time, fresh air, beautiful nature.*

HAPPINESS IS A VITALITY *First of all, life is happiness. The fact that we live, from our first moment, from moment we're born, it is happiness for our parents.*

HAPPINESS IS CONNECTION *For me happiness is being around my family, travelling, and hanging out with my friends.*

HAPPINESS IS SUPPORT a) *Family takes the first place in my life. If you have parents, it already means happiness.* b) *Also, of course, it's my friends. They also your support and people who know you well.*

HAPPINESS IS SECURITY *They never leave me in a difficult situation and, of course, they love me the way I am.*

HAPPINESS IS ACHIEVEMENT *Today I study at one of the best universities in my country, and it was my dream.*

There are four concepts that are constructed on the basis of conceptual metonymy:

SMILING FOR HAPPINESS *Happiness is the feeling that makes people smile. The smile of my Mom and Dad makes me unbelievably happy.*

DANCING FOR HAPPINESS *Second happiness for me is my ballroom dance sport training.*

LISTENING TO MUSIC FOR HAPPINESS *The thing that makes me happy, and, I think, generally most of people, is to listen to my favorite music. In my case, this band is "Coldplay".*

DOING SOMETHING PLEASANT FOR HAPPINESS *Making people happy makes me happy. I love seeing happy faces, and the thing I like the most is seeing the reactions of people.*

There are also structures based on related concepts:

HAPPINESS IS SATISFACTION *Studying at X University makes me happy. I always dreamed to study in university which I saw in the movies with big libraries, interesting lessons and enjoyable student life. Actually, I thought a lot about my future university, and X is a choice I will never regret about.*

HAPPINESS IS PLEASURE *Recently, I began to notice one interesting thing. That is – that I feel satisfied and I have a great pleasure to watch how people smile and laugh.*

HAPPINESS IS JOY/ ENJOYMENT a) *The third happiness for me is some joys of life, like a sun, chocolate, ice-cream, sea, beach, new clothes, presents, and something like this.* b) *To sum up, the one can realize what real happiness is, when he or she do or see what makes them enjoyed.*

HAPPINESS IS PEACE *Clean sky is happiness for me. I am very proud that in my country, we have the most important – piece!*

HAPPINESS IS INNOVATION *Things that make me happy are different, but they have common characteristics, this is learning new, in practice.*

HAPPINESS IS HEALTH *Being healthy is real happiness, and I wish it to everyone.*

HAPPINESS IS FREEDOM *Next one is being free from any responsibility.*

HAPPINESS IS EXPERIENCE *Watching movies makes me happy because with the help of it, I get new experience, widen my knowledge horizons, and fix my mistakes.*

Some of the above mentioned concepts replicate the ones elaborated by Kövecses [1991; 2008], but there are also different ones that serve as a characterization of the specific perception of happiness by young native speakers of Kazakh. As for prototypical cognitive models, the concept of happiness can be described as “HAPPINESS IS BEING GLAD” and “HAPPINESS IS MAKING GLAD”. As for the other prototypes – “HAPPINESS AS AN IMMEDIATE RESPONSE” and “HAPPINESS AS A VALUE” [Kövecses, 1991; Kövecses, 2008], they can be indirectly inferred from the frames contextualized by the participants of the study.

It was mentioned above that the Kazakhs believed that happiness is awarded by Providence; the God decides whom to grant with luck and fortune [Kajdar, 2009]. Young native speakers of Kazakh, reversely, think that they are masters of their life and can build up a happy life the way they understand it; as one of participants wrote – “*In 21st century people should be happy because your happiness depends on yourself, and all new technologies can't help you. But each person should use the given opportunity to help for yourself and be happy!*” (personal correspondence, April 2, 2015). This statement confirms McMahan's [2006] observation that contemporary people perceive happiness as something that can be controlled, regardless of external conditions.

6. Conclusion

In this paper I have investigated the conceptual base of HAPPINESS in the perception of native speakers of the Kazakh language. Eighteen young people wrote essays on the topic of happiness and shared their ways of perceiving this notion. An analysis of participants' papers shows that young people perceive the notion of happiness in different ways, and mostly relate it to being a part of a bigger community, like family, close friends, and university peers. They receive support and understanding from their nearest environment, and they exert the similar feelings in return; this reciprocal respect, encouragement, and love make them happy. The participants are also proud of their achievements; they are engaged in various activities, and like doing many things that bring them satisfaction, pleasure, and happiness. The respondents are also concerned with serious issues, like health problems and global situation; they express their appreciation of the peaceful life they live in, and possibility to live the life they experience at present.

On the whole, the analysis of experimental data have revealed the ways young Kazakh people conceptualize HAPPINESS; it showed that conceptualization is mostly based on conceptual metaphors and related notions; though, there were examples of conceptual metonymies constituting the frame of happiness. The analysis has also showed that young native speakers of Kazakh have a positive perception of the notion of HAPPINESS.

To sum up, the method used and the results received in my study open up perspectives for further analysis of linguistic data from various languages which will reveal the key properties of the concepts most valuable for different cultures and correspondingly stimulate a deeper insight into national worldviews.

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UDC 165.194

SYNERGY OF THE FLOW OF THINKING
A.A. Kalyta, O.V. Klymenyuk (Kyiv, Ukraine)

*The main thing in solving a difficult problem
 is to get abstracted from a number of
 secondary issues related to it.*

O.V. Klymenyuk

A.A. Kalyta, O.V. Klymenyuk. Synergy of the flow of thinking. In the paper on the basis of a hypothetical method grounded on a number of assumptions, the authors advance a new theoretical-and-methodological construct allowing a scientific consideration of the problem of the individual's thinking self-development. The presentation of this construct is carried out with the use of verbal and graphical scientific tools, which, within the framework of classical maxims of similarity theory, make it possible to model the most important phenomena and mechanisms of their realization in the flow of thinking, viewed as a complex stochastically self-developing cognitive-and-synergetic system. The paper substantiates the elementary two-dimensional and spatial models of the self-development of human's flow of thinking, which, according to the criterion of dominance of the fractal actualization results of its attractor-structures' self-development, allowed the authors to single out four basic types of thinking: existential, mental, transcendental and logical ones, occurring in the corresponding spheres of a person's spiritual life. The paper also offers the energy models for qualitative and quantitative analyses of the synergism of speaking-and-thinking and thinking-and-acting processes advanced by the authors on the basis of methods and criteria of synergetic estimation, as well as the methodology for their practical application.

Keywords: chaos, communication, concept-notion, concept-thought, emotional-and-pragmatic potential, energy redistribution, existential, flow of thinking, instinct, logical, mental, modeling, psycho-physiological energy, self-development, slip of the tongue, synergism, tabooing, transcendental, types of thinking.

A.A. Калита, О.В. Клименюк. Синергізм потоку мислення. На основі гіпотетичного методу, базованого на низці припущень, авторами запропоновано нову теоретико-методологічну концепцію наукового розгляду проблеми саморозвитку мислення індивіда. Виклад концепції здійснено з використанням вербально-графічного наукового інструментарію, що дозволив у межах класичних положень теорії подібності змоделювати найважливіші явища й механізми їхньої реалізації в потоці мислення, що являє собою складну когнітивно-синергетичну систему, яка стохастично саморозвивається. В роботі обґрунтовано елементарні площинну і просторову моделі саморозвитку потоку мислення людини, які дозволяють за критерієм домінування фрактальної актуалізації результатів саморозвитку його структур-атракторів класифікувати чотири основних типи мислення: екзистенціальне, ментальне, трансцендентне і логічне, що протікають у відповідних сферах духовного буття індивіда. Запропоновано енергетичні моделі для якісного і кількісного аналізу синергізму процесів мислення під час породження мовлення і мисленнєвого проектування дій на основі розроблених авторами методів і критеріїв синергетичної оцінки, а також методології їх практичного застосування.

Ключові слова: екзистенціальний, емоційно-прагматичний потенціал, інстинкт, комунікація, концепт-думка, концепт-поняття, логічний, ментальний, моделювання, обмовка, перерозподіл енергії, потік мислення, психофізіологічна енергія, саморозвиток, синергізм, табування, типи мислення, трансцендентний, хаос.

А.А. Калита, А.В. Клименюк. Синергизм потока мышления. На основе гипотетического метода, базирующегося на ряде предположений, авторами предложена новая теоретико-методологическая концепция научного рассмотрения проблемы саморазвития мышления индивида. Изложение концепции осуществлено с использованием вербально-графического научного инструментария, позволившего в рамках классических положений теории подобия смоделировать важнейшие явления и механизмы их реализации в потоке мышления, представляющего собой сложную стохастически саморазвивающуюся когнитивно-синергетическую систему. В работе обоснованы элементарные плоскостная и пространственная модели саморазвития потока мышления человека, позволяющие по критерию доминирования фрактальной актуализации результатов саморазвития его структур-аттракторов классифицировать четыре основных типа мышления: экзистенциальное, ментальное, трансцендентное и логическое, протекающих в соответствующих сферах духовного бытия индивида. Предложены энергетические модели для качественного и количественного анализа синергизма процессов речемышления и мышледействия на основе разработанных авторами методов и критериев синергетической оценки, а также методологии их практического применения.

Ключевые слова: инстинкт, коммуникация, концепт-мысль, концепт-понятие, логический, ментальный, моделирование, оговорка, поток мышления, перераспределение энергии, психофизиологическая энергия, саморазвитие, синергизм, табуирование, типы мышления, трансцендентный, хаос, экзистенциальный, эмоционально-прагматический потенциал.

1. Introduction

Proceeding from the present-day division of problems into “difficult” ones, the solution of which does not produce a satisfactory result at this stage of science development, and “easy” ones, the adequacy of whose solutions can be confirmed experimentally, we can firmly state that the problem of synergism of thinking flow should be rather referred to the second type of problems.

In this regard, it is known that synergetics, or the theory of self-organization, as the most productive and popular at present interdisciplinary theoretical tool, provides researchers, as it was pointed out by Herman Haken [Haken 2004: XIII-IX], with two prospects. The first one lies in the possibility of studying within the limits of a certain science the mechanisms of emergence of new properties in the whole (i.e. a self-developing system), consisting of interacting objects (i.e. subsystems). The second prospect is oriented to the realization of a comprehensive study of the phenomena alike on the basis of similarity of their self-development patterns. However, its implementation requires a cooperation of specialists from different fields of scientific knowledge.

Generally speaking, one should also agree with the opinion of a number of leading experts in the field of a hypothetical development, based on current achievements of a synergetic approach, who rightly state (see, for example, [Bak 2014; Pinker 2004; Chalmers 1996; Penrose 2015]) that the most effective methodological tool that make it possible to develop an overall scientific picture of the world in general and a specific scientific linguistic picture of the processes of speaking-and-thinking activities in particular is modeling. From their works it is also evident that, firstly, for the formation of such models it is obligatory to have minimal interdisciplinary knowledge, synthesized on the basis of achievements in neurolinguistics, psychology and linguistics. Secondly, when constructing lingua-cognitive models, it is rational to proceed from the monistic understanding of thinking mechanisms (speaking-and-thinking and thinking-and-acting activities) with a dual consideration of the participation in these mechanisms of logical and emotional beginnings of a human psyche.

However, despite the existence of these prerequisites, linguists have so far paid little attention to a number of important issues concerning the possibilities of modeling the inherently synergetic processes of speaking-and-thinking and thinking-and-acting activities as well as to the issues of their further interdisciplinary study. Furthermore, even a well-known understanding of synergy and synergism itself (from the Greek *synergeia*, meaning *cooperation*, *commonwealth*) as a joint action or interaction of different potentials and types of energies in integral and identical processes of

speaking and thinking activities, unfortunately, did not lead to the additional stimulus for linguists to conduct a more profound study of the energetic essence of thinking processes.

Therefore, the **aim** of the undertaken theoretical search is the conceptual substantiation of the possibility of modeling the energy picture of an individual's thinking as a process of synergistic self-development of a non-equilibrium system.

2. Methodological grounds of a conceptual synergetic modeling

In the work [Klymenyuk 2017] we showed that, unlike the linear scheme of verbalization of dialectical thinking results, the individual's thought, arising in fact in the emotional sphere of the unconscious, is formed in the turbulent zone of subconsciousness and further self-develops polylectically [Klymenyuk 1998] as a certain verbal-and-logical structure.

It was emphasized that the self-development of thinking flow is limited by a multitude of factors that generally form the corresponding zones of an existential (ET), mental (MT), transcendental (TT) and logical (LT) taboo.

To consider the synergy of the thinking flow self-development, let us turn to the elementary two-dimensional model substantiated in the work [Klymenyuk 2017: 456], which we reproduce in Fig. 1.

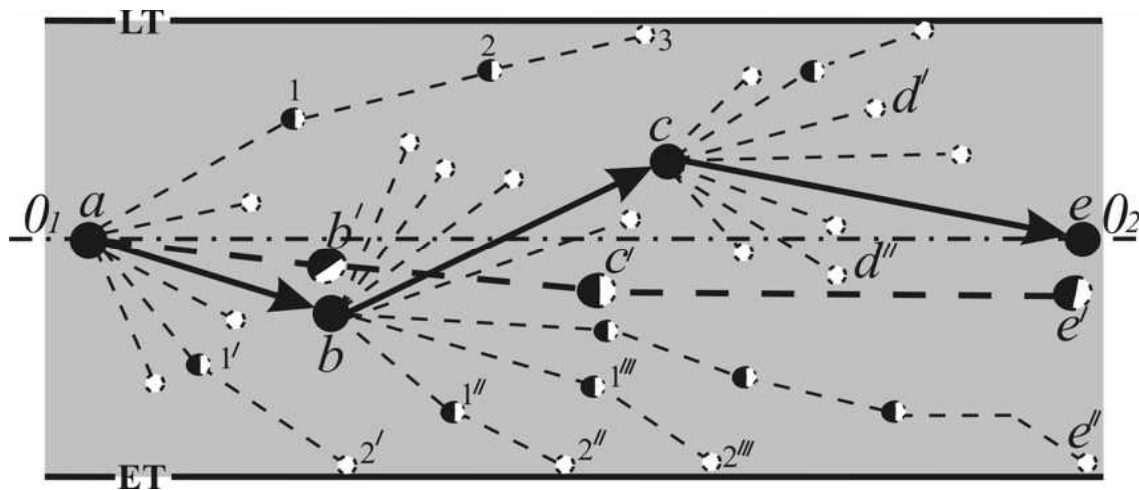


Fig. 1. Elementary two-dimensional model presenting the self-development of a person's thinking: ET – zone of an existential taboo, LT – zone of a logical taboo

We shall note here that along the vertical plane the model is limited with two lines interpreting the zones of logical (LT) and existential (ET) tabooing of the thinking flow self-development.

The model shows that the partial attractor of almost unconscious concept-idea, or concept-thought, having originated under the influence of emotions at the point of the first bifurcation (a) of the process of thinking self-development, after emerging from chaos, heads to the point (b). At this point, under the influence of a psycho-physiological energy of existential tabooing, incited by instincts and emotions, there develops the chaos of the second bifurcation. As a result of this chaos the attractor ($b-c$) sharply swerves in the direction to logical concepts stored in the individual's memory and, having reached the energetic equilibrium with them, completes its development at the point (c) of its third bifurcation. Further self-development of the flow of conceptual thinking is realized within the structure of the attractor ($a-e$) in a similar way.

At the same time, at each point of the bifurcation, there occurs the emergence and parallel self-development of a number of other energetically less powerful attractor-structures (see: $a-3$; $a-2$; $b-2''$; $c-2''$; $c-2'''$; $a-e'$; $b-e''$) as well as of some partial attractors that get into the scope of attraction of more powerful attractors being nearby (see: $a-b$, $b-c$, $c-d$). In this case, less powerful attractor-structures complete their self-development as a result of energy dissipation at the points (3 ; $2'$; $2''$; $2'''$; e'), taking place under the influence of corresponding energies of existential and logical tabooing.

As for the structure-attractor ($a-e'$) of the energetically sufficiently charged thought, it can accompany the main idea ($a-e$) in the flow of thinking up to the end of its self-development. However, at the moment of verbal materialization of the main thought in the form of an utterance or sentence, the consciousness completely suppresses the parallel thought ($a-e'$) with its energy, and, having previously realized it in the form of inner speech, returns it, if necessary, to the memory in the spheres of subconscious or unconscious.

We shall focus here on one important circumstance, directly related in the work to the use of the notions “consciousness”, “cognition”, “awareness, or comprehension”. Leaving aside the continuous and rather broad discussion about the consciousness, in our search we are to talk about the following.

Firstly, the term “stream of consciousness”, which is often encountered in psychology, cognitive science and in a number of other humanitarian sciences, seems rather strange, since it is quite obvious that consciousness along with the unconscious, mental and transcendental is just one of the phenomena of human psyche that ensure the self-development of his/her thinking flow. Secondly, “cognition” should be considered as one of the particular cognitive processes (see, for instance, the attractor-structure $a-e'$ or $a-3$ in Fig. 1) that participate in the self-development of thinking flow (the attractor-structure $a-e$). Thirdly, “awareness” of something, by its definition, must be considered as a cognitive result of the process of cognition as a specific pragmatically oriented flow of the individual’s thinking.

We have to emphasize that, on the one hand, consciousness, being the central element of cognition, is able to control both the original meaning of the stored in memory concept-ideas of different levels of complexity or abstractness, and the meaning of any of their analogues varying in nature, arising as a result of the repeated self-development of previous thinking flows connected with a particular form of the individual’s speaking-and-thinking and thinking-and-acting activities. On the other hand, the energetic potential of consciousness allows it not only to control the adequacy of verbal materialization of thinking results, but also to taboo logically contradictory, as well as ethically and aesthetically unsatisfactory concepts, inevitably activated by memory directly in the process of thinking.

In the model of Fig. 1 the cognitive tabooing occurs at final points (3 , $2'$, $2''$, $2'''$ and e'') of attractor-structures of the self-development of energetically less charged concept-thoughts ($a-3$, $a-2'$, $a-2''$, $a-2'''$ and $b-e''$), flowing in parallel with the main idea ($a-e$). At these points, the energy of taboo finally suppresses the self-development of energetically not powerful enough concept-thoughts, leading to a dissipation of psycho-physiological energy that ensures their development.

Such acts of cognitive control and tabooing of certain “illogical” concepts can take place within a wide range of emotions that develop in the individual’s psyche from a natural interest to a moderate stress [Klymenyuk 2017: 455].

It is quite clear, though, that apart from the energetically powerful orthodox taboos of consciousness that lead to the dissipation of energy of illogical for dialectical thinking concepts, there must also exist other mechanisms for their suppression. First of all, they should include the total energy potential of a number of anti-concepts (a kind of illogical concepts that are energetically sufficiently charged and are not suppressed by the consciousness at this stage of thinking self-development) that get into the scope of attraction of an energetically more powerful concept-thought controlled by consciousness. The potentials (concentration of energy) thus formed are capable of performing a kind of informal (unorthodox) taboo, providing a further suppression of the concepts previously admitted by consciousness into the process of thinking.

Along with this, in the thinking flow there can also occur a mechanism compensating the energies of separate concepts (for example, $c-e$) by the energy of dialectically interconnected with them anti-concepts (for example, $c-e''$), as a result of which their meanings are suppressed by consciousness and does not affect the subsequent self-development of thinking processes.

The mechanism of energetic resonance also poses some interest, due to which the potential accumulated by consciousness on the basis of meanings of a number of concepts, gets into the resonance with the energy of related emotions, and generates the energy considerably exceeding their sum and thus is capable of suppressing even powerful orthodox taboos produced by the consciousness itself.

We should add here that in a number of cases the energy of excessive emotions, giving rise to a sharp increase in the energetic potential of the unconscious (for example, in cases of strong or prolonged stress, as well as in the state of affect), can dramatically suppress the energy of logical or mental taboo.

Speaking about the considered above mechanisms of attraction, suppression, compensation, resonance and energy dissipation, we should not forget that, firstly, being difficult to predict in real communication, these mechanisms can be quite satisfactorily described retrospectively while studying physically materialized speech. Secondly, the energy potentials are formed due to the constant stochastic migration of psycho-physiological energy in the spiritual sphere of the individual [Kalyta & Klymenyuk 2004]. Such energetic potentials cannot only act as taboos for some concept-thoughts, but also ensure the overcoming of any taboos arising in the thinking flow on the levels of unconscious, subconscious and consciousness. Thirdly, under the psycho-physiological energy of a person one should understand the ability of his/her body, under the influence of emotional excitement, to perform the work of the mechanical movement of the body as well as the movement of electric charges in the nervous system.

On the basis of the stated above, we get every reason to assert that the specificity of the stochastic self-development of thinking activities in the subconscious sphere of the person's psyche, including the acts of his/her mental and transcendental beings, is the attainment of maximal entropy (or the measure of disorder) of thinking processes, characterized by a sharp increase in the intensity of chaos development and a corresponding sharp increase of psycho-physiological energy consumption by the individual's organism. Besides, in the process of thinking, the so-called increase in brain entropy causes the maximum number of connections between neurons, which leads to a sharp growth in the number of potentially possible interactions in the neural network. It quite agrees with the conclusions obtained on the basis of introspective retrospection that the process of uttering a word is accompanied by the emergence of ten new thoughts [Rerih 2011: 162-163; Penrose 2015: 333]. It also agrees with the idea that a thought originates not from another thought, but from a motivating sphere of consciousness that embraces our drives and needs, our affects and emotions [Vygotskij 1982: 379-380]. Similar ideas are presented in a number of other works, whose authors, unfortunately, operate with the notion of "stream of consciousness".

Turning to the two-dimensional model (Fig. 1), that comprises the projections of a set of attractor-structures on the frontal plane of the human thinking flow, it is easy to see that it does not provide a comprehensive picture of self-developing thinking processes. But, being an elementary model, it contains their most important structural elements, whose understanding and comprehension is the minimum requirement to continue the undertaken conceptual search.

Viewing this as our methodological basis for constructing a generalized spatial (three-dimensional) energetic model depicting the dynamics of self-development of the individual's thinking flow, we followed three main conditions: (a) the adequacy of the model to the phenomenon under study; (b) the consistency of a new hypothetical knowledge applied for its description with the existing linguistic, psychological and physical scientific knowledge; (c) the ability of the model to accurately reflect the change in qualitative characteristics and quantitative values of the parameters of simulated processes.

As it was mentioned before [Klymenyuk 2017], the idea of modeling the self-development of the human's thinking process was based on its similarity to a sufficiently studied physical process of a turbulent flow of liquid or gas in a pipe, since these objects (the flow of thinking as a natural

phenomenon and the flow of fluid as a model) are identical from the point of their theoretical study [Guhman 1973: 230-245].

With a propaedeutic aim to increase the effectiveness of understanding the presented material, let us first consider the structure of the space modeling the self-development of the human's thinking flow, shown in Fig. 2.

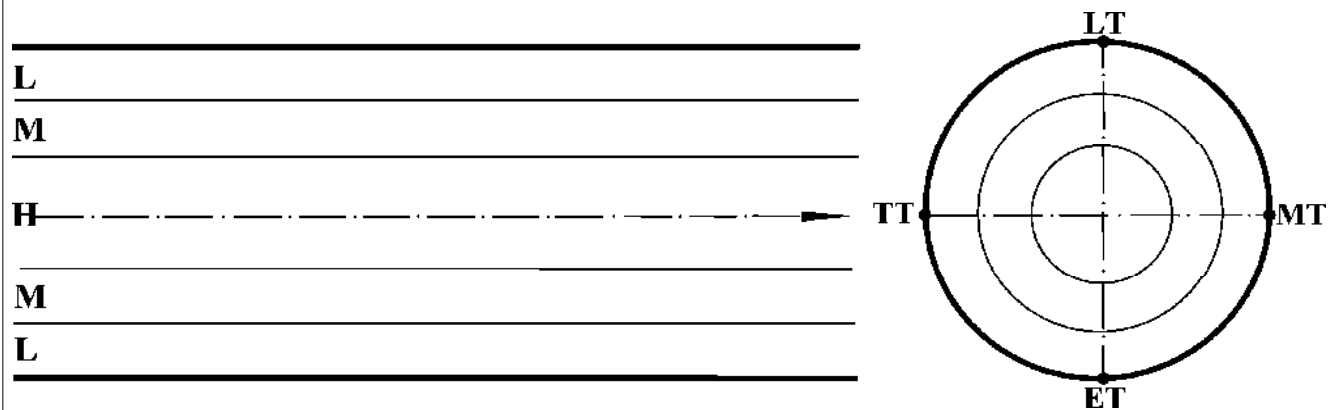


Fig. 2. Structure of the space modeling the self-development of the human's thinking flow

It can be seen from the figure that the modeling space is represented in the form of a pipe section as the shell of a system separating a stochastically self-developing flow of thinking from the environment, which is an information field external to the individual's psyche. In accordance with the generally known laws of hydro- and aerodynamics, the maximum velocity of flow in any similar space takes place in its central zone (**H**), which, according to the modeling conditions, corresponds to a high level of the emotional-and-pragmatic potential of the modeled thinking flow, limited on the projection to the right by a small circle in its center. Similarly, on the projection there is a circle that demarcates the mid (**M**) and low (**L**) levels of the emotional-and-pragmatic potential actualization in the process of self-development of the individual's thinking flow.

The shell of the model also performs an additional function, consisting in tabooing energetically insufficiently powerful concepts, leading to the partial suppression or complete dissipation of their psycho-physiological energy. In view of the fact that taboo processes can take place during the self-development of thinking processes in any of the four known spheres of the individual's spiritual existence (existential, mental, transcendental and the sphere of consciousness), the points of a maximum concentration of their tabooing potentials are indicated on the projection as follows: **LT** – logical taboo, **ET** – existential taboo, **MT** – mental taboo, **TT** – transcendental taboo.

Such a supplementary introduction of parametric factors into the initial model, as is well known from the similarity theory, opens up additional possibilities within the framework of interdisciplinary research. They consist in the fact that the localization of the final points of self-development of concept-thoughts of any nature and level of complexity can be described by a number of new cognitive-synergistic concepts. In our case, it is sufficient to designate the upper half of the projection as a sector of the logical taboo, and consider the lower one as a sector of existential tabooing. Then it is logical to term the left half of the projection as the sector of transcendental tabooing, and the right one – as the sector of mental taboo.

In turn (see Fig. 2), the occurrence of the final point of any attractor in the sector covered by the **LT-MT** arc, can be treated as the completion of self-development of thinking flow in the zone of a logical-and-mental taboo. The actualization of such a point in the sector of the **MT-ET** arc will demonstrate its entry into the zone of a mental-and-existential tabooing. The localization of a final point of the attractor in the **ET-TT** sector will show that the self-development of thinking ended in the zone of existential-and-transcendental tabooing. And, finally, the localization of this point in the

sector of the **TT-LT** arc can be interpreted as the completion of the attractor-structure of the thought self-development in the zone of logical-and-transcendental tabooing.

In other words, the upper half of the perpendicular section of the flow of thinking model (see the right-hand side of Fig. 2) can be viewed as a sector of conscious thinking, while the lower half can be regarded as a sector of the unconscious. Herewith, the left half of this section will reflect the cognitive processes taking place in the transcendental sphere of the individual's psyche, while the right half will reflect the processes occurring in the mental sphere of his/her thinking.

However, one should remember that, firstly, with a chaotic self-development of the thinking flow, it is difficult to predict the real directions of its thoughts development on the trajectories of not only partial attractors but also on the scale of complete attractor-structures. Secondly, there can be no doubt that any of the attractors can develop between the nearest points of concentration of taboo energies in a definite or opposite direction. To put it simply, the real directions of a reverse self-development of attractors can be designated by such pairs as the mental-and-logical trajectory and the opposite logical-and-mental one; the existential-and-transcendental trajectory can be opposed by the transcendental-and-existential one, etc.

3. Cognitive classification of the individual's thinking types

As can be easily seen, the artifact generated by the introduction of an additional parameter (i.e. the reversibility of self-development directions) into the model allows us to create a comprehensive classification of individual's thinking types by the dominance of the flows of its self-development in a specific sphere of spiritual being (Fig. 3).

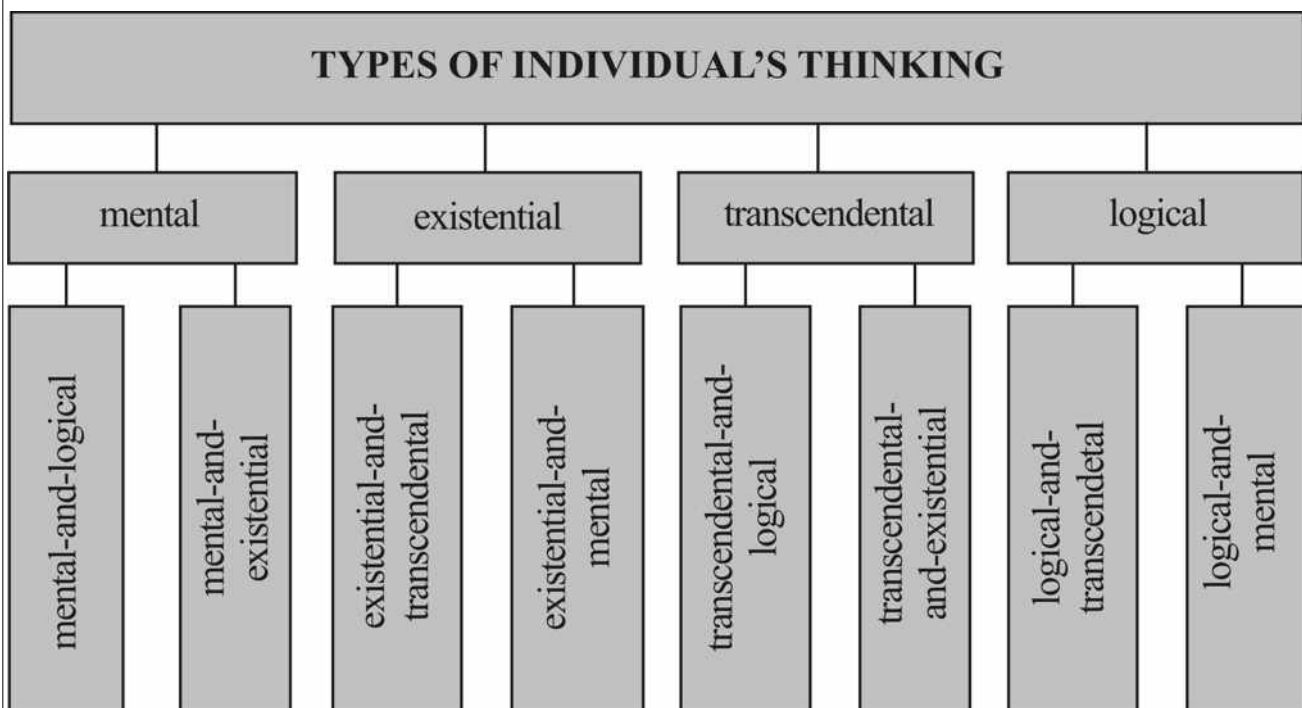


Fig. 3. Classification of the types of individual's thinking by the dominance of the flows of its self-development in a specific sphere of spiritual being

Cognitivists are well-aware of the fact that the final points of the attractor-structures formalized in the geometric form of self-development models of similar non-equilibrium stochastic systems, a typical example of which being the process of individual's thinking, are usually represented in the form of certain geometric figures, known as fractals in synergetics. Herewith, the interdisciplinary research has established [Arshinov & Budagov 2002: 87; Vedenova 2002] that in the case of the above mentioned (geometric) interpretation the overwhelming majority of the final points of

elementary processes occurring in the flows of the particular phenomena under study most often take the form of a torus or of its certain part.

Therefore, the next logical step seems to be the possibility to theoretically predict a finite number of variants of patterns of the dominant fractal actualization of the results of self-development of the individual's thinking attractor-structures. For this, it is sufficient to accentuate the fact that under the influence of strictly orthodox types of thinking, the localization of points (the set of which forms specific fractals) should be the most frequent in the corresponding sectors of arcs described above (Fig. 2): LT-MT, MT-ET, ET-TT, TT-LT.

Fragments of a number of thus projected patterns of the dominant fractal actualization of the results of self-development of the individuals' concept-thoughts attractor-structures are shown in Fig. 4.

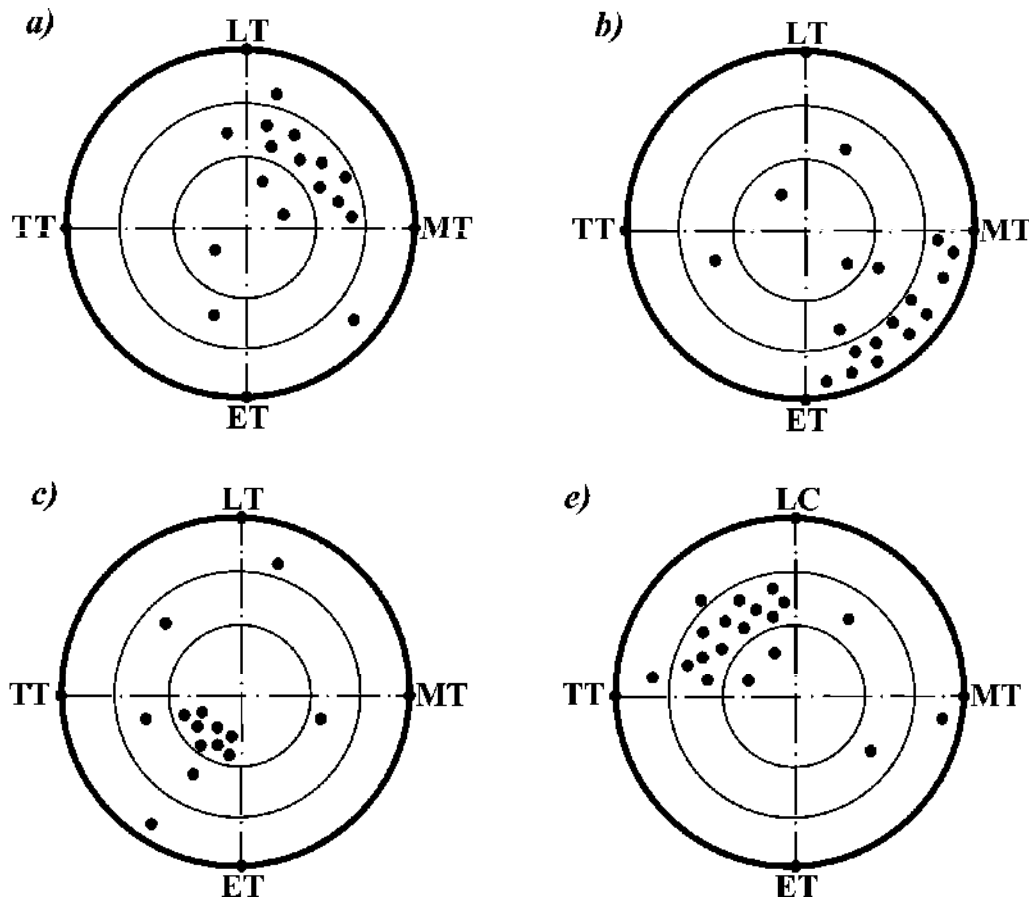


Fig. 4. Fragments of patterns of the dominant fractal actualization of the results of self-development of the attractor-structures of individuals' thinking

Let us consider in outline the location of the final points (see Fig. 4a) of the actualization of certain concept-thoughts realized by the speaker while describing some recent events (for example, impressions from meeting his sister's group-mates). From the context of the example, it is quite obvious that in the speaker's spiritual sphere the assessment of the behavior and intellectual level of each of them is based primarily on the logical and mental prototypes of concept-thoughts, fixed in his memory in the process of acquiring communicative experience. At the same time, due to the fact that the mentioned conflict-free meeting did not leave any strong positive or negative emotional trace in his memory, the final points of the self-development of concept-thoughts' attractor-structures are mainly realized at the middle level of emotional-and-pragmatic potential. The actualization of these points in the sector of logical-mental thinking is caused by the fact that the speaker, as is known from the context, is a professional mathematician brought up in the traditional ethnic environment.

As for the pattern shown in Fig. 4*b*, it can fairly be considered as a fractal figure of actualization of the interrelated set of concept-thoughts as the results of mental-and-existential thinking of a representative of a certain religious denomination during the evening service, whose verbal materialization takes place at a low level of emotional-and-pragmatic potential.

A somewhat different pattern (see Fig. 4*c*) can occur when a politician on the basis of existential-and-transcendental thinking expresses non-standard ideas at a high level of emotional-and-pragmatic potential, while having a discussion with communicants having orthodox conservative views.

The fractal figure of the fourth pattern (see Fig. 4*d*) fully corresponds to the speech of the individual, who on the basis of a transcendental-and-logical thinking introduces some convincing facts in support of his own theory to the members of a scientific community and performs it at the middle level of emotional-and-pragmatic potential.

Addressing the second level of the classification elements (Fig. 3), we will see that according to the dominant localization of points forming typical fractals, there can exist only eight patterns of subtypes, or forms of individuals' thinking self-development in the spheres of their spiritual beings. Upon that, we should not forget that the subtypes of fractal actualization 4*a* and 4*d*, as stated above, are alternatives to the logical type of thinking. In contrast to them, the common feature that unites the subtypes of fractal actualization 4*b* and 4*c* is their belonging to the existential (emotional) type of thinking.

Fractal actualizations of the final points of attractor-structures of the main thoughts' self-development, combining the subtypes 4*c* and 4*d* (localization in the sectors of arcs of ET-TT and TT-LT), indicate a transcendental type of thinking of the individual, whilst their dominant concentration in the sectors of LT-MT arcs (subtype 4*a*) and MT-ET arcs (subtype 4*b*) reflects the mental type of thinking.

Therefore, we may safely predict that in communication there are four main types of fractal patterns of the results of attractor-structures of thinking self-development classified by logical, mental, existential and transcendental types.

However, in real communication, when it is viewed on the scale of partial attractors, there are also more complex subtypes of self-development flows of the individual's speaking and thinking activities, as shown in Figures 4*a*-4*d* with the points not included into their local fractal patterns.

Therefore, when presenting the results of fractal research, one should not forget about the necessity to describe such complex subtypes of self-development flows of individual's thinking attractors as logical transcendental-and-mental and logical mental-and-transcendental ones, some of the cognitive processes of which are localized in the upper half of the projection of Fig. 2, known as the zone of logical thinking.

Similarly, in the zone of existential (emotional) thinking, there can also be subtypes of self-development of thinking, such as emotional transcendental-and-mental and emotional mental-and-transcendental ones.

In the left part of the projection (see Fig. 2, LT-TT and TT-ET sectors), i.e. in the zone of transcendental thinking, the transcendental logical-existential and transcendental existential-logical subtypes of thinking processes self-development can be actualized.

In the same way we obtain the demarcation of the mental logical-and-existential and mental existential-and-logical subtypes of thinking self-development in the right-hand side of the projection in Fig. 2.

In cases of migration of partial attractors from the TT-LT arc sector to the ET-MT arc sector, the variants of their self-development should be described as a subtype of the transition of the transcendental-and-logical self-development of the partial attractor of the thinking process to the existential-and-mental one. In the opposite case, we can talk about the transition of existential-and-mental thinking to the transcendental-and-logical one.

In accordance with this logic, we can talk about such variants of transitions: logical-and-mental thinking into existential-and-transcendental one and existential-transcendental thinking into the logical-and-mental one.

4. Mechanisms of transitions of thinking into adjacent spheres of individual's spiritual being

Generalizing the picture thus obtained, let us turn to Fig. 5 and focus our attention on the fact that in real communication, if considered synergistically at the level of attractor-structures, it is possible to distinguish four basic types of self-development of individual's thinking (mental, existential, transcendental, and logical) as well as eight subtypes of a vector-like directed self-development of these flows of thinking (logical-and-mental, mental-and-logical; mental-and-existential, existential-and-mental; existential-and-transcendental, transcendental-and-existential; transcendental-and-logical, logical-and-transcendental).

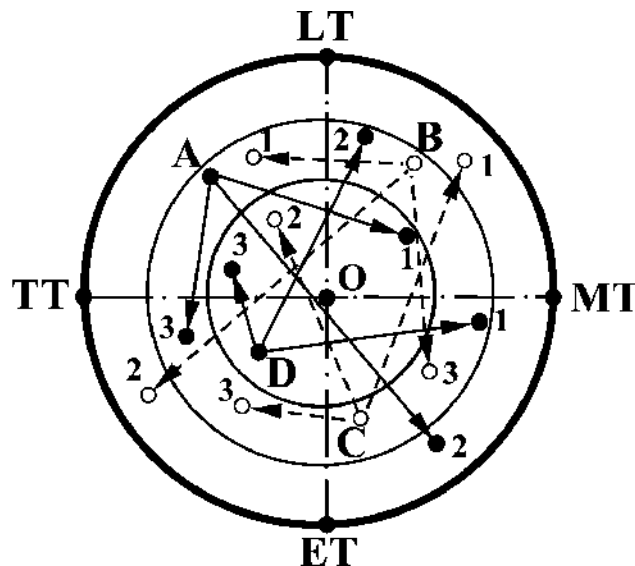


Fig. 5. Types of vector transitions of thinking (i.e. of the attractors of concept-thoughts' self-development) into adjacent spheres of individual's spiritual being

At the level of partial attractors (see Fig. 5), we are most likely to have to consider twelve complex subtypes of a vector self-development of concept-thoughts in adjacent spheres of individual's spiritual being (logical transcendental-and-mental – see vector A1, logical-and-existential transcendental-and-mental – vector A2, transcendental logical-and-existential – vector A3; logical mental-and-transcendental – vector B1, logical-and-existential mental-and-transcendental – vector B2; mental logical-and-existential – vector B3; mental existential-and-logical – vector C1, existential-and-logical mental-and-transcendental – vector C2, existential mental-and-transcendental – vector C3; existential transcendental-and-mental – vector D1, existential-and-logical transcendental-and-mental – vector D2, transcendental existential-and-logical – vector D3) and the four variants of their reciprocal transitions (A, B, C, D).

This implies another important artifact that requires an explanation of the difference in nature and the mechanisms of smooth and jump-like transitions of partial attractor-structures in the processes of initiation of the self-development of thought at the logical level (level of consciousness) and its completion at the existential level (level of emotional thinking) and vice versa. In this regard, attention should be paid to the fact that, firstly, a smooth transition is characterized by the fact that the partial attractor, which circumscribes it, crosses the horizontal axis of the projection (see Fig. 2), while the jump-like transition cannot be realized in any other way than that when the trajectory of the partial attractor crosses the adjacencies of the point O of the projection center (the zone of a high emotional-and-pragmatic potential), where the rate of its development is maximal. Secondly, the meaningful load of concepts-notions being located on the horizontal axis of projection and playing the role of elements of thinking, indicates the possibility of their simultaneous attribution to both logical and emotional beginnings of the individual's psyche. The smoothness of the transition is evident here by definition.

A jump-like transition is entirely different one. At the moment of its performance (when the attractor intersects the point O, which is the origin of the projection coordinates) there occurs either interruption or complete suppression of the result of the previous meanings interaction, since at this point the meaningful load of any concept-notion equals zero, basically it is absent, which prompts the brain to resume thinking on antinomial conditions.

Therefore, we believe that in order to implement the jump-like transition of individual's thinking we need to use the psychic energy of the affect state resulting from the annihilation of the emotional and logical potentials of concept-thoughts or taboos caused by a sharp contradiction to their sense and meaning.

Generally speaking, the processes occurring in the flow of thinking can be viewed on various scales (attractor-structure, partial attractor, and bifurcation point) as well as on any segment of the thought (speech, text) generated by it. The logic of modeling, shown in Fig. 2, gives us the opportunity to define typical fractal actualizations of thinking flow on two main scales: on the scale of any partial attractor as well as on the scale of the entire attractor-structure. The typical fractals, obtained in this way, are likely to be one of the objective psycho-communicative characteristics of individual's speech. Thanks to this, linguists, psychologists, sociologists, philosophers and cyberneticians will get an opportunity of a deeper scientific description of the phenomenon of the dominance of certain forms (or fractal models) of individual's actualization of typical thought flows, related to a particular communicative situation or to the problem which the individual is currently thinking through.

5. Energetic specificity of self-development of the main thought attractor-structure in the flow of individual's thinking

With a view to getting a deeper understanding of methodological possibilities of a practical description of the results of an experimental study of the thinking flow synergy, let us examine typical spatial models of its attractor-structures self-development. To do this, we shall remind you that in real communicative situations, there are practically no utterances [Kalyta 2007] actualized at a low level of emotional-and-pragmatic potential, since there is no absolutely emotionally neutral speech. Therefore, typical models include only two types of partial spatial models of the self-development of attractor-structures at the middle and high levels of emotional-and-pragmatic potential actualization as well as a complete model of their self-development on all three levels of emotional-and-pragmatic potential.

Thus, having singled out the individual's main idea according to the results of the experiment, we can consider (see Fig. 6) the spatial energetic model of its self-development at all levels of the emotional-and-pragmatic potential actualization of the thinking flow.

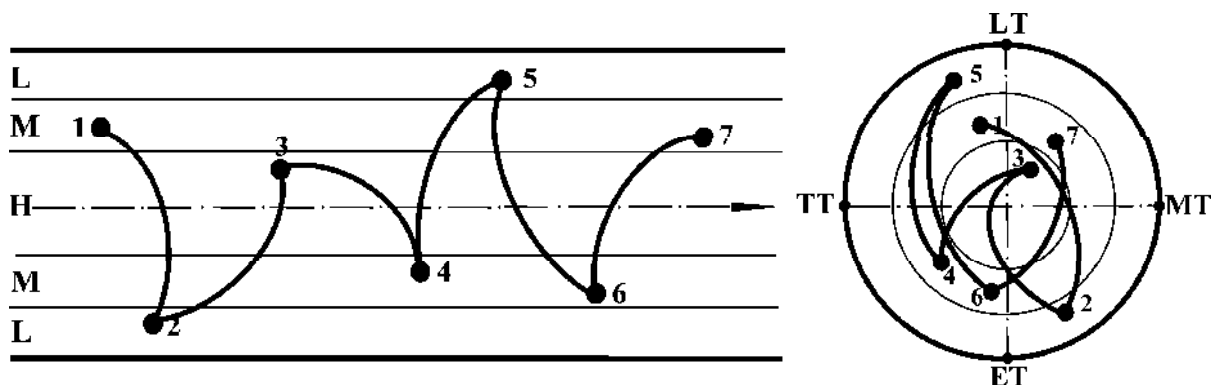


Fig. 6. Spatial energetic model of self-development of the attractor-structure of the main idea at three levels of the emotional-and-pragmatic potential of the human's thinking flow

It can be seen from the model that, having originated at the point (1), the partial attractor of the main thought actualization completes its self-development at the point (2) at a low level of emotional-and-pragmatic potential. We can see from the projection (see the right-hand part of Fig. 6) that the trajectory of the partial attractor (1-2), starting in the sector of logical-and-transcendental thinking, further develops in the sector of logical-and-mental thinking and, moving smoothly further completes its self-development in the mental-and-existential sector.

Self-development of the next partial attractor is characterized by the transfer of thinking energy from a low level of emotional-and-pragmatic potential (point 2) to its high level (point 3). At the same time, having originated in the mental-and-existential sector, the concept-idea smoothly passes into the existential-and-transcendental one and completes its development at the point of the third bifurcation (3) located in the mental-and-logical sector.

The attractor (3-4), originating at a high level of emotional-and-pragmatic potential (point 3), finishes its development at the middle level. The trajectory of the self-development of this attractor begins in the mental-and-logical sector and, passing through the transcendental-and-logical one, ends in the transcendental-and-existential sector.

The development of a partial attractor (4-5) begins at the middle level of the emotional-and-pragmatic potential in the transcendental-and-existential sector and ends at the point of bifurcation (5) at a low level of its potential in the logical-and-transcendental sector of the individual's thinking.

The direction of self-development of the partial attractor (5-6) is the opposite of the previous one: it starts with a low level of emotional-and-pragmatic potential in the logical-and-transcendental sector of thinking and ends with a middle level potential in the transcendental-and-existential sector.

The final partial attractor (6-7) of the general attractor-structure (1-7) develops at the middle level of the emotional-and-pragmatic potential from the existential-and-transcendental sector to the mental-and-logical one of the individual's thinking.

We shall point out that in the example described, the attractors (4-5) and (5-6), which indicate the formation of thoughts by the consciousness in the transcendental-existential-and-logical and transcendental-logical-and-existential sectors, respectively, refer to the described above complex subtypes of the individual's concept-thoughts self-development. However, even more complex processes are reflected by the trajectories of the remaining attractors, whose self-development, as it has been described above, is carried out in at least three sectors. With an in-depth analysis of complex thoughts, it is natural to expect the appearance of an even broader range of alternatives to hierarchically lower groups of subtypes, since, as evidenced by lingua-cognitive experience, the alternativeness of variations of thinking by different individuals is practically infinite.

Let us also consider a typical example of the spatial energetic model of the attractor-structure of a thought self-development at the middle level of the emotional-and-pragmatic potential of the individual's thinking (Fig. 7).

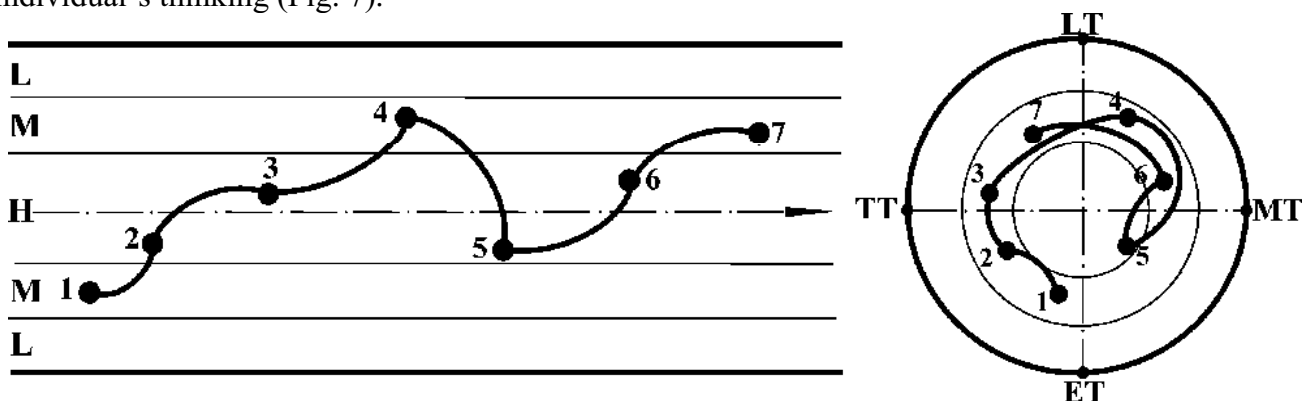


Fig. 7. Spatial energetic model of self-development of the attractor-structure of the main idea at the middle level of the emotional-and-pragmatic potential of the human's thinking flow

Focusing on the projection (the right-hand part of Fig. 7), we can see that the self-development of the attractor-structure of the main idea, originating in the sector of individual's existential-and-transcendental thinking (point 1), is carried out, mainly, at the middle level of the emotional-and-pragmatic potential of his/her thinking flow. Further, passing through the zone of transcendental-and-logical thinking, the main idea (attractor-structure 1-7), continuing its development in the logical-and-mental and mental-and-existential (i.e. mental-and-emotional) zones, completes it in the logical-and-transcendental zone (point 7). We shall remark here that the situation in which the researcher is shaping the initial hypothesis of the object under study functioning can serve as a vivid example of such a type of thinking self-development.

Let us also consider the case of self-development of the attractor-structure of the main idea at a high level of the emotional-and-pragmatic potential of the human's thinking flow, whose model is presented below in Fig. 8.

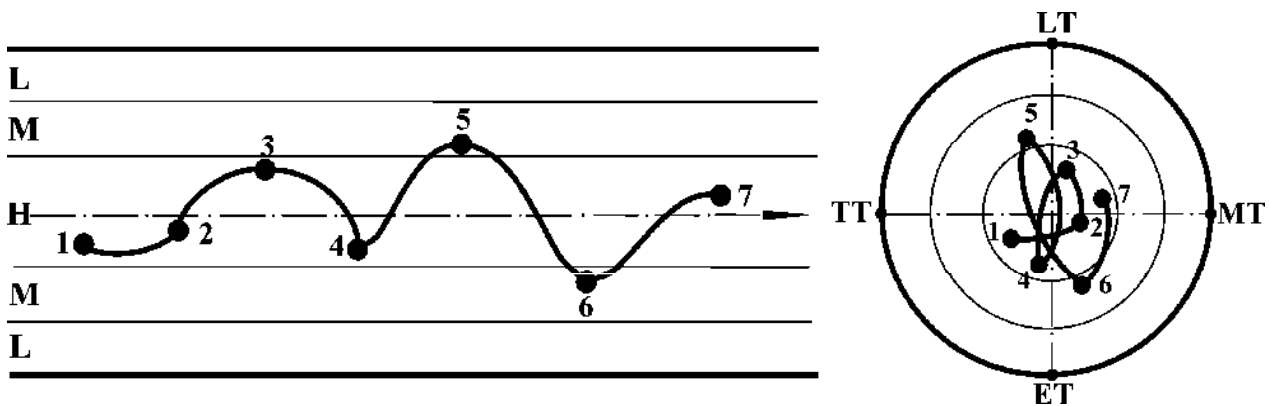


Fig. 8. Spatial energetic model of self-development of the attractor-structure of the main idea at the high level of emotional-and-pragmatic potential of the human's thinking flow

Unlike the previous model, such a type of self-development of the human's thinking flow (Fig. 8) occurs at a high level of emotional-and-pragmatic potential. The self-development of attractor-structure of the main idea depicted in this model can characterize the excited state of the psyche of the individual trying to convince the interlocutor of something on the basis of the prevalence of common for them mental-and-logical and mental-and-existential views.

The models considered above obviously reveal methodological possibilities of their practical application for describing the results of a multitude of lingua-cognitive processes. The use of such a description in psycholinguistic scientific research is of a particularly interest.

We shall turn now to an equally important issue, i.e. the use of the methodological potential of the considered models by analogy with the capabilities of the chosen physical prototype model (the motion of a liquid or gas in the pipe) allowing to solve a number of problems relating to the quantitative assessment of the distribution of the rates of actualization of the partial attractors' energies according to the levels of emotional-and-pragmatic potentials in the flow of human's thinking (Fig. 9).

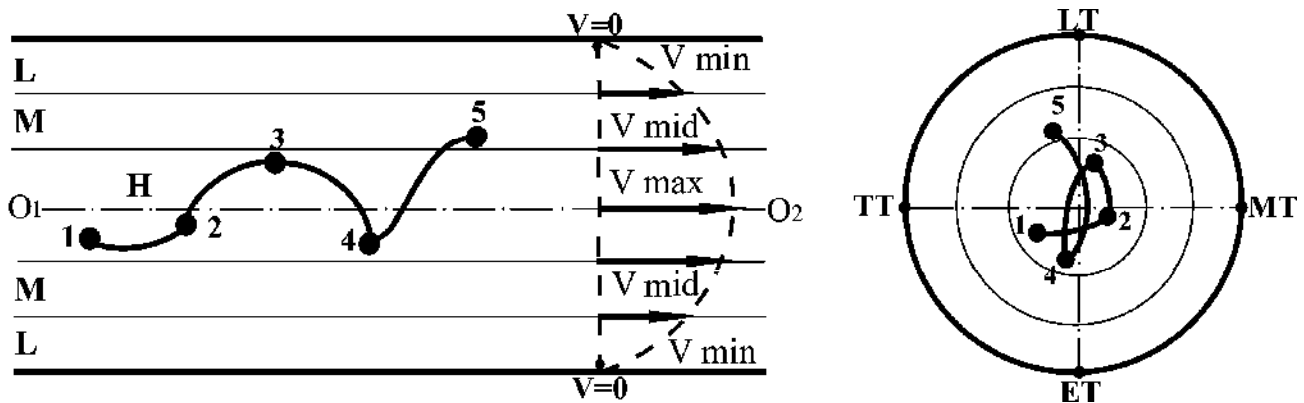


Fig. 9. Regularities of distribution of the rates of the partial attractors' energies according to the levels of emotional-and-pragmatic potentials in the flow of human's thinking

From the stated above two facts are quite obvious. First, at the boundary of the liquid or gas flow and the pipe wall (in the case of our model this is the boundary of the thinking flow and the walls of the taboo) forming the shell of the system, the velocities of the flowing particles in it, as well as the rates of actualization of the energies of partial attractors, are equal to zero. Secondly, in both cases, the maximum velocity of the particles and points that form the trajectories of attractors, as well as the motion of particles of liquid or gas, is achieved on the central axis (O1-O2) of the model. Consequently, nothing prevents us from using a known in physics [Chugaev 1982: 85-88, 152-160; Smyslov 1979: 157-169] distribution diagram of velocities of the motion of particle flows in a pipe as a direct analogy for a graphical interpretation and a corresponding quantitative assessment of the rates of the main idea self-development and the distributions of the rates of actualization of partial attractors' energies that unambiguously correlate with them.

We have to remind here that the experimental instrumental recording of the uttered thoughts is also carried out along the time vector, whose scale of flow is marked in milliseconds. Due to this, taking the O1-O2 axis as a time scale, we obtain a complete analogy that allows us to carry out an objective quantitative assessment of fluctuations in the velocities and energies of attractors' self-development in the phenomena that constitute the human's thinking flow.

Here, incidentally, the question arises about the energy intensity of speech segments actualization in the process of their oral materialization, since it is quite natural for the researcher to have a quantitative criterion for its evaluation. Such an intensity indicator is easy to obtain by calculating the total value of the maxima of the utterance emotional-and-pragmatic potential in units of the *K*-criterion [Kalyta & Taranenko 2012] and its subsequent division on the duration axis of the utterance itself (or any analyzed speech segment).

This will also allow us to consider the phenomena of subliminal impact migration according to the language levels. For this it is only necessary to break down the intensity of the utterance emotional-and-pragmatic potential actualization (high, medium, low) into three conventional zones by means of any language level or communication and consequently mark three corresponding levels of a subliminal influence realized by these means. In the coordinates "intensity-subliminal influence" thus formed, it becomes possible to search for a correlation between the intensity and a subliminal influence, as well as perform the advanced study of the effects of resonance, dissonance, extinguishment, oppression, dissipation or redistribution of energy flows of the utterance emotional-and-pragmatic potential.

Thus, we arrive at the issue of a practical use of the model as a central methodological tool for the maximum permissible qualitative and quantitative description of the phenomena whose synergism ensures the dynamic self-development of the individual's thinking flow. In other words, now we can build a three-dimensional psycho-energygram depicting the dynamics of the main idea self-development in the human's flow of thinking. For this purpose (see Fig. 9), having a time scale

(O1-O2 axis), it is sufficient (see Fig. 2 and 9) to take the radius of the modeling space for the thinking flow self-development as a vector scale of the level of thought's (or utterance) emotional-and-pragmatic potential actualization, graded in units of the *K*-criterion (see [Kalyta & Taranenko 2012] for more details) and directed towards the center of the flow.

It is appropriate to mention here that, firstly, the existing medical apparatus allows recording the dynamics of changes in basic electrophysiological indices of the phenomena occurring in the human body as a result of thinking processes in his/her psyche. Secondly, the present-day level of computerization of research technologies makes it possible to develop the appropriate software for automatic construction of spatial psycho-energygrams of the individual's self-development of thinking flow.

But this is potentially the nearest prospect. Today, in order to present an exhaustive comprehensive description of the dynamics of thinking flow self-development and of the processes of verbal actualization of the idea in the form of an utterance or any other speech segment, we can use the substantiated two-dimensional models (see Fig. 6-10). To do this, provided they have a time axis (O₁-O₂) on them, by analogy with the scale of the velocity distribution diagram (Fig. 9), it is necessary to place the *K*-criterion scale (the criterion of actualizing the utterance emotional-and-pragmatic potential) vertically.

Now, proceeding from the broad functional capabilities of the justified models, let us consider one more difficult issue – the problem of a qualitative modeling of the phenomenon of the person's comprehension of the content of the main idea formed as a result of the self-development of the chaos in his/her thinking flow. From the methodological point of view, the following circumstances can serve as the key to its solution within the framework of conceptual ideas being developed in this paper. According to the existing experimentally reliable information [Libet et al. 1979; Upravlenie real'nost'ju 2014; Mozg Chelovaka 2015] the individual is able to become aware of the decision taken by his/her brain only in 0.5 seconds. It is clear at the same time that the human being can fully comprehend only the content of already completed thought, as if taking an outside view at it. This means that all the given above spatial energetic models of the self-development of the main idea attractor-structure, being very effective for a retrospective study of the majority of cognitive phenomena, should also allow the description of hypothetical ideas about the energetic mechanism of the individual's comprehension of his/her thinking results.

Having emphasized the energetic side of the process of human comprehension of the results of his/her brain work, we will use the model shown in Fig. 10 for its description.

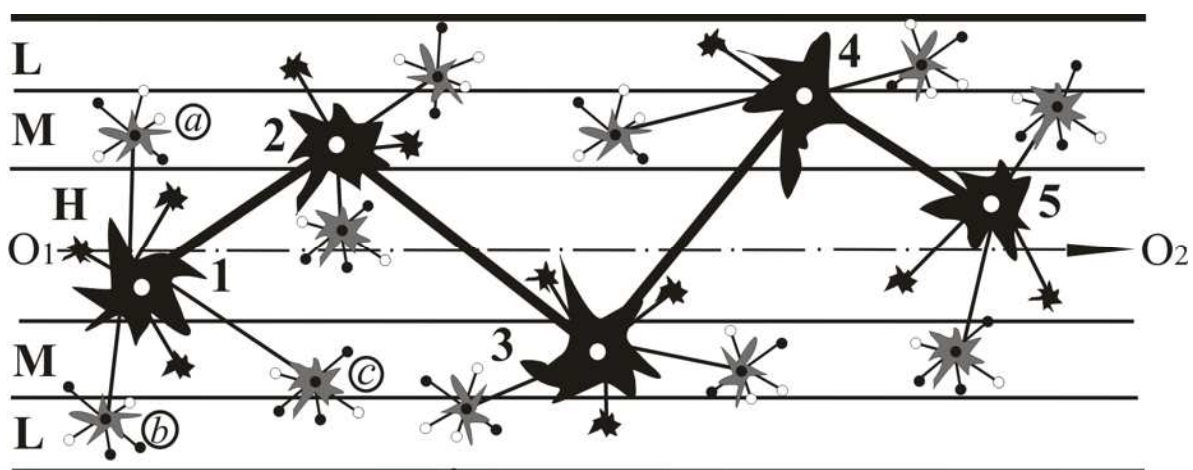


Fig. 10. Energetic model of the individual's comprehension of his/her thinking results

On this figure the energetic picture of the main idea, formed as a result of the cognitive work of the unconscious and subconscious under the strict control of consciousness, is depicted by the attractor-

structure 1-5. It can be seen from the figure that at each particular bifurcation point (1, 2, 3...) after the cognitive system emergence from the chaos, there is an accumulation of a certain energetic potential of the concept-notions, which is the result of the self-development of a dialectical interaction of the energies of logical and emotional beginnings in the individual's psychic sphere.

At present it is known that from a physical point of view this potential has an electromagnetic nature, and, consequently, can be accumulated in the form of similar fields as a result of the flow of completely material electrostatic and dissociative processes occurring in the human's body. Another logical point is that it is a semantic potential that, unambiguously correlating with the mentioned energetic potential, forms a pre-verbal concept-notion which is decoded by the consciousness of a thinking person in a verbal form. In other words, the identity of mechanisms for the emergence of energetic and semantic potentials realizing cognitive processes is obvious. Therefore, we can consider (see Fig. 10) that a complex energetic potential of the chaos self-development at the bifurcation point (1), which creates the content of a complex verbal concept-notion in the person's subconsciousness, is formed by means of integrating the energies of simpler concepts excited by the individual's memory – *a*, *b* and *c* (auditory, tactile, visual, olfactory, gustatory), which enter into the cone of its attraction. The mechanism of such a polylectic interaction is described in detail in the following paper [Klymenyuk 1998].

Proceeding from the above mentioned fact of a person's comprehension of a thought as a certain complete whole, it is not difficult to understand that the energetic result of its final pre-verbal formation is similar to a flash of lightning (i.e. a coronary discharge), for the comprehension of whose meaning a person needs, as shown above, 0,5 seconds. This is the very energetic result that can be kept by the short-term memory for a specific time. Otherwise, there is a failure of consciousness, leading to the impossibility of verbalization of a thought, produced by the psychic sphere.

Consequently, the human's consciousness is given two possibilities: either to accept and justify the results of the cognitive work of his/her brain, or by increasing the energy expenditure, taboo them as non-logical. The situation of tabooing is by no means simple for the individual's psyche, since tabooing by the consciousness of a single illogical concept-thought before its verbal materialization can be complete and incomplete. In general, a complete tabooing leads to the suppression of a separate contradictory or illogical pre-verbal concept-notion, being a part of the general structure of concept-thought. Further on, the consciousness, replacing the contradictory pre-verbal concept with the closest one, not contradicting to the logic of the idea formed by the subconscious, materializes it verbally in the form of an utterance.

In cases of incomplete tabooing by the consciousness of a single contradictory thought energetically powerful concept-notion, there appear slips or incomplete slips of the tongue, whose generation mechanism is modeled in Fig. 11.

The model shows the joint flow of the main (attractor-structure 1-5) and competing, energetically less powerful (structure-attractor *a-f*) thoughts in the individual's thinking flow.

The very mechanism generating the slips of the tongue will be considered in a toned zone marked with a dashed oval (Fig. 11). As we can see, there takes place the situation of approximation of complex energetic potentials of a pre-verbal concept-notion of the main idea (3) with the potential of the concept-notion of a competing thought (*b*) at a high level of their energies fluctuations in the sphere of the individual's emotional thinking (ET).

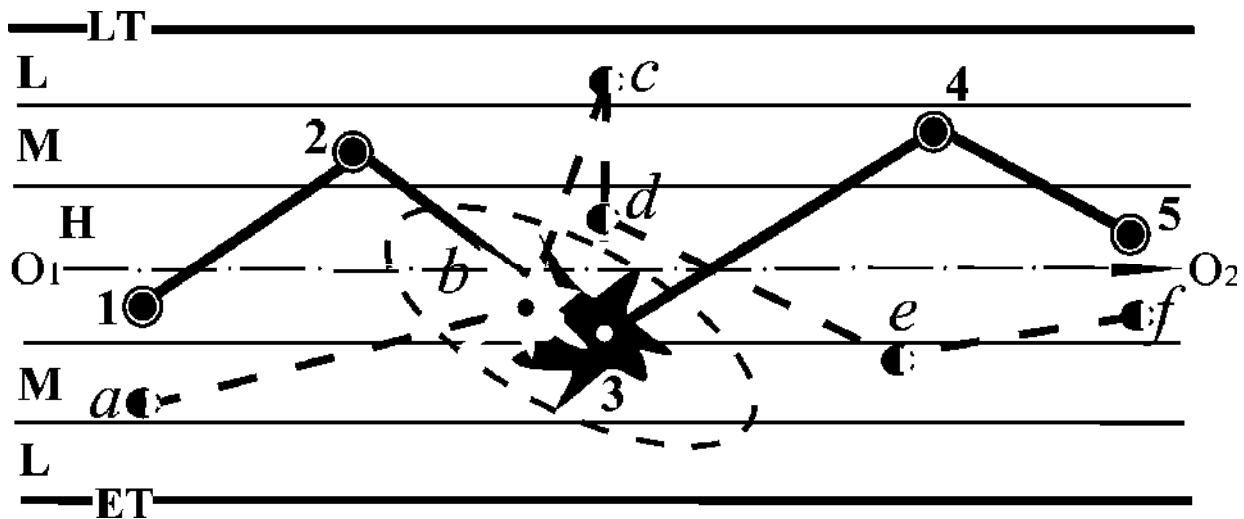


Fig. 11. Model of the energetic mechanism generating the slips of the tongue

Naturally, in such a situation the influence of the logical taboo (LT) is practically insignificant. Therefore, in such cases, provided that the energetic potential of the concept-notion *b* (highlighted in Fig. 11 by a white flash) of the competing thought exceeds the potential of the main thought 3 (a black flash), there occurs a corresponding substitution of the conceptual content of the concept-notion 3 by a competing concept-notion *b*, i.e. there originates, according to Z. Freud, a complete slip of the tongue. Cases with a smaller difference in the similar interaction of potentials lead to incomplete slips of the tongue (or half-slips). We shall note here that the energetic mechanism for the generation and verbalization of offensive concept-words is adequate to the formation mechanism of the slips of the tongue. However, if the total potential of competing emotional energies is exceeded due to the same mechanism, the individual finds him/herself in a situation that forces them to interrupt communication, which is called “the lack for words”.

Here we are compelled to make a remark, since if we are to consider the phenomenon of a communication break in a comprehensive manner, it is necessary to pay attention to the following. It is known that in a micro diachronic plane the human brain does not tolerate an absolute break in communication, and therefore, after a temporary suspension, it usually continues communication in the form of a virtual dialogue between the hemispheres of the brain during his/her sleep or in the processes of repeated remembrances.

It is illogical, in our opinion, to leave aside one more important for cognitive studies possibility, potentially resulting from the above-mentioned fact, by act of which a person needs, according to different sources, no less than 1,5-2,0 seconds to comprehend the thought expressed by the interlocutor, analyze it and make a decision whether to react to it in the form of response or readdress it into the short-term memory (see, for example [Deeke at al. 1976: 99; Penrose 2015: 377]).

We do not deny the fact that due to this genetic circumstance, we can experimentally prove the existence of a certain “golden rule of communication”, according to which in order to achieve maximum subliminal influence or a corresponding memorizing efficiency, the speaker, after the prosodic accentuation of the main idea, as well as after highlighting semantic centers in any speech segment, should make a pause, which exceeds from 1.4 to 1.6 times the actualization time of these speech segments.

Let us also dwell on another interesting phenomenon, which can manifest itself both in pre-verbal thinking and in the individual’s inner speech. Here and further on, we will consider the inner speech as a result of a subconscious dialogue of the brain hemispheres, apt to verbalization. Naming this phenomenon as a “taboo loop”, we shall describe a typical mechanism for its actualization in the flow of thinking, using a two-dimensional model of Fig. 12.

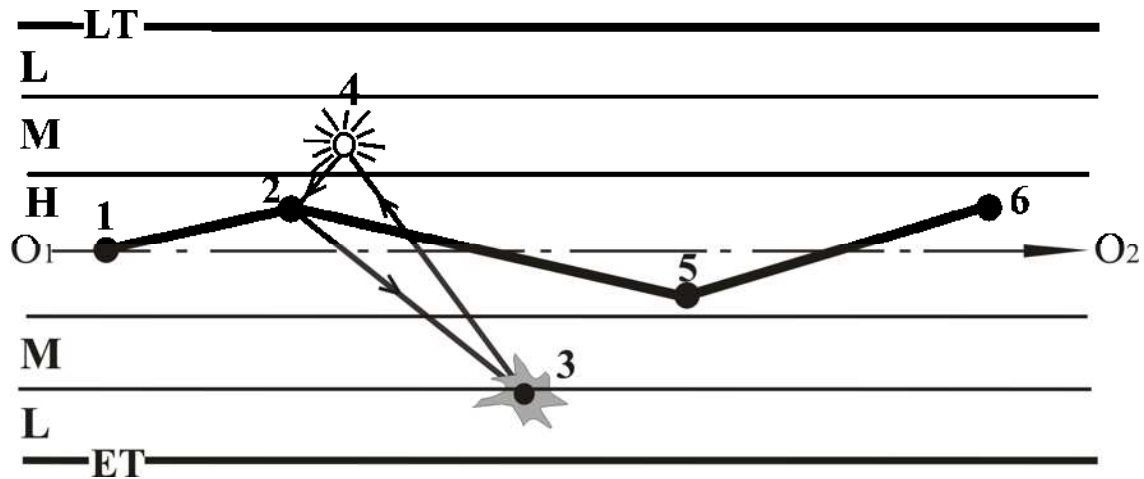


Fig. 12. Model presenting the emergence of a taboo loop in the individual's inner speech

As it can be seen from the figure, the concept-thought, having originated at the point of the first bifurcation (1) and continuing its self-development along the trajectory of the partial attractor 1-2, reaches the point of its second bifurcation (2). As a result of the emergence from the chaos of the second bifurcation, the self-development of a concept-thought rushes to the point of the third bifurcation (3) (we emphasize here that it is no longer an issue of a pre-verbal concept-word, but of a larger cognitive unit – the concept-thought).

The reason for such a sharp deviation of the partial attractor 2-3 into the zone of existential (emotional) thinking may well be a transformation of the logical concept-thought (see the partial attractor 2-3), formed at the point 2, into an analog of the energetically more powerful concept-prototype (3), generated, as a rule, by the interaction of emotions and instincts. It is known that the prototypes of such pre-verbal concept-thoughts are usually fixed in the emotional (existential) memory of an individual who went through great stress in the previous communicative experience.

Further, after reaching the bifurcation point (3), another chaos arises in the flow of thinking, whose self-development is characterized by the inevitable energetic interaction of the concept-thought with a dialectically contradictory to it existential taboo (in Fig. 12 this is clearly demonstrated by the approximation of point 3 to the ET boundary). As a result of the interaction of polar energies of taboo and the concept-thought, the partial attractor 3-4 sharply deflects into the zone of logical thinking and enters the bifurcation point (4). At this point, as a result of logical tabooing, the energy of the concept-thought is almost completely suppressed (to be more precise, there occurs a complete energy dissipation), and thinking as a self-developing system is forced to return in the given situation to the nearest starting point, i.e. to the concept-thought formed in the chaos of the second bifurcation point (2).

Having thus made a "loop" (see the sequence of partial attractors 2-3-4), the system continues to strive to the achievement of its functioning goal at the point (5), and then at the final point (6) the attractor-structure (1-6) of the main clearly controlled by the consciousness thought completes the general process of self-development of the individual's thinking flow.

Here it is necessary to pay attention to the fact that it is the mechanism of the formation of taboo loop that also lies at the basis of the process of generating slips of the tongue, that is, the mechanism of failure in thinking (i.e. the appearance of the taboo loop) and the actualization of tongue slips is the same.

Estimating the processes that are being modeled in whole, we cannot but pay attention to the fact that the general regularity of self-development is an oscillatory motion of bifurcation points in the flow of thinking. Since the law or the principle of pendulum is well known from a number of psychological sources, we have the right to speak about the existence of a universal principle of self-development of the human's flow of thinking – the principle of the "logical-and-emotional

pendulum of thinking”, whose amplitude of oscillations can be realized only within the limits of genetically regulated (ET and LT) as well as socially acquired on the basis of a communicative experience (MT and TT) taboo.

6. Methodological stipulations for the experimental study of phenomena affecting the synergy of individual’s flow of thinking

Summarizing the stated ideas, let us recall a number of methodological statements, which the conceptual idea elaborated above is based on. First of all, we proceeded from the fact that due to the interaction of instincts and emotions in the human body the psycho-physiological energy is excited, leading to the emergence of a certain emotional-and-pragmatic potential in the spiritual sphere of his/her psyche. The emotional-and-pragmatic potential is aimed at both actualizing the speaking-and-thinking or thinking-and-acting activities and the potential of a physiological energy, which implements the person’s muscular activity.

A related property of the synergism of an individual’s flow of thinking lies in the fact that synergy, being the phenomenon of a combined action of psychic and muscular energies, different by their nature but aimed at achieving a common goal, is realized through a chaotic redistribution and interaction of the potentials of these energies (suppression, compensation, integration, resonance, etc.).

At the same time, being flared up almost instantly, the energetically powerful pre-verbal thought is realized quite quickly. Yet we must not forget that its self-development in the sphere of unconsciousness is incomparably more prolonged, and its results, having reached subconsciousness in the long run, can quite successfully be distorted by the consciousness.

The pre-verbal and verbal state of the concepts of thinking can be fundamentally different, since the pre-verbal thinking is limited to a number of different kinds of taboos, while verbalization of a thought, in general, is always controlled by the consciousness. Therefore, to analyze the results of thinking of the sender and the recipient, it is expedient to resort to taboos existing in the sphere of a spiritual being of each of them (consciousness, subconsciousness, unconscious).

Moreover, we believe that similarly to the meaningful load of cognitive processes of speaking-and-thinking and thinking-and-acting activities, which is a super-system that includes elements of the concept sphere, a synchronous to it set of excited energetic fields is also structured as a similar super-system of a functional unity of hierarchically strictly subordinate local energetic fluctuations that promote the self-development of the acts of reducing abstract concepts in the individual’s mind to their more specific sub-concepts. This ability might be either an intrinsic genetic or acquired property of the operating system of the human psyche.

Besides, considering communication as an open self-developing super-system, it is methodologically essential to understand that in each phrase of a spoken dialogue, as well as of inner one, there must be an element of feedback. Upon closer examination of its phono-energetics there appears a possibility to define or predict the answer expected by the person producing subliminal influence.

It is also important that while carrying out and describing the results of a cognitive interdisciplinary research, it is necessary to fulfill two main methodological conditions: 1) to give as an exhaustive characteristic as possible of the supervention [Chalmers 1996] of the considered processes of the individual’s thinking-and-speaking activities from the position of influence on their self-development of a number of factors resulting in complex effects of these processes; 2) to carry out a theoretical or experimental justification for the role of minor or secondary factors capable of radically changing the trajectory of self-development of the attractor-structure in the chaos of individual’s speaking-and-thinking and thinking-and-acting activities.

7. Conclusion

We believe that the stated above should be regarded as a next step in the inevitable process of natural conventional unification of notions and terminology of a cognitive science, since, as practice

shows, without a philosophical interpretation of the corresponding methodology, the majority of attempts to transfer methods and conceptual apparatus of related sciences into it, have been and unfortunately remain unproductive.

The results of the carried out research give us every reason to speak about broad *prospects* of a scientific and practical application of the advanced methodology and strategy of heuristic consideration of the individual's thinking processes serving in fact as a systemic basis that can ensure the development of an unlimited number of new directions within cognitive interdisciplinary studies which allow adequate obtaining qualitative and quantitative data on the degree of influence of a set of factors on the self-development of speaking-and-thinking and thinking-and-speaking activities in the addresser and recipient's psyche.

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**PARADOXICALITY IN MODERN ENGLISH POETIC DISCOURSE:
 TESTING BOUNDARIES OF LINGUISTIC RESEARCH
 IN THE 21ST CENTURY**

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O.S. Marina. Paradoxicality in Modern English Poetic Discourse: Testing Boundaries of Linguistic Research in the 21st Century. This article elaborates on a paradigmatic dialogue approach to explore paradoxicality manifestations in modern English poetic discourse. It follows a "jigsaw pattern" principle predominant in linguistic research in the 21st century and kaleidoscopically integrates key notions, techniques, and methodological tools of cognitive poetics, including multimodal, cognitive semiotics, and mobile stylistics. Such an approach facilitates developing a completely new view on paradoxicality. The paper defines paradoxicality as a cognitive and discursive category, modelled on the basis of "fuzzy set" principle, which predetermines the elasticity of its boundaries and constant accessibility for new members. A number of categorial features, related to certain categorial foci, structure the category. In particular, contradiction, unusualness, boundedness, anomaly and mobility foci actualized to a different extent in multimodal poetic discourse through paradoxical poetic forms (micro-, macro- and megaparadoxical). The paper proves that paradoxical poetic forms are multimodal construals, incorporating preconceptual, conceptual, verbal, and non-verbal facets. Formation of paradoxical poetic forms is a result of linguistic and cognitive activity of addresser and addressee ensured by linguistic and cognitive processes of pre-categorization, acategorization and categorization. Cognitive and semiotic operations as well as procedures accompany each process at a certain facet of a form.

Key words: cognitive and discursive category, paradoxical poetic form, paradoxicality, focus of paradoxicality category, paradigmatic dialogue.

О.С. Марина. Парадоксальність у сучасному англomовному поетичному дискурсі: випробування меж лінгвістичних досліджень у 21 столітті. У статті застосовується підхід парадигмального діалогу до вивчення маніфестацій парадоксальності в сучасному англomовному поетичному дискурсі. Дослідження вибудовується за принципом "епістемної збірки", що домінує у лінгвістичних дослідженнях у 21 столітті та інтегрує основні поняття, техніки й методи когнітивної поезики, мультимодальної когнітивної поезики, когнітивної семіотики та мобільної стилістики. Такий підхід дає можливість продемонструвати достеменно новий погляд на парадоксальність. У сучасному англomовному поетичному дискурсі парадоксальність визначається як когнітивно-дискурсивна категорія, структурована у форматі розмитої множини, що зумовлює багатофокусну структуру і різновекторну динаміку її змістових та формальних ознак, а також розмитість категоріальних меж. Зміст категорії репрезентовано її категоріальними ознаками, реалізація яких в сучасному англomовному поетичному дискурсі зумовлена низкою гетерогенних фокусів: суперечливості, незвичності, аномальності, мобільності та межевості. Фокуси парадоксальності в різному ступені актуалізуються в мультимодальному поетичному дискурсі через парадоксальні поетичні форми (мікро-, макро- і мегапарадоксальні). У статті доводиться, що парадоксальні поетичні форми є мультимодальними конструктами, що включають передконцептуальну, концептуальну, вербальну та невербальну площини. Розкриття механізмів формування парадоксальних поетичних форм у сучасному англomовному поетичному дискурсі уможливило висновок про те, що їх творення є результатом лінгвокогнітивної діяльності адресанта й адресата в породженні й обробці інформації, закодованої у їх різних площинах. Така діяльність здійснюється

шляхом аналізу процесів передкатегоризації, акатегоризації і власне категоризації через виявлення лінгвокогнітивних і когнітивно-семиотичних операцій і процедур.

Ключові слова: когнітивно-дискурсивна категорія, парадоксальна поетична форма, парадоксальність, фокуси категорії парадоксальності, парадигмальний діалог.

Е.С. Марина. Парадоксальность в современном англоязычном поэтическом дискурсе: испытание границ лингвистических исследований в 21 веке. В статье применяется подход парадигмального диалога к изучению манифестаций парадоксальности в современном англоязычном поэтическом дискурсе. Исследование выстраивается по принципу "эпистемной сборки", доминирующего в лингвистических исследованиях в 21 веке и интегрирующего основные понятия, техники и методы когнитивной поэтики, мультимодальной когнитивной поэтики, когнитивной семиотики и мобильной стилистики. Такой подход даёт возможность продемонстрировать абсолютно новый взгляд на парадоксальность. В современном англоязычном поэтическом дискурсе парадоксальность определяется как когнитивно-дискурсивная категория, структурированная в формате размытого множества, определяющего многофокусную структуриацию и разновекторную динамику её содержательных и формальных признаков, а также размытость категориальных границ. Содержание категории представлено её категориальными признаками, реализация которых в современном англоязычном поэтическом дискурсе обусловлена рядом гетерогенных фокусов: противоречия, непривычности, аномальности, мобильности и граничности. Фокусы парадоксальности в разной степени актуализируются в мультимодальном поэтическом дискурсе посредством парадоксальных поэтических форм (микро-, макро- и мегапарадоксальных). В статье доказывается, что парадоксальные поэтические формы являются мультимодальными конструктами, инкорпорирующими предконцептуальную, концептуальную, вербальную и невербальную плоскости. Раскрытие механизмов создания парадоксальных поэтических форм в современном англоязычном поэтическом дискурсе позволило сделать вывод о том, что конструирование таких форм есть результатом лингвокогнитивной деятельности адресанта и адресата при порождении и обработке информации, закодированной в их различных ипостасях, включающая анализ процессов предкатегоризации, акатегоризации и категоризации путём выявления лингвокогнитивных и когнитивно-семиотических операций и процедур.

Ключевые слова: когнитивно-дискурсивная категория, парадоксальная поэтическая форма, парадоксальность, фокус категории парадоксальности, парадигмальний діалог.

1. Introduction

In the 21st century, scientists have produced substantial evidence that our universe is a hologram [Nomura 2017; Afshordi 2017]. Scholars argue that the contemporary world is fluid, unstable, and hybrid and people with a standard set of knowledge will soon become superfluous [Chernigovskaya 2018]. Being in the vein of global interdisciplinary or even transdisciplinary academic research, linguistics has recently faced a number of "turns", among which are cognitive, multimodal, and mobile ones. In particular, stylistics, or literary linguistics has travelled a long way from "classical rhetoric to cognitive neuroscience" [Burke 2014: 2-3]. International communities of literary linguists (PALA – Poetics and Linguistics Association 2018) are setting out to discuss advantages and problems of different methods, used alone or in synthesis, in the study of various styles focusing on the language of literature. A number of factors trigger the mentioned questions. First of all, in the 21st century the world witnesses multiplicity of "-isms" competing to "reserve a seat" in the socio-cultural arena, including, but not limited to digimodernism [Kirby 2009], metamodernism [Vermeulen 2010], and performatism [Eshelman 2008]. Secondly, diversity of new artistic forms – verbal, visual, auditory, olfactory, tactile – being generated today is striking. Every minute a novel artistic product appears, at least, in the digital Internet environment. Furthermore, poetic discourse has turned into the field of conflicting schools and movements, which give impetus to generating new and recasting existing poetic forms as well as novel means and ways of construing senses. Thus, to "adequately" explain all the changes occurring in digital and non-digital literary discourse one should resort to different methods of not solely linguistic nature, but go beyond the boundaries of linguistics in search of an effective toolkit.

Conceptualization of contemporary poetic discourse requires new, integral [Gebser 1986] literary mind, which envisages multidimensional character of construction and reconstruction of literary reality via intermingling of different kinds of poetic reasoning. The latter includes the following kinds: ecological (M. Epstein, O. Losiev), essayistic, paradoxical [Belekhova 2004; Epstein 1999], catachrestic, which presupposes juxtaposition of incongruous features of things and phenomena represented by poetic forms (I. Smirnov), transgressive, which is based on crossing the boundary between possible and impossible that is manifested in weird combinations of events, phenomena, and everyday objects described by poetic forms [Bataille 2003; Blanchot 1994], and, finally, parallaxic, which entails an epistemological shift in the observer's point of view claimed to reflect an ontological shift in the object itself [Žižek 2006: 17].

As a literary linguist, in this article I address the phenomenon of **paradoxicality**, which, as I have hypothesized and proved [Marina 2015], became a central category of modern English poetic discourse. To be more precise, the article **aims at** revealing cognitive and semiotic specificity of paradoxicality category realization in modern English poetic discourse, namely its digi- and metamodernist genres.

In linguistic terms, paradoxicality is a product of conceptualization of objects, phenomena, and events of real or imaginary world through the lens of rational (logical) and irrational (emotional, sensory) cognition, due to which in the course of addressors' (writers, poets, painters, composers) linguo-creative activity (special, defamiliarized) verbal and non-verbal forms are generated to express contradiction, incongruity, illogicality, weirdness, unexpectedness, originality and opposition. One of the evidence to support the idea of paradoxicalization of modern English literary discourse in general and poetic in particular, is a growing number of research in the fields of cognitive poetics and poetic criticism focusing on absurd, nonsensical [Gavins 2013], surreal [Stockwell 2017], impossible, unnatural [Alber 2016; Ryan 2013: 131-150], ambiguous [Vorobyova 2017: 428-496], uncreative, unoriginal, and anomalous [Goldsmith 2011; Perloff 2012] facets of present-day literary discourse.

2. Methods

Occupying the niche of unnatural, anomalous, and deviant phenomena research in poetic verbal and non-verbal communication, I adhere to a general methodological principle of paradigmatic dialogue or a jigsaw pattern predominant in linguistic research in the 21st century [Vorobyova 2013: 44], which kaleidoscopically integrates key notions, techniques, and methodological tools of cognitive poetics, including multimodal, cognitive semiotics and mobile stylistics. Such an approach facilitates developing a completely new view on paradoxicality. So, in this paper the research puzzle of paradoxicality looks as follows (Fig.1):

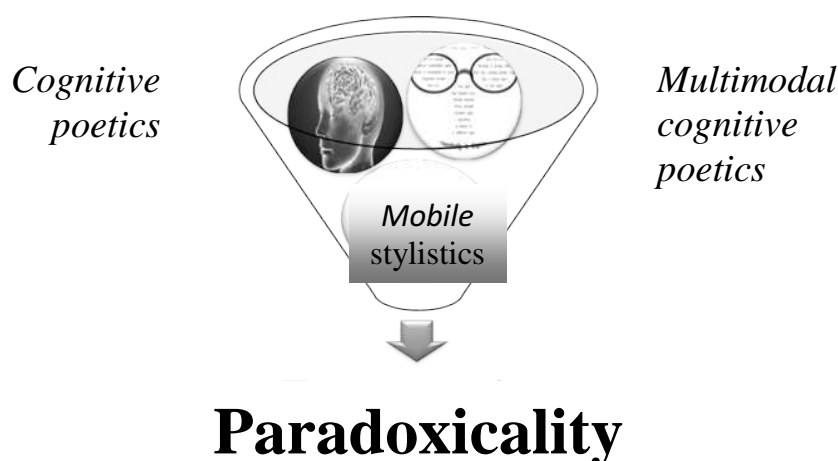


Fig. 1. Theoretical and Methodological Puzzle of Paradoxicality Category

Defining paradoxicality as a **cognitive** and **discursive category** of modern English poetic discourse, involving mental processes and discourse configurations taken in their interaction, became a result of tracing the evolution of scholarly opinion on content and forms of paradoxical reasoning expression from Antiquity to the 21st century, including specificity of their interpretation from the standpoint of paradigmatic dialogue. Paradoxicality category is manifested via paradoxical poetic forms, which emanate various senses. Furthermore, a number of linguistic and extralinguistic changes influence genesis of the paradoxicality category. Linguistic factors embrace general trends in poetic speech development, as well as ways of compositional and genre organization of modern English poetic discourse. Extralinguistic factors include types of literary mind, in which rational or irrational conceptualization of reality prevails, kinds of poetic reasoning, and, finally, ways of literary construal of reality.

Gradually assembling theoretical and methodological puzzle, the first chunk of the latter goes to cognitive poetics (L. Belehova, O. Vorobyova, M. Freeman, P. Stockwell, R. Tsur), which contributed to my treatment of paradoxicality category through cognitive lens, as well as referring contrastive tropes, such as oxymoron, paradox, antithesis, adynaton, catachresis, grotesque, and irony being an outcome of paradoxical reasoning, to paradoxical poetic forms. Conceptual oxymoron (L. Belehova, R. Gibbs, O. Marina) is a predominant conceptual scheme of the latter. Conceptual oxymoron is a way of understanding and experiencing objects, events or phenomena of real and fictional worlds via contrasting their axiologically charged features. It presupposes that our conceptualization of the world is not just metaphorical, but also paradoxical.

The second chunk in the puzzle is cognitive semiotics (L. Brandt, P.A. Brandt), which facilitated interpretation of paradoxical poetic forms as polycode signs taking different shapes and configurations in modern English poetic discourse. Polycode character of these forms means that different semiotic resources interact and integrate in their formation.

The third chunk is woven from different theories of multimodal cognitive poetics (O. Vorobyova, B. Büsse, Ch. Forceville, A. Gibbons, G. Kress, T. Van Leeuwen, N. Nørgaard). The paper distinguishes intersemioticity and multimodality of paradoxical poetic forms. **Intersemioticity** is an interaction of various codes in paradoxical poetic forms creation, in particular: verbal and non-verbal, i.e. visual, auditory, and audiovisual. **Multimodality** envisages construction of paradoxical poetic forms on the verge of different modes of a poetic discourse, which appeal to this or that addressees' sensory system.

The forth chunk of the puzzle belongs to mobile stylistics (M. Bednarek, B. Büsse, M. Sheller, J. Urry), which provides for explaining the workings of paradoxicality category from the standpoint of mobility, or moveability of its boundaries.

Etymological analysis of a lexical unit *paradox* confirmed a possibility to approach the research of paradoxical poetic forms, in particular applying a concept of **boundary**. Due to prefix *para-* it appears as a semantic primitive [Wierzbicka 1992] lexicalized as the mentioned morpheme in a number words (in the English, Ukrainian, and other languages) denoting deviant, incongruent, anomalous, and unusual phenomena, including paradoxical poetic forms.

Boundaries of paradoxicality category are characterized by rigidity within a classical approach in Antiquity. They become more flexible in the 20th century, proceeding from L. Wittgenstein's "family resemblance" principle, and transform into absolutely blurred from cognitive standpoint in the late 20th – early 21st century.

Moreover, mobility of paradoxical poetic forms is manifested in gestalt-free character of words – components of paradoxical poetic forms' semantics, in Reuven Tsur's parlance [2012]. Besides, mobility of paradoxical poetic forms may be expressed via their destruction, which can cause either their desemantization or, vice versa, new senses construal.

3. Results and Discussion

Contemporary English poetic discourse fits in the chronological framework of approximately last sixty years [Robinson 2013: 2]. Analysis has witnessed that it possesses a number of features, such as eclecticism, interactivity, non-linearity, heterogeneity, hybridity, irrationality, mobility, openness, and multimodality. Modern English poetic discourse has demonstrated a tendency towards pejoration manifested via deterioration of poetic forms' semantics, deformation of their syntactic structure, violation of lexical and grammatical combinability rules, excessive and intentional use of low-flown, taboo vocabulary.

Modern English poetic discourse characterized by different degrees of paradoxicality (low, middle, high) is represented in its main varieties – **digimodernist** and **metamodernist**. Digimodernist poetic discourse embodies digital text- and discourse construing based on "aesthetics" of intentional appropriation, plagiarism and copying by means of uncreative techniques "copy-paste" and "search-compile". It presupposes involvement of digital technologies and unfolding in virtual space, i.e. the Internet.

The term "digimodernism" was coined by the British cultural critic Alan Kirby [2009]. Actually, in his first essay "The Death of Postmodernism and Beyond" the scholar introduced the term "pseudomodernism". Digimodernism is a contraction from "digital modernism", which envisages a blend of digital technology and textuality, taking into account the (technical) process of a digital text generation, i.e. fingers and thumbs clicking, keying, and pressing [Kirby 2009: 1]. Consequently, today we are witnessing the development of a new digitally born textuality that is **digital textuality** in Alan Kirby's parlance. Digital texts are described as onward, haphazard, evanescent, anonymous, social, as well as undergoing multiple authorship and divergent readership [Bell 2014].

Additionally, the definition of digimodernist poetic discourse within the context of this article, proceeds from the concepts of "unoriginal" and "uncreative" writing, giving rise to constraint-based poetry. Within the framework of this article English digimodernist poetic discourse is subdivided into the poetic discourse of Flarf and Spam.

The founder of Flarf poetry is an American poet Garry Sullivan. The concept of Flarf has multiple meanings. In particular: 1) a quality of intentional or unintentional "flarfiness", corrosive, cute, or cloying, awfulness; 2) a work of a community of poets focusing on exploration of "flarfiness", which in early 21st century becomes an avant-garde, experimental, revolutionary poetic, even broader, artistic movement. Flarf poetic speech is characterized by intentional mistakes, taboo words, violation of lexico-semantic and syntactic links. It is meant to create "so bad it's good" poetic effect, achieved by Drew Gardner's novel technique of "google sculpting". The technique envisages creation of Flarf poetic texts from bits, pieces, and phrases predominantly borrowed from Google search results. Paradoxicality serves as the basis for both emergence of Flarf movement, in general, and often for the author's intent embodied in this or that Flarf poem, in particular. For instance, Flarfists create poetic texts about why they hate Flarf so much. In this case paradoxicality of the author's intent is manifested via contradiction between the state of affairs in real life – the poet's involvement in Flarf's creative activity – and its embodiment in the poetic text – hatred towards this activity.

WHY DO I HATE FLARF SO MUCH?

She (Sharon, Nanda) came from the mountains, killing zombies at will her Plants vs. Zombies attack. Some people cried "but that was cool!" and I could only whisper "we should NOT be killing zombies!" What have you gotten yourself to do? Did it ever occur to you that you may in fact hate yourself? I know I do . . . I'm not nearly high enough yet—and you're not helping. My group got invited to join the Flarfist Collective, set up some hibachis and do what we do best, if you know what I mean. I wouldn't have so much of a problem with this writing if it were a library and I checked out the entire world as if it were a single

book. Strike "helpful" off your list. The 4th quarter gets pretty intense and the announcers are usually trying to figure out who is going to become overwhelmed by their own arrogant nightmares. It would upset the stomach of the balance of nature. I always go red over the stupidest things and I have no clue why. Whether it's speaking in front of the class or someone asking me why I think I have the right to say anything. Why do I need an enemy to feel okay about what I'm doing? Observe yourself as you browse with ophistication through the topic of Authorship & Credibility (Gardner)

A given fragment possesses all properties inherent to Flarf poetry – prose format, weird, striking theme (*computer games with killing zombies*), use of taboo and low-flown vocabulary (*Well . . . you Hate Your Fucking Dad, BECAUSE I'm fucking ANXIOUS AS HELL about EVERYTHING. AAAAAAAAARGH*). Proper names – *Sharon, Nada* – referring to famous Flarfist lady poets (*Sharon Mesmer, Nada Gordon*), as well as lexical unit to denote this poetic movement (*My group got invited to join the **Flarfist** Collective*) serve as linguistic markers or allusions to the Flarf poetic genre. A certain author's appeal to approach search results as to authorship and credibility with due care (*Observe yourself as you browse with sophistication through the topic of Authorship & Credibility*) via an implied in nominative units feature of incongruence acquires somewhat ironical colouring. That is because the issue of "Authorship" among flarfists is in tune with "plagiarism" and "appropriation".

Why do I hate the surface of the world so much that I want to poison it? Why do I hate this so much? Well . . . you Hate Your Fucking Dad! Why is the screen so damn small? And why does the car turn so sharply? And why is the only sound I hear the sound of a raft of marmosets? BECAUSE I'm fucking ANXIOUS AS HELL about EVERYTHING. AAAAAAAAARGH. It's even worse: "I'll tell you later." The medium is literally made of thousands of beautiful, living, breathing wolves. Why do I hate the moon so much? Unpublish your ideas in reverse. People hate any new way of writing. My girlfriend really hates it. There is not so much daytime left. Life is like spring snow tossing off mercurial Creeley-like escapes from life-threatening health problems. In summer we love winter in winter we love summer – all poetry is written in social mercurochrome. Since I hate the abridgement of life, a function of needing to please unpleaseable parents is more what this is about. Hate and love–if those are the options I just want to love and hate lobsters. The oddity is not so much that Blake held these eccentric views for most of his life, but that in modern civilization they not only extend the hand, so that it could not complain about complaining about something it hadn't even bothered to read, and instead formed a halfway decent indie rock band. I'm actually starting to get much more interested in white people than I used to be. Why do I hate Flarf so much? Because it is against everything good this country once espoused. Why do I hate Flarf so much? Because of the awful conflict it places the law-abiding or police-fearing poets under. (Gardner)

In the poetic text some verbal technoimagery appears as unexpected and weird (*all poetry is written in social mercurochrome*). A word's *mercurochrome* semantic structure (liquid antiseptic of a red colour, organometallic compound, has a complex structure and contains mercury) represents denotative feature of *thingness* and signifiatory *antiseptic* and *complexity* features. As is known, mercury possesses poisonous properties. Thus, the senses generated by the given poetic image is, on the one hand, "filtering" function of society concerning poetry being created today. On the other hand, it appears that such poetry becomes an outcome of "poisonous" trends emerging in cultural and historical context of the 21st century. Conclusion: "*Why do I hate Flarf so much? Because of the awful conflict it places the law-abiding or police-fearing poets under*".

Spam poetic discourse, or Spoetry is construed primarily from the emails' subject, content or spam. On the one hand, this genre of digimodernist poetic discourse is viewed as "bursts of random,

spam-filter-busting language which somehow transcend their mundane purpose and burst into the golden light of literary glory". On the other hand, it is seen as a "literary sub-culture that has yet to be recognized by the print media", in spite of the fact that it has been around since 1990s.

Metamodernist poetic discourse evolves in constant mobility of literary forms, including poetic, between naïve modernist enthusiasm, striving for experiment and cynical postmodern irony actualized in pendulum-like oscillations of co-existing heterogeneous verbal and non-verbal poetic forms.

In modern English poetic discourse paradoxicality category is modelled on the basis of "fuzzy set" principle [Zade 1965], which predetermines the elasticity of its boundaries, asymmetry of its formal and conceptual features, fostering its multifocal structure, and constant accessibility for new members [Marina 2015]. **Multifocality** parameter of the category envisages heterogeneous foci structuring it and preconditioning realization of paradoxicality categorical features. In particular, *contradiction*, *unusualness* (see Fig. 2), *boundedness*, *anomaly*, and *mobility* foci actualized to a different extent in modern English poetic discourse through paradoxical poetic forms. I suggest that foci of paradoxicality are, on the one hand, its semantic nodes, which accumulate and at the same time generate a wide range of semantic features of paradoxicality and, on the other hand, serve as anchors in poetic texts interpretation.

In the *unusualness focus* the parameters of *weirdness* – *strange(ness)*, *weird*, *odd*, *unexpectedness* – *not commonly seen or expected*, and *mysteriousness* – *enigmatic*, *mystical* [Macmillan English Dictionary for Advanced Learners 2012; Oxford Dictionary for Advanced Learners 2009] converge as in a poetic discourse of an American metamodernist poet B. Lerner viewed as similar to "enigmatic and unexpected cryptograms encoding" ironical, sometimes even sarcastic attitude towards commercialization of present-day American culture and art, as well as towards ubiquity of advertising, harmfulness of computer environment, especially computer games, and ambivalence of social and political life [Perloff 2012: 45].

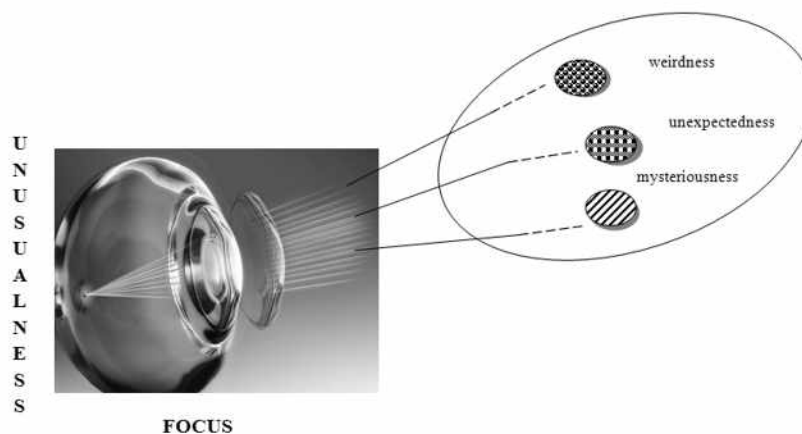


Fig. 2. Schematic Representation of the Unusualness Focus

For instance, in B. Lerner's verse "*Mad Lib Elegy*" the **unusualness** focus accumulates the features of *unexpectedness* and *weirdness*. The senses of *unusualness* and *unexpectedness* are, first of all, hidden in the poem's title. Unexpected is a combination of a word collocation *Mad Lib* (an American phrasal template game, in which players are supposed to fill in the gaps in a text by any words they wish to) and a lexical unit *elegy* (lyrical genre of *elegy* expressing *sadness*, *grief*, *mourning* and prompting to philosophical speculations).

Unusualness of paradoxical forms is manifested via *unexpectedness* of thematic shifts from a description of starving children (*There are starving children left on your / plate*), unconsciously caused harm (*There are injuries without brains*), hair removal (*Entire nations are ignorant of the basic / facts / of hair removal*), euthanasia of homeless animals (*70% of pound animals will be euthanized. / 94% of pound animals would be / euthanized*), online games (*massively multiplayer*

zombie-infection / web games) to global conceptualization of the world as a rare instance of selective assymetry (*The world is a rare case of selective / asymmetry*) or a parking lot (*There are two kinds of people in the world: / those that condemn parking lots as monstrosities, / 'the ruins of a broken World,' and those that respond to their majesty emotionally / 70% of the planet is covered in parking lots*).

The **anomaly focus** (Fig. 3) predetermines instances of *deviance* (*deviant, irregular, abnormal*) in modern English poetic discourse as deviation from language norms and standards of poetic creativity, in particular.

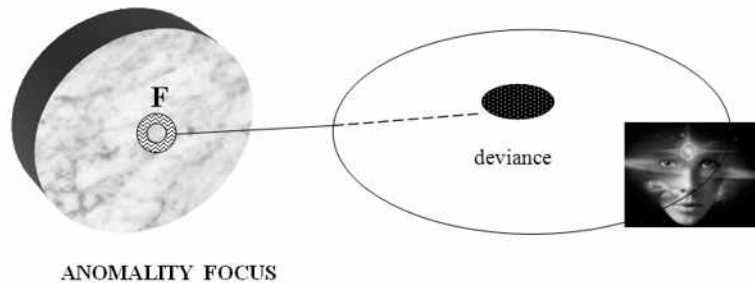


Fig. 3. Schematic Representation of the Anomaly Focus

Predominant semantic node in British poet J. Bennett's poetry is **anomaly** projecting mostly the parameter of *deviance* expressed on all levels of texts' compositional structure, e.g.:

LoOk

*my boOrn casTer l'ame my ouch
log ——— or bent the cOmb ra)labpst
book (was/////tum//bling an the
assssshes fleww : : : : : ah
air was grey insects * * * fa\\ing f
rom thye sky my stone saiiled aw
aaay na ym gol saw gniliob gnillliob)
runn a head an think k k k k k*

(J. Bennett)

Graphically capital letters function within a morphological structure of lexical units (*LoOk / boOrn*), syntactic constructions appear to be deviant. Moreover, almost complete distortion of the poem's syntactic organization gives grounds to state its disharmonious character. Punctuation marks and graphical symbols stand for letters and, sometimes, words (*book(was/////tum//bling ///// assssshes fleww : : : : : ah*).

The formal facet of the category is realised in a number of paradoxical poetic forms. Namely, I differentiate micro-, macro- and megaparadoxical poetic forms.

Microparadoxical poetic forms include words, whose outer shape is distorted, or ruptured, as in *dr ape, c, loud, p late* [Bennett 2015], nonsensical quasi-lexical units, authors' nonce-words, for instance, *erriff. ceol pliney / bracsp. ceid,oeuf,loet. seaid. ithpr.* [Inman 2014].

Macroparadoxical poetic forms embrace paradoxical poetic imagery expressed by: 1) phonographical or phonetic stylistic means, when clash of heterogeneous phonemic clusters, phonesthemes, homophones, and homographs generates implicit and contradictory senses. 2) Deviant syntactic constructions based on the principles of deformation, destruction, and asymmetry, created with the help of, particularly, enjambment, when a syntactic construction

transgresses the limits of a poem line or stanza. Violation of a syntactic whole causes restructuring of syntactic links and relations within a poetic text, which is accompanied by appearance of unexpected semantic shifts. 3) Contrastive tropes and figures, which actualize various categorial features of paradoxicality, such as oxymoron, antithesis, paradox, catachresis, adynaton, and irony.

Many of paradoxical poetic forms expressed by oxymora or paradoxes are stereotypical. In other words, they are entrenched in addressees' mind [Belekhova 2004: 304] due to recurrent use in a poetic discourse of poets belonging to different literary epochs or in other kinds of a literary discourse – visual, auditory and / or audiovisual. Functioning of such macroparadoxical poetic forms is observed predominantly in the poetry of modernism. For instance, macroparadoxical poetic forms expressed by poetic oxymora *unanswered question*, *resolute doubt*, *dumbly calling*, *deafly listening* from M. Moore's poem "What are years" are stereotypical. They have been created as a result of clash of diametrically or medially opposite semantic features characterizing components of the tropes. For instance, in a poetic oxymoron *resolute doubt* semantic features of *firmness*, *resoluteness*, and *purposefulness* characterize the word *resolute*, while another component *doubt* has opposite semantic features of *uncertainty*, *ambivalence*, and *hesitation*. In some publications the poem's title contains a question mark, which was required by publishers. However, it contradicts the author's intent, who created the poetic text as a poem-speculation over eternal life problems that does not call for an answer: *What is our innocence, / What is our guilt? All are / naked, none is safe. And whence / is courage: the unanswered question, / the resolute doubt <...> / This is mortality, / This is eternity.*

Stereotypical nature of the poetic oxymora *unanswered question*, *resolute doubt*, *dumbly calling*, *deafly listening* is explained by intersemiotic links. *Unanswered question* is a title of a musical piece of a famous 20th century American composer Ch. Ives, popular in the period when M. Moore's verse was written (1940–1950). The musical discourse embodies ideas similar to the lady poet's speculations over eternal questions of human existence. In musical auditory discourse strings perform, not changing their tempo. In such a way they recreate the silence of the druids. The trumpet poses perennial questions of existence sustaining the same tone, and flutes symbolize search by alternating tones and tempo. Dissonances and polytonality as non-verbal auditory forms correlate with paradoxical poetic forms in the poem.

Megaparadoxical poetic forms are impossible poetic worlds constructed in modern English poetic discourse. As a rule, these worlds are metaleptic ones, whose creation is based on: 1) ontological contradiction or incongruence of poetic worlds that prompts their clash, flicker or immersiveness; 2) distortion of poetic worlds' boundaries, which causes absorption of non-fiction worlds (legal, newspaper, medical discourse) by fiction (poetic); 3) blurring the boundaries of poetic worlds caused by compression of virtual non-fiction worlds constructed by means of the Internet search engines; 4) discrepancy between state of affairs in poetic and real worlds.

Paradoxical poetic forms are **multimodal construals**, incorporating preconceptual, conceptual, verbal, and non-verbal facets. Each facet is constructed and reconstructed on the verge of two or more modalities of modern British and American poetic discourse – verbal (poetic texts), visual (paintings accompanying poetic texts), auditory (poetic discourse as an outcome of videogames or street noise's acoustic environment and / or rhythm of current musical genres) and / or audiovisual (videoclips – screened or animated versions of poetic texts; poetic readings).

Preconceptual facet of paradoxical poetic forms is structured by binary oppositions of image schemas (HERE – THERE, UP – DOWN, FRONT – BACK, HEIGHT – DEPTH, CENTRE – PERIPHERY, BALANCE – DISBALANCE) as well as implicative features (e.g. the archetype of Orientation – *striving for divine* and *secular*; the archetype of Earth – *birth* and *death*), reflecting ambivalence of the archetypes content and specificity of their embodiment in modern English poetic discourse. Such specificity is predetermined by cognitive operations of image schemas transformation into conceptual schemas, namely, conceptual oxymora, which structure conceptual

facet of paradoxical poetic forms. Cognitive and semiotic operation of transgression [Bataille 2003; Blanchot 1994; Foucault 1994] facilitates actualization of paradoxical poetic forms in poetic discourse.

Formation of paradoxical poetic forms is a result of linguistic and cognitive activity of addresser and addressee ensured by linguistic and cognitive processes of **precategorization** [Belekhova 2004; Tsur 2012], **acategorization** [Gebser 1986; Atmanspacher, Fach 2005], and **categorization**. Cognitive and semiotic operations, as well as procedures accompany each process at a certain facet of a form.

Categorization includes linguistic and cognitive operations aimed at determining denotative and significative features of nominative units, which constitute paradoxical poetic forms. Precategorization is meant to explicate senses of paradoxical poetic forms' preconceptual facet activated by archetypes. It presupposes cognitive operations with their low-categorized implicative features embodied in lexical units, which are paradoxical poetic forms' constituents, whose connotations are signals of archetypes activation. Acategorization embraces linguistic and cognitive operations (extrusion, absorption, clash, overlapping) as well as cognitive and semiotic ones (intersemiotic transformations, discursive import) linking sound symbolic associations of phonological units, connotations of morphological and lexical units (verbal facet) with implicative features (preconceptual facet) and accord them with senses explicated from paradoxical poetic forms' conceptual facet and connotations encoded in visual, auditory and audiovisual paradoxical poetic forms (non-verbal facet). Acategorization ensures integrity of all paradoxical poetic forms' facets as multimodal construals.

4. Conclusions

The 21st century linguistics shatters the limits of a strictly-outlined paradigm within which this or that research may be conducted. It rather urges to blur the boundaries between linguistic and non-linguistic paradigms, whose theories and methodological tools should work in synthesis creating an interdisciplinary "harmony" in investigating complex phenomena. A paradigmatic dialogue in the study of the concept of paradoxicality facilitated its treatment as a cognitive and discursive category of modern English poetic discourse. It became possible via tracing linguistic and extralinguistic factors of poetic discourse paradoxicalization, determining an extent of its paradoxicalization, as well as revealing specificity of paradoxical poetic forms discursive realization, proceeding from the theories of moveable and blurred character of categories' boundaries (mobile stylistics) along with a partial application of L. Zade's mathematical theory of a fuzzy set, and, finally, mechanisms of emotive senses generation in synthesis of various semiotic codes, intermingling in literary communication (cognitive poetics, multimodal cognitive poetics).

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UDC 811.111'42

**“NOW THAT THE MAGIC IS GONE”
 OR
 TOWARD COGNITIVE ANALYSIS OF VERBAL/CO-VERBAL COMMUNICATION
 Alla Martynyuk (Kharkiv, Ukraine)**

A. Martynyuk. “Now that the magic is gone” or toward cognitive analysis of verbal/co-verbal communication. The paper addresses the problem created by the gap between Cognitive Linguistics usage-based theoretical commitment and the lack of empirical cognitive research on live communication. Its primary objective is to analyse advanced models of cognition in an attempt to outline basic methodological principles of cognitive analysis of verbal/co-verbal communication and, building on these principles, define the workable units and instruments of such analysis. I propose the key unit of cognitive analysis of verbal/co-verbal communication: an inter-subjective act, i.e. an inter-action including at least two verbal / co-verbal utterances (one initial and the other responsive) embedded in the complex dynamic psychic experiential context ‘shared’ by the communicants focusing attention on the same utterance as a perceptual stimulus. Such perceptual stimulus triggers parallel conscious / nonconscious inference processes involving cognition, volition, and affect to issue a command of a motivated, goal-oriented communicative and/or (immediate or postponed) social action. I also suggest analysing the process of the generation of meaning in communication in terms of inference. An inference is viewed as both a natural emergent product of conscious / nonconscious interplay of volition, cognition, and affect, triggering a communicative and/or social action, and also a tool of discovering this key structure of human psychic experience in cognitive linguistic analysis of communication.

Keywords: action, affect, cognition, communication, inference, inter-subjective act, volition.

А. Мартинюк. “Тепер, коли магія розвіялася”, або спроба когнітивного аналізу вербальної / невербальної комунікації. У статті піднімається проблема, спричинена розбіжністю між вихідним положенням когнітивної лінгвістики про те, що структура мови виникає з мовленнєвого вжитку, і відсутністю емпіричних когнітивних досліджень живої комунікації. Метою статті є аналіз актуальних моделей когніції для визначення базових методологічних принципів когнітивного аналізу вербальної / невербальної комунікації й, спираючись на ці принцип, – одиниць і інструментів такого аналізу. Пропонується ключова одиниця когнітивного аналізу вербальної / невербальної комунікації: інтерсуб’єктний акт. Інтерсуб’єктний акт мислиться як інтеракція, що включає мінімум два вербальних / невербальних висловлення (ініціальне і респонсивне), занурених у складно організований динамічний контекст психічного досвіду, ‘спільного’ для комунікантів, які фокусують увагу на одному і тому самому висловленні як перцептивному стимулові. Такий перцептивний стимул запускає паралельні усвідомлювані / неусвідомлювані інференційні процеси, що включають когніцію, волевиявлення й афект в ініціацію мотивованої, цілеспрямованої комунікативної і /або (миттєвої або відкладеної) соціальної дії. Також пропонується аналізувати процес продукування значення в комунікації в термінах інференцій. Інференція розуміється і як природний емергентний продукт усвідомлюваної / неусвідомлюваної взаємодії волі, когніції й афекту в ініціації комунікативної і/чи соціальної дії, і як інструмент виявлення цієї ключової структури психічного досвіду людини у процесі когнітивного лінгвістичного аналізу комунікації.

Ключові слова: афект, волевиявлення, дія, інтерсуб’єктний акт, інференція, когніція, комунікація.

А. Мартынюк. “Теперь, когда волшебство ушло”, или опыт когнитивного анализа вербальной / невербальной коммуникации. В статье поднимается проблема расхождения между исходным теоретическим положением когнитивной лингвистики о том, что структура языка возникает из речевого употребления, и отсутствием эмпирических когнитивных исследований живой коммуникации. Цель статьи состоит в анализе актуальных моделей когниции для определения базовых методологических принципов когнитивного анализа вербальной / невербальной коммуникации, и, опираясь на эти принципы, – единиц и инструментов такого анализа. Предлагается единица когнитивного анализа вербальной / невербальной коммуникации: интересубъектный акт. Интересубъектный акт мыслится как интеракция, состоящая из минимум двух вербальных и/или невербальных высказываний (инициального и респонсивного), включенных в сложно организованный динамический контекст психического опыта, ‘разделяемого’ коммуникантами, фокусирующими внимание на одном и том же высказывании как перцептивном стимуле. Этот перцептивный стимул запускает параллельные осознаваемые / неосознаваемые процессы, вовлекающие когницию, волеизъявление и аффект в инициацию мотивированного, целенаправленного коммуникативного и/или (сиюминутного или отложенного) социального действия. Также предлагается анализировать процесс производства значений в коммуникации в терминах инференций. Инференция понимается и как естественный эмергентный продукт осознаваемого / неосознаваемого взаимодействия волеизъявления, когниции и аффекта, инициирующий коммуникативное и/или социальное действие, и как инструмент выявления этой ключевой структуры психического опыта человека в ходе когнитивного лингвистического анализа коммуникации.

Ключевые слова: аффект, волеизъявление, действие, интересубъектный акт, инференция, когниция, коммуникация.

1. Introduction

In recent years more and more voices are heard to express their disappointment with Cognitive Linguistics project. “What attracted me to Cognitive Linguistics in the late 1980s”, writes Jordan Zlatev in one of the recent issues of “Cognitive Linguistics”, “was the promise of bringing language back to experience. Rather than just skeletal trees, meaningless symbols, computational algorithms, possible worlds and mathematical functions, etc. the door was opened toward understanding language as what it felt like: rich in imagination, rooted in the body, socially negotiated and driven by communicative needs. Even more, the pathway of the “three milestones” (Johnson 1987; Lakoff 1987; Langacker 1987) seemed to extend toward a better, and more humane understanding of the mind and the world at large. Such early enthusiasm was in many ways naïve” [Zlatev 2016: 559–560].

Though I certainly share the author’s concern, to me it seems hardly rewarding to seek solution of the problem in the analysis, even phenomenological, of words like “dog” in abstract sentences like “The dog is sleeping” / “Dogs are domestic canines” (see Zlatev’s analysis in the same article) since such data is a far cry from that of the “canonical face-to-face encounter” [Clark 1973] and for that reason is devoid of all traces of human presence – physical, psychological, social, let alone presence of the world at large – the ecological context of human existence.

However this approach highlights the cause of disappointment with Cognitive Linguistics described by Zlatev which is a strikingly wide gap between its usage-based theoretical commitment and an obvious lack of empirical cognitive research on live communication. In this connection rather refreshing is Alan Cienki’s appeal “to take usage-based commitment seriously” since, in his words, “[d]iscussion of the place of studying multimodal communication within Cognitive Linguistics leads to consideration of broader political, economic, and sociological factors in academia which can play a role in determining the future of the field” [Chenki 2016: 603].

In view of the problem outlined above the objective of this article is to analyse advanced models of cognition in search of the insights that can lay down methodological principles of cognitive analysis of verbal/co-verbal communication and, building on these principles, focus on the units and instruments of such analysis.

2. An inter-subjective model of cognition as a ground for understanding language

The problem we are currently facing seems even more acute from the perspective of the relatively recent theoretical proposal called *the new science of mind* [Thompson 2007] (not to be confused with the *theory of mind* it actually opposes) – an emerging interdisciplinary field of cognitive science including philosophy, neuroscience, psychology, sociology, anthropology, linguistics, and other social sciences “transgressing the boundaries of their respective fields” [Zlatev 2012: 6].

Springing from the *enactivism* [Varela et al 1991] as one of the cluster of related models of cognition dubbed 4Es: *embodied*, i.e. involving more than the brain, including a more general involvement of bodily structures and processes; *embedded*, i.e. functioning only in a related external environment; *enacted* involving not only neural processes, but also things an organism does; *extended* into the organism's environment [Rowlands 2010: 51–85], the new science of mind explicitly posits itself as a welcome alternative to classical cognitivist tradition in its both “first generation” and “second generation” forms since the latter “was and continues to be centered on notions such as “computation”, “information processing” and “symbolic representation”, being divorced from “first-person” (phenomenological) experience of the world [Zlatev 2012: 6].

The main stance of the new science of mind is that human cognition (and consequently – language) can and should be explained in terms of *inter-subjectivity*, i.e. human capacity of “sharing experiential content (e.g. feelings, perceptions, thoughts, linguistic meanings) among a plurality of subjects” [Zlatev 2008: 1], “not only, and not primarily, on a cognitive level, but also (and more basically) on the level of affect, perceptual processes and conative (action-oriented) engagements” [Zlatev 2008: 3].

The concept of inter-subjectivity emerges from recognising *motion* and *emotion* the crucial ingredients of all cognitive processes governing all human physical and social engagements.

This belief brings together several more or less tightly interconnected trends of cognitive research which have roots both in phenomenology (primarily, Maurice Merleau-Ponty [1945/1962]) and neurophysiology (see more about it in 2.5) and strive to integrate phenomenological philosophy with neuropsychology, celebrating the ideas of “embodiment” [Lakoff, Johnson 1980], “enaction” [Varela et al 1991], “active perception” [Noë 2004], “extended mind” [Clark 1998, 2008], “distributed cognition” [Hutchins 1980, 1995], “situated cognition” [Barwise, Perry 1983; Brown et al 1989; Greeno 1989, 1998; Lave, Wenger 1991], “animation” [Sheets-Johnstone 2012], and also those stressing the key role of affect / emotion in cognition [Watt 1998; Damasio 1999, 2003; Panksepp 1998, 2000].

All these trends focus on complex psychophysiological phenomena, which should be given a closer look since they are basic for understanding both cognition and language/communication.

2.1. Embodiment from a third person and first person perspective

The pioneers of the embodied cognition tradition ground abstract human concepts in basic actions and bodily orientations identifying human cognitive activity with constructing metaphors [Lakoff, Johnson 1980; Lakoff 1987; Lakoff, Turner 1989; Lakoff, Johnson 1999; Lakoff, Núñez 2000]. For example, the experience of ‘UPNESS’ is claimed to be shaped by the specificity of the human body that defines the way it interacts with its environment. Such emotion as love is structured in terms of a journey, i.e. our common bodily experience that we have as creatures who move through the world to achieve certain purposes and goals – heading off together, finding ourselves at crossroads, dead-end streets, or on the rocks, getting off the track, taking wrong turns, or spinning our wheels, etc. Time is conceived as a moving object, i.e. time is moving and we are standing still, or as a stationary we move through, i.e. we are moving and time is standing still. In motion metaphors changes are seen as movements and a line represents the path of a moving entity from left to right.

Identifying *the dependence between human cognition and human body* is a giant step forward compared to computational cognitivist tradition conceptualising central cognitive processing (“cognition in the narrow sense”) in abstraction from bodily mechanisms of sensory processing and

motor control. But this step is not enough from the phenomenological perspective of first person experience since metaphoric mappings are all about *how people understand their experience*, but not about *what people feel going through that experience*.

Mapping love in terms of journey, madness, war, patient, physical force, container, physical contact, or whatever else does structure this emotional concept which is “not clearly delineated in our experience in any direct fashion” so that it could “be comprehended primarily in-directly, via metaphor” [Lakoff, Johnson 1980/2003: 85] but it still tells us less about the emotional state experienced by a person in love than does this simple if not banal pop song taken at random from the charts of the 60-s:

*Whenever he calls my name
Sounds so soft, sweet, and plain
Right then, right there
I feel this burning pain
Has high blood pressure got a hold of me
Or is this the way love's supposed to be?
It's like a heat wave ... burning in my heart!*

(“Heat Wave,” a song by Martha & The Vandellas that first hit the charts in 1963)

In a similar way mapping motion in terms of “entity moving from left to right” tells us nothing about the complex kinesthetic dynamic of movement that carries us through every day of our lives. Addressing movement as “change of position” is an instantiation of what Maxine Sheets-Johnstone calls “received ignorance” about movement: “received ignorance is meant pejoratively not toward individuals but toward habits of thought that pass for received wisdom” [Sheets-Johnstone 2012: 37]. “To begin with, movement does not have a “position”, so it cannot possibly change it. Furthermore, we clearly improperly define ourselves-in-movement as “changing position”. While in moving about in our everyday world – in writing our name, washing our face, sweeping the floor, or getting into a car – we indeed change “positions”, we do so only from a third person, analytical, object-in-motion perspective. We ourselves are involved not in anonymous happenings taking place between two – or even more different positions as we move in distinctive and innumerable ways throughout the day, but in rich and complex qualitative kinetic dynamics” [ibid: 38].

Another piece of received ignorance about movement is the belief that movement “takes place in time and space”. There is no objection to this claim from an objective (third person) point of view but phenomenological analysis (see Sheets-Johnstone’s detailed description of *tensional*, *linear*, *areal* and *projectional* qualities inherent in movement [ibid: 37–41]) exhibiting the difference between *perceiving one’s movement as an objective happening* and *feeling one’s movement as a qualitative kinetic dynamic*, makes it clear that “movement differs from objects in motion in creating its own time and space” [ibid: 39]. The specificity of “kinesthetic sensations” is that we do not experience movement (to some extent, it probably explains the persistence of the objective view of movement as “change of position”, registered in dictionaries) “in the way we experience a twitch or an itch, a darting pain, a flash of light, a chill, or a peppery taste <...> sensations are *temporally punctual and spatially pointillist phenomena*. They are discreet bodily sensed events, *momentarily here-now bodily experiences*. <...> We do not experience our everyday movement – reaching for a glass, opening our arms to hug a friend, and so on, movements that are indeed voluntary – as a series of discreet moment-by-moment, place-by-place kinetic happenings, now-here, now-here kinetic events. What we experience is the *kinesthetic feeling of a qualitative kinetic dynamic*. <...> Moreover, <...> *it can be shown to coincide formally with emotions, with feelings in an affective sense*” [ibid: 40–41].

This link between our first person kinesthetic experience and affect seems crucial for understanding cognitive processes underpinning our physical and social (including verbal and co-verbal) interaction with the world.

2.2. Diversity of enactment

Trying to cope with the problem of a third person view of motion and emotion, incompatible with phenomenological ideas, recent enactivist accounts of cognition put forward what they call “dynamical, active view of emotion along with an affect-laden view of motion” [Zlatev 2012: 6].

Most enactivists start from the same idea: no explanation of cognition can ignore the fact that conceptual understanding is rooted in our bodily actions as we interact with the environment. But at this starting point views diverge.

Some support an ‘external version’ of embodiment making emphasis on the environment to place conceptual understanding beyond the brain and the rest of the body. Thus proponents of the *extended mind* theory argue that mental processes extend beyond the body boundaries to include aspects of the environment in which an organism is embedded and with which it interacts [Clark, Chalmers 1998; Clark 2008]. In a similar way, supporters of the *distributed cognition* theory claim that mental content is non-reducible to individual cognition and is more properly understood as off-loaded through social and technological means into the environment, where it becomes available to other individuals [Hutchins 1980, 1995].

Others put forward an ‘internal version’ of embodiment placing emphasis on the processes inside the organism to ground conceptual understanding in the *active perception*, i.e. physical adjustment of the sensory organs of an individual focusing on and processing incoming stimuli while in actual or imaginary movement / action [Noë 2004].

Mainstream proponents of the enactivist tradition share the ‘middle version’ of embodiment stating that cognition arises through a dynamic interaction between an acting organism and its immediate environment which it selectively creates through its capacities to interact with the world [Varela et al 1991; Thompson 2008]. They build on the biological notion of autopoiesis which describes living organisms as active, adaptive, self-maintaining and self-reproducing systems, being “structurally coupled” with their environment, embedded in sensory-motor dynamic of changes. This continuous dynamic is addressed as a rudimentary form of cognition, i.e. behavior of an organism “with relevance to the maintenance of itself” [Maturana, Varela 1980: 13].

Francisco Varela, Evan Thompson, and Eleanor Rosch originally defined *enaction* as “a history of structural coupling that brings forth a world <...> through a network consisting of multiple levels of interconnected, sensorimotor subnetworks” [Varela et al 1991: 206].

Their emphasis on the structural coupling of brain-body-world is underpinned by the classical phenomenological idea that cognitive agents bring forth a world of meaningful experience by means of the activity of their *situated living bodies* (see [Merleau-Ponty 1945/1962]). The metaphor of “bringing forth a world” implies that “cognition is not the representation of a pre-given world by a pre-given mind but is rather the enactment of a world and a mind on the basis of a history of the variety of actions that a being in the world performs” [Varela et al 1991: 9].

At this point enactivism overlaps with the *situated cognition* tradition which claims that conceptual understanding is inseparable from doing/acting and all knowledge is situated in the activity bound to social, cultural and physical contexts [Barwise, Perry 1983; Brown et al 1989; Greeno 1989, 1998; Lave, Wenger 1991]. It is hard not to notice that this tradition owes many of its insights to Lev Vygotsky who decades earlier stated that *all higher psychic functions first emerge as forms of social-cultural interactive activity* [Vygotskij 1934: 281–282].

In explaining psychophysical nature of interaction both traditions feed on James Gibson’s idea of *affordances*, central to his proposal of the ecological psychology. Gibson defines “affordance” as properties in the environment that present possibilities for action and are available for an agent (human or animal) to perceive directly and act upon. In Gibson’s words, “[t]he affordances of the environment are what it offers the animal, what it provides or furnishes, either for good or ill” [Gibson 1979: 127].

Gibson’s idea that affordances are directly perceived by an agent instead of being mediated by mental representations is shared by enactivists in that the enactivist program practically gives the

role of cognition away to the inherent capacity of an organism to manifest an appropriate degree of *attunement* to the features of the immediate environment (threats and opportunities) with these features being specified in terms of the organism's capacities for activity. So the organism's intelligent behaviour with respect to such features does not require computation or deliberation to translate information about objective features of the environment into terms relating to the organism's capacities, activities and interests, since the organism is already attuned to its environment in just such terms (for a detailed analysis see [Ward, Stapleton 2012]).

Some enactivists take this idea as far as to explicitly ground human cognition in the *direct perception* of overt actions in face-to-face communication, addressing these actions as “natural signs” humans are able to understand directly without “the manipulation of representations or any inferential thought” being “intentionally directed at the intentional and affective attitudes of others” [Hutto 2006: 165–166].

This discussion brings us to the issue of a *mental representation* and its role in cognition and language/communication.

2.3. Complexity of a mental representation

The term “representation” has been a source of confusion in recent literature. There is the computational approach to mental representations [Newell, Simon 1972; Fodor, Pylyshyn 1988] based on at least three fundamental principles: 1) information conveyed by a mental representation exhibits no modality-specific feature (in this sense, representations are autonomous from perceptual systems, bodily action, and their operational details); 2) knowledge is organised propositionally, with the meaning of words emerging from their relations to internal symbols; 3) internal representations are used to instruct motor programs, which are essentially separate and independent from cognition; hence, cognitive processing is not inextricably shaped by bodily actions [Wilson, Foglia 2015].

And enactivists are right to reject this approach for treating representations as “meaningless symbols that map into the external world and are manipulated by mental calculators” [Ellis, Newton 2012: 75]. However, one can't agree more with Raph Ellis and Natika Newton in that “if they do so by denying a role of representation in any sense of the term, enactivism will fall” [Ellis, Newton 2012: 75]. In this context rather promising is Ellis and Newton's proposal grounding conceptual understanding in our early motor movements in infancy which lay down experimental patterns that become the basis for action representations [ibid: 65].

They begin with stressing the difference between representations as *visual images* and representations as *action images*. Traditionally the term “image” refers to sensory visual images representing “what I would look like doing the action”. Unlike visual images, action images represent “the way my body feels when doing it” [ibid]. Like sensory visual images, action images are reproductions of earlier experiential traces of performing the actions and they represent actions in that they can be used in planning, initiating, and evaluating these actions.

Ellis and Newton argue that “very primitive forms of these images are laid down during the original thrashings and flailings of the infant even before voluntary movement becomes possible. They are the results not only of *sensory input* produced by the action, but also of the “efferent copy” (by “efferent” they mean “nervous activity that normally would lead to some bodily movement, unless inhibited to form action imagery” [ibid: 70] – A.M.) – *the action pattern* that the motor system saves in issuing a motor command, and *the memory of the emotional valence of the action* – was it successful or frustrating in trying to reach the toy? The infant produces an initial repertoire of these action images, which it can then draw upon, consciously or unconsciously, when it is ready for volitional action. Involuntary reaching for a desired toy provides imagery of all the arm's motions, as well as of the desirable toy; when more control is gained, the infant can select from that repertoire the movements that were most successful in attaining the goal” [ibid: 66].

This idea of a mental representation is fundamentally different not only from the computational view where a representation is *amodal* and hence divorced from the bodily

experience of interacting with the world, but also from the view of cognitive semanticists addressing linguistic meaning (semantic structure) as a partial and incomplete representation of conceptual structure (encyclopaedic knowledge) which is *multimodal* since it arises from the bodily experience of interacting with the world and also relies on introspective experience involving reflection on our inner bodily, emotional and mental states.

Cognitive semanticists view mental processes in terms of the imaginative projection of bodily experience onto abstract cognitive models like frames [Fillmore 1982], domains [Langacker 1987], image-schemas [Johnson 1987], idealised cognitive models [Lakoff 1987], mental spaces [Fauconnier 1985], etc.

Since *frame* seems to be the prototypical model in the above list, and also has different interpretations being used in different fields of research, it seems appropriate to have a closer look at what it means in cognitive semantics.

Cognitive semanticists basically view *frame* in Charles Fillmore's interpretation as "any system of concepts related in such a way that to understand any one of them you have to understand the whole structure in which it fits" [Fillmore 1982: 111]. For instance, COMMERCIAL EVENT frame includes at the very least such participant roles as BUYER, SELLER, GOODS and MONEY engaged in a particular semantic relationship [ibid: 116–117]. For purposes of modelling encyclopaedic knowledge this visual third person experience schema is reduced to a *proposition* – an even more abstract schema addressing participant roles in terms of arguments (semantic roles), i.e. abstract concepts like AGENT, PATIENCE, INSTRUMENT, RECIPIENT, etc. which depend on the predicate to specify the relations between them, e.g. [BUYER-agent *buys* GOODS-patience from SELLER-donor with MONEY-instrument].

Cognitive semanticists' models organise 'static' *declarative knowledge* (i.e. conscious precise memories and recognition of objects and events as expressed through language) which is distinguished from 'dynamic' *procedural knowledge* (i.e. implicit memory of psychomotor processes as procedures that have become automatic and nonconscious) [Anderson 1976]. A somewhat analogous scheme was proposed by Karl Popper and John Eccles to distinguish between *implicit memory* that organises deeply ingrained linguistic-semantic and psychomotor processes (such as gestures, speech, writing, reading, walking, common tool handling, etc.), relatively unaffected by events, and *explicit memory* which is linked to specific events and objects (such as faces, patterns, different kinds of conceptual information, etc.) and needs repetition to be sustained [Popper, Eccles 1977].

Procedural knowledge is thought to be structured by *scripts*. Originally, *script theory* emerged as part of the *affect theory* developed by Silvan Tomkins in the 40–60-s of the last century [Tomkins 1979]. Tomkins studied humans' affects, i.e. emotional responses to stimuli and noticed that the purely biological response of affect may be followed by *awareness of what we cognitively do in terms of acting on that affect*. In his script theory, the basic unit of analysis is called a "scene", i.e. a sequence of events linked by the affects triggered during the experience of those events. Tomkins recognised that our affective experiences fall into patterns which constitute scripts that *inform our behavior in an effort to maximise positive affect and to minimise negative affect*.

Roger Schank and Robert Abelson extended Tomkins' theory to use scripts as a model of representing procedural knowledge in artificial intelligence work. They address a script as a schema structuring a canonic sequence of events in some socio-cultural context [Schank, Abelson 1977: 151], e.g. a script for drinks in a restaurant would involve: *finding a seat, reading the menu, ordering drinks*, etc. Since artificial intellect is not capable of emotion, affect naturally moved out of the focus of Schank and Abelson's script theory. Their theory eventually developed into a method for computer reasoning (case based reasoning) also used in everyday human problem solving. This method is rule-driven, based on analogy and it incorporates four algorithmic steps: retrieve (given a target problem, retrieve from memory cases relevant to solving it); reuse (map the solution from the previous case to the target problem); revise (having mapped the previous solution

to the target situation, test the new solution in the real world (or a simulation) and, if necessary, revise); retain (after the solution has been successfully adapted to the target problem, store the resulting experience as a new case in memory) [Agnar, Plaza 1994]. A variety of scripts schematising knowledge about various types of speech situations are also referred to as *speech event frames* [Saville-Troike 1987] – schemas that are thought to structure knowledge about styles and registers of language use, licensing certain lexical items and grammatical constructions and contributing to their interpretation. For example, we have speech event frames for fairytales, academic lectures, spoken conversations, obituaries, newspaper reports, horoscopes and business letters, among others. In other words, these speech event frames contain schematic knowledge about styles or registers of language use [Evans, Green 2006: 228].

It seems that frames and scripts focus on different parts of a psychic act both missing the idea of *a psychic act as an indivisible whole*. Frames take into account perceptual and cognitive (in the narrow sense) processes involved in interpretation of the material world, but ignore action while scripts focus on action (sequence of actions) to perform a task / solve a problem, but, having lost touch with affect, ignore psychic processes, triggering action.

The problem of inattention to action in psychophysiological theory was raised in the middle of the 19th century by Ivan Sechenov who recognised that *a psychic act begins with perception of the world and ends in an action*. Discussing the problem, Sechenov asks a rhetoric question whether it is acceptable “to tear apart what is united by nature”, i.e. “tear the element of consciousness from its beginning, external impulse, and its ending, action; tear out the middle, isolate it, and oppose it to the rest as the psychic to the material” [Sechenov 1947: 240].

From a different angle the importance of action was accentuated at the beginning of the 20th century by Mikhail Bakhtin. Action is an integral part of his dialogical conception of language and culture. He asserted that interpretation of language signs does not equate passive understanding; it is a “*responsive understanding of a delayed action*: sooner or later what was heard and actively understood will responsively materialise in speech or behaviour of the listener” [Bahtin 1979: 246–247].

This idea is fully consistent with the phenomenologists’ and neurologists’ view of the brain as “a dynamic organ” [Sheets-Johnstone 2012: 48]; the organ for movement that functions as integral whole on behalf of “a preparation for response” [Sperry 1952: 301] (see more about it in 2.5).

Unfortunately, the problem of inattention to action, outlined by Sechenov, is still with us. Going back to frames and scripts, it should be noticed that as a result of inattention to action triggered by affect both frames and scripts provide a purely rational, logical account of psychic processes including interpretation of linguistic signs.

However, neurological data show that though we certainly engage in rational reasoning, this is hardly the way our mind operates most of the time: nonconscious thought processes operate in parallel to the conscious stream of thought: “[c]omputational rule-bound processing, as expressed in logical or mathematical reasoning, must be seen as a high-level process – more akin to something we *painfully learn and force our minds into*, rather than a basic, natural working of the mind” [Hardy 1998: 6].

Natural thought processes appear to be nonlogical, “arational” [Reber 1993], underpinned by low-level spontaneous nonlinear connective dynamic where intuition, creativity and insights prove more powerful than linear reasoning [Hardy 1998: 216]; see also [Kihlstrom 1996]. For instance, such mental act as a statement during a dialogue “relies on numerous nonconscious processes, both at the semantic and at the neural level (e.g., search for the right words, the building of a grammatically correct sentence, tones and gestures, quasi-automatic adaptation to the other person’s style of communication, etc.). At the neuromotor level, it involves activation of neural pathways and brain areas, psychomotor coordination of the larynx muscles, coordination of diverse sensory maps, control of posture and spatial orientation, and so on. In short, even in the simple act of forming a single statement, the mind triggers – and somehow directs – extensive nonconscious processes, searches, and computations at both neural and linguistic levels. In critical situations, we

may experience extremely rapid and intelligent reflex actions that have not been consciously thought out or decided upon – for example, bringing a car out of a dangerous skid without ever having been in that situation before (or ever being instructed in the proper way to control a skid). Unlike a mere automatism (e.g., jerking one’s hand away from a very hot surface), *such actions involve a complex assessment of the situation and rapid adjustments and error correction*. They thus underscore the existence of processes that, ***although lying beyond the conscious self, are nevertheless intelligent and goal-directed***. [Hardy 1998: 28–29].

Nonconscious mental processes are *goal-oriented* in the sense of self-organisation, i.e. they are implicitly oriented toward goals we need to attain for maintaining ourselves as living organisms seeking homeostasis. Our inter-action with the world (verbal and co-verbal interaction in the first place) is always implicitly or explicitly oriented toward satisfying our needs and purposes; it is exactly what our survival is all about – social no less than biological.

Attaining homeostasis requires a *motivated action* (conscious or unconscious, since (paradoxical as it may sound) a motivated action is not necessarily conscious (see [Ellis, Newton 2012])). And a motivated action is not possible without *emotional evaluation of the valence of the action*. So it is only natural that more and more experimental data [Watt 1998; Damasio 1999, 2003; Panksepp 1998, 2000] prove emotion to be not only an indispensable ingredient of consciousness in all modalities, but the condition of its functioning: “we can gradually eliminate cortical areas without eliminating “core consciousness”, whereas if we knock out emotional areas, all types of consciousness become impossible” [Ellis, Newton 2012: 67].

This means that to execute cognition and communication a mental representation should account for a goal-oriented motivated action, and, consequently, for emotion that issues a command for a motivated action. In the opposite case we are left with naked rationality of abstract models in which logics of brilliant scientific minds are confused with happenings of a real brain.

2.4. The difference emotion makes

So, in Ellis and Newton’s framework the desired objects – like the toy – are understood in terms of initial movements/actions as attainable by means of those actions; i.e. the toy is an early “affordance” in the infant’s environment.

Radically new in their proposal is the account of the role emotion plays in motivating action commands in terms of which the action affordances of environment are understood; the account which eventually leads to recognition that *representations of the goals of motivated actions and emotions motivating those actions* are “*indispensable part of the actual substrates of consciousness*” [Ellis, Newton 2012: 64].

Ellis and Newton suggest that afferent input (by “afferent” they mean “resulting from receiving and transformation of incoming perceptual information” [ibid: 70] – A.M.) may be necessary for conscious perception only in the way that the perceived object is necessary. Afferent input affects the what-content of consciousness, but is not sufficient, at least not by itself, to execute the consciousness. *The actual consciousness is executed by self-initiated action commands, which ground the action imagery* [ibid: 64].

What Ellis and Newton actually say is that executing a voluntary action, (or at least imagining ourselves doing so) we have to be able to (consciously or nonconsciously) form an image of ourselves performing the action that is rich enough to be used *to plan* the movement and the achievement of the goals of the action. In planning a voluntary action we activate the various images and simultaneously inhibit them from triggering actual movements. And that means that initiation of a voluntary action is not possible without some kind of representation. Action images are necessary for conscious action because we must try out the various hypothetical experiences that will result from the various choices, and compare them. Comparing, we are paying attention to the *feelings aroused by the various images* and these positive or negative feelings motivate our choice of the action. And moreover, this *motivated attention brings us to consciousness* [ibid: 67].

It seems, Ellis and Newton's proposal sheds more light on the role of emotion in cognition than quite a number of phenomenological and neurophysiological accounts observing the correlations between emotion and cognition/consciousness, "without emphasising <...> the capacity for action as the missing element in non-conscious information processing" [ibid: 58]. For instance, for Antonio Damasio who treats emotions as "brain states and bodily responses" and claims that "feelings are functionally distinctive because their essence consists of the thoughts that represent the body involved in a reactive process" [Damasio 2003: 86] *emotion* is a result of receiving interoceptive (encompassing the sense of the internal state of the body – A.M.) afferent signal which is not different from receiving an afferent signal when perceiving an external object. In both cases the signal is afferent in that it travels toward the central nervous system from more remote areas – either the body's extremities, or the viscera (the internal organs of the body – A.M.). So, in Damasio's view the conscious feeling results from a receiving of interoceptive information, not from the initiating of an action command. As a result, "introducing feeling and emotion into the traditional perceptual model of consciousness adds no further participation on the part of the subject, who still remains a passive recipient of interoceptive signals" [Ellis, Newton 2012: 62].

Ellis and Newton underline that most enactivist accounts of consciousness, at least in principle, acknowledge that emotion is inseparable from self-motivated, consciousness producing activity on the part of the subject. But emphasising the importance of action as a necessary grounding of consciousness these accounts fail to stress the difference between *action* and *mere reaction* which is interconnected with the *difference that emotion makes* [Ellis, Newton 2012: 58].

The criticised view is clearly illustrated by Varela's description of *emotion* as "the tonality of the affect that accompanies a shift in transparency" ("unreflected absorption" in the world accompanying our everyday activities) and *affect* as "a broader dispositional orientation which will precondition the emotional tone that may appear" [Varela 1999: 299–230]. In simpler words it means that emotion is seen as a kind of switch which brings us back to conscious state from our "unreflected absorption" in the world when there is a sudden break in our "coping" with some familiar practical task – using Heidegger's classic example of "hammering" [Heidegger 1962: 98], when "the hammer slips and lands on the finger" [Varela 1999: 299].

This view fails to grasp what Sheets-Johnstone calls "affectively-felt dynamic contours" of emotion [Sheets-Johnstone 2012: 49], i.e. semantic congruency between emotion and motion which motivates action. This idea underpins a broader perspective of the "living dynamics of affectivity and cognition" [ibid: 47] captured by the concept of "animation" which grounds our capacity to make sense of ourselves as well as make sense of others in the "synergies of meaningful movement", informed by "spatio-temporal-energetic concepts" [ibid: 46].

In Sheets-Johnstone's view affectivity is inseparable from cognition in that affectivity is not a "state" of an organism but a "framework", *motivating* and *articulating* "a *movement-perceptual-cognitive relationship*" [ibid: 47] in which cognition is also inseparable from movement as "*cognitive achievements are consistently the result of thinking in movement*" [ibid: 50]. As for "transparency", it is accounted for by such a cognitive activity as *learning*, i.e. "kinetic-affective-cognitive engagement with the world" which with time makes "doing" so familiar that we become "unreflectively absorbed" in it [ibid: 49]. Sheets-Johnstone roots transparency in the qualitative tactile-kinesthetically felt kinetic dynamics of motions in learning described by Alexander Luria as *kinesthetic/kinetic melodies*.

Luria, who developed Vygotsky's ideas, applied this description to *speech* addressing it as *an inter-subjective psychic activity similar in nature to any other types of higher psychic human activity*. He also identified two conditions allowing its development: firstly, it should initially rest on some external anchors like knots tied to remember a thing or words/letters written down not to forget a useful thought; secondly, it should rely on painstaking and complex conscious learning: thus learning to write presupposes activation of a graphical image of every letter in a word and is executed by a series of isolated motor impulses each of which enables completion of just one

element of the graphic structure; but with time, as a result of exercising, the structure of this process radically changes and writing turns into an automatic kinesthetic melody [Lurija 1973/2003: 296].

The above discussion has at least two important implications. It reminds that our everyday automatic nonconscious *re-active* engagement with the world results from conscious *active* learning which is impossible without representations of visual images of external objects and motor images of our inter-actions with these objects. It also reminds that our conscious actions are motivated by feelings aroused by those objects and apprehension of the prospective goals we may achieve interacting with those objects.

In spite of its tremendous importance in cognitive (in the broad sense) processes the role of *emotion, motivating action* escapes practically all existing theories of language and specifically theories of linguistic meaning.

2.5. Interplay of action and perception, emotion, cognition: a glimpse of experimental data

The inter-subjectivity proposal, implying that our capacity to interact with the world rests on the interplay of perception, emotion, cognition and action, is fully consistent with quality psychophysical and neurophysiological experimental data, dating from the 19th century till today. Specifically, it correlates with Hermann von Helmholtz' idea of "unconscious inference", a product of visual perception, needed for guiding all actions of our self in the world [Helmholtz 1925]; Charles Sherrington's account of the integrative action of the nervous system, attributing the power of cognition to knowledge inferred through the "extero-ceptive projiciency" (anticipation of the satisfaction of vital needs by "distant receptors" (those perceiving smell, light, sound "at a distance")), guiding our "integrated self" by "affective appraisals" of senses which measure values of objects taken up by the body [Sherrington 1906]; Nikolai Bernstein's theory of prospective motor control executed by generating "motor images" for desired movements [Bernshtejn 1966]; Roger Sperry's discovery of the capacity of the brain to predict the consequences of movements with "images" of the internal effects and the eventual engagements with environment [Sperry 1952]; Alexander Luria's notion of kinesthetic/kinetic melodies [Lurija 1973, 1975, 1979].

Discovery of *mirror neurons* in the 1980-s, also referred to as *resonance systems*, proved that brain actions predictive of the consequences of moving can be used not only to guide movements of the self, but also to detect and evaluate the motivation of others and, this, in Colwyn Trevarthen's words, "revolutionized psychological theory of both subjective and inter-subjective regulations" [Trevarthen, Frank 2012: 265].

Mirror neurons were originally discovered in the macaque monkey [Di Pellegrino et al 1992] and later were identified in the human brain [Fatiga et al 1995]. In a nutshell, mirror neurons are neural systems which are located in the premotor cortex and parietal areas and are activated when subjects: 1) intentionally *act* in specific ways (classic examples are reaching and grasping), *observe* the same kind of action, *imagine* such action [Jeannerod 1997; Ruby, Decety 2001]; 2) *experience* certain *emotions* and *observe* others experiencing these emotions [Adolphs 2003] (for further details see [Gallagher 2012]).

In recent years this line of research has been extended to processing linguistic information to show that words recruit the same neural systems that are engaged in actions and emotions represented by their meanings [Vigliocco et al. 2009]: words for action activate the motor system [Pulvermuller, Fadiga 2010], emotion-laden words activate the limbic system, the complex of emotional centers in the brain, in particular in the right hemisphere, which is strong in processing prosody, and gesture [Landis 2006].

Going back to Ellis and Newton's action images it should be noted that they correspond to the sense of action image in Marc Jeannerod's usage: they are initiated in the cerebellum and the motor cortices and precede implementation of overt actions and they represent *what it would feel like* for the subject to perform an action [Jeannerod 1997]. So, put into the context of mirror neuron's

discovery, action images contribute to the explanation of inter-subjectivity in that they ground it in the natural acquisition of the earliest concepts of other persons.

Mirror neurons hypothesis is also fully consonant with ideas of developmental scientists, primarily Trevarthen who in the past 40 years has demonstrated that “humans are motivated from birth to act and learn as persons who intend to relate to other persons” [Trevarthen, Frank 2012: 263]; and children learn the socially accepted meanings that constitute a “culture” with its traditional practices and language through “innate impulses to move as coherent intentional and conscious selves in emotional engagement with the sensitive responses to the intentions of other persons in inter-subjectivity” [ibid].

The issue of inter-subjectivity, grasping cognitive, affective, perceptive and conative aspects of human interaction with the world, lays down methodological assumptions which seem fruitful for understanding a human language.

3. An outline of an inter-subjective model of linguistic analysis

It is obvious that an inter-subjective model of language has to be a cognitive(in the broad sense)-communicative model since face-to-face communication is the only natural medium where we can observe and investigate the complex interplay in which our kinaesthetic-perceptive-affective-volitional-cognitive(in the narrow sense)-conative first person experience of interaction with and in the world becomes ‘shared’ to ensure the attaining of our needs and purposes.

An inter-subjective model of language is naturally opposed to its symbolic model that rests on the idea of a semiotic code put forward by Ferdinand de Saussure at the beginning of the last century and readily embraced a little more than half a century later by computational cognitivists whose abstract, amodal, symbolic representations, labelled by words, are recognisable echoes of Saussure’s arbitrary symbolic language signs.

The same idea underpins the code model of communication – the assumption that people understand each other through encoding and decoding messages contained in linguistic signs as if they were containers with meanings. To be able to communicate people just have to know these correlations between forms and meanings of linguistic signs and the rules of combining them to express all kinds of ideas.

In many ways an inter-subjective model of language goes beyond the cognitive semanticists’ proposal, since stressing the importance of bodily experience in understanding the nature of linguistic signs cognitive semanticists fail to account for its impact when it comes to interpretation of linguistic meanings in interaction. Probably it happens because they do not investigate face-to-face interaction being focused on abstract examples of language use. However “looking at real spoken language usage can reveal that our object of investigation is not what we could have predicted based upon intuition” [Chenki 2016: 608].

In the cognitive semanticists’ usage-based model of language linguistic meanings are seen as *construed in the act of speech* (“usage event”) rather than encoded/decoded ‘ready-made’. A body of conceptual content associated with a linguistic unit used by a speaker is regarded as *a prompt* or *purport* [Croft, Cruse 2004: 100-101] which is defined as “some function of previous experiences of construed occurrences of the word in specific situations” which is “continually developing: every experience of the user of a word modifies the word’s purport to some degree” [ibid: 101]. This conceptual content provides raw material for *conceptualisation*, i.e. an array of cognitive operations recruiting conceptual structure (encyclopaedic knowledge) for construing linguistic meaning within a context. Thus, conceptual structures are seen as partly stable (stored) knowledge systems and partly dynamic (on-line) conceptualisations creating a semantic network of interrelated concepts.

According to Ronald Langacker, the conceptualisation, inherent in a usage event, incorporates the interlocutors’ apprehension of *the ground* (i.e. the speech event itself, the speaker and hearer, their interaction, and the immediate circumstances (notably the time and place of speech)) and *the current discourse space* (i.e. the mental space comprising those elements and relations construed as

being shared by the speaker and hearer as a basis for communication at a given moment in the flow of discourse). The ground and the current discourse space are among the cognitive domains capable of being evoked as the conceptual base for the meanings of linguistic elements. The usage event is viewed as *an action* carried out by the speaker *acting* in an initiative capacity, and the hearer being responsive. The speaker's and hearer's action involves *the directing and focusing of attention* (- - ->). In successful communication, they manage to coordinate this action and focus attention on the same conceived entity. Metaphorically, it is as if they are "looking at" the world through a window, or *viewing frame*. The immediate scope of their conception at any one moment is limited to what appears in this frame. The "window" they are looking through is part of the speech context. *The speech context* is interpreted as part of the current discourse space that includes all the physical, mental, social, and cultural circumstances with the ground as its center. Besides the speech context, the current discourse space includes *a body of knowledge* presumed to be shared and reasonably accessible. It also includes *the speaker's and hearer's apprehension of the ongoing discourse* itself: a series of previous usage events, as well as subsequent events that might be anticipated. Any facet of this can be drawn upon or alluded to in the current utterance [Langacker 2001: 144–145].

The cognitive (in the narrow sense) experience involved in conceptualisation has many facets and is categorised and described in many ways. Langacker addresses the communicants' conceptual content evoked by a linguistic unit in a usage event (i.e. "specification") in terms of *centrality*, i.e. the degree of salience of certain aspects of the conceptual content associated with a linguistic unit used in some context. In the long run, the centrality depends on 1) how well established ("entrenched") the conceptual content is in the memory; 2) the particular context in which a linguistic unit is embedded [Langacker 1987: 159–161].

The centrality "tends to correlate with the extent to which a specification is conventional, generic, intrinsic, and characteristic" [ibid: 159]. Being the most important factor, contributing to centrality, *conventionality* of knowledge (the extent to which it is being shared throughout the speech community) is closely linked to its being *generic* rather than *specific* ("the information that two of my colleagues are allergic to my cat Metathesis is quite specific, whereas the fact that they are allergic to cats in general is partially generic, and the knowledge that many people are allergic to cats is highly generic" [ibid: 160]). The third factor contributing to centrality is intrinsicness: "A property is *intrinsic* to the extent that its characterization makes no essential reference to external entities. Shape, for example, is a highly intrinsic property of physical objects, as it reduces to relations between the parts of an object and does not require interaction or comparison with other entities. Size, on the other hand, implies comparison either with other objects or with some scale of measurement" [ibid: 160–161]. And "the final factor contributing to centrality is the extent to which a specification is *characteristic* in the sense of being unique to the class of entities designated by an expression and consequently sufficient to identify a class member. Shape is generally more characteristic than color" [ibid: 161]. All these parameters are interdependent with more probability for generic / intrinsic / characteristic knowledge to become conventional.

As for 'the extent of conventionality', in linguistic literature encyclopaedic knowledge is addressed as *universal, cultural, socio-cultural* and (theoretically) *individual* where socio-cultural dimension seems to be the basic operational level of categorisation. In any culture in the course of their lives people participate in a variety of socio-cultural *communities of practice* [Eckert, McConnell-Ginet 1995: 469-470], formed on different principles: ethnicity, gender, education, social status, income, family, profession, territory, religion, friendly ties, interests and hobbies like sports, fishing, diving, etc. Taking or not taking part in the activities of such communities of practice shapes people's experience differently and defines its place in the continuum of conventionality. The number and variety of socio-cultural communities of practice an individual can become involved in during his / her social life is only limited by his / her motives/purposes, biological faculties and the opportunities given by the family at birth, on the one hand, and also the opportunities offered by the culture, in general, on the other hand.

In the two following examples taken from popular feature TV series, modelling live communication, the generation of linguistic meanings can be accounted for in terms of degree of centrality of encyclopaedic knowledge evoked in the memory of the participants in the usage event:

WILSON: *Well, you are a very special man. Quite like Galileo.*

TIM: *Yeah, I had his wine!*

WILSON: *No, no, no, Tim. I'm talking about the 17th century Italian astronomer. He was ridiculed for teaching that the Earth revolves around the Sun.*

TIM: *And he believed that?!*

WILSON: *Tim. The Earth does revolve around the Sun.*

TIM: [Grunting] *Oh yeah yeah, sure yeah, does. It's just that we're spinning so we don't notice it.* (Home Improvement)

For most people the personality of Galileo and the fact that the Earth rotates around the Sun is part of conventional knowledge. So, mentioning Galileo, Wilson expects Tim to interpret it within ASTRONOMY frame since this conceptual content naturally appears central for him in this usage event. Yet, for Tim this knowledge is evidently on the periphery of his conceptual system since he interprets the utterance within WINE-MAKING frame, probably, well established in his memory, which makes the association between Galileo and the name of the wine producer more salient.

PENNY: *Come on, everybody has a deal.*

HOWARD: *Not Sheldon. Over the years, we've formulated many theories about how he might reproduce. I'm an advocate of mitosis.*

PENNY: *I'm sorry?*

HOWARD: *I believe one day Sheldon will eat an enormous amount of Thai food and split into two Sheldons.* (The Big Bang Theory)

Interacting with Howard, Penny cannot interpret the biophysical term “mitosis”. This communicative failure occurs because for Howard who is a physicist and intellectual the concept of mitosis is part of conventional knowledge while for Penny who is a waitress, not interested in science, this concept is highly specific; evidently, it is not established in her memory at all since the word “mitosis” does not activate any conceptual content.

The above usage events do not presuppose any immediate responsive action and this creates an illusion that explanation involving rational thinking in terms of centrality of encyclopaedic knowledge is sufficient to account for the generation of meaning in communication.

Besides, encyclopaedic knowledge involved in the generation of linguistic meaning in such usage events is of *declarative* nature. Thematically it is *ontological* since it structures information about entities and their relations within a hierarchy. It can well be modelled in *propositional schemas* and *visual images*. This kind of knowledge constitutes ‘the what-content of consciousness’, but it does not *execute consciousness unless it participates in issuing a command of a goal-oriented action* because **communication is not about ‘exchange of information’ between ‘sharing minds’, it is about gaining our social goals.**

Natural and simple as it might sound this idea is lost in cognitive semanticists’ proposal because of their inattention to action.

Acting involves evaluation of our choices: we must try out the various experiences that will result from our various actions. It means that besides ontological knowledge our interaction is governed by *ethological knowledge* of the system of social values and ethic norms of social behaviour and *lingua-ethological knowledge* of the patterns of communicative behaviour suitable for attaining communicative goals in different usage events. This kind of knowledge is both *declarative* and *procedural*: I have an idea of a university lecture and I ‘know’ *how to act* reading a lecture. And modelling this type of knowledge involves *action images* including sensory input produced by the action, the memory of the emotional valence of the action, and the motor pattern of the action incorporating the goal of the action.

A still more important thing is that all our knowledge involved in conceptualisation is not abstract, it is *intimately personal*. “When interacting with cultural concepts, individuals build their own world vision; they generally do not simply accept or reject them, but rather modify or remold the associated meanings, *adapting them to their needs or feelings* through their own experiences and understandings” [Hardy 1998: 16]. Our knowledge involved in the generation of meaning is being *affected* by our interests, wishes, needs, and feelings shaping our motives and goals because we use it (consciously or nonconsciously) to *inform our behavior in reaching our communicative and – through them – social goals*.

So it seems appropriate to suggest that in the inter-subjective framework the unit of analysis of communication will have to account not only for cognitive (in the narrow sense) experience creating the basis for the generation of meaning but also for volition and affect, adapting this cognitive experience to the needs and feelings of the interlocutors and triggering their goal-oriented motivated communicative (verbal and co-verbal) actions.

I propose to call such a unit of analysis *an inter-subjective act*, i.e. an *inter-action*, structurally including at least two verbal or/and co-verbal utterances: one initial and the other responsive, embedded in *the complex dynamic psychic experiential context* ‘shared’ by the communicants focusing attention on the same verbal/co-verbal utterance as *a perceptual stimulus* which triggers parallel conscious / nonconscious inference processes involving cognition, volition, and affect to issue a command of a meaningful goal-oriented communicative and/or (immediate or postponed) social action.

The psychic experiential context serving as a base for the creation of meaning by the participants of an inter-subjective act seems far more complex structure than such as to be adequately described as a “body of knowledge”. To reveal the complexities we are dealing with I turn to Christine Hardy’s advanced cognitive *theory of semantic constellations* which offers quite a number of insights into the process of the creation of meaning in communication [Hardy1998]. This is a rare case when a cognitive scientist turns to the study of meaning (semantics) as the foundation on which to build a working theory of the mind. Though Hardy formulated her theory 20 years ago it has not lost its innovative flavor (actually, she builds her recent theories on the assumptions of semantic constellations theory: see, for example, [Hardy 2017]) because the gap between traditional cognitive semantics with its schemas and propositional semantic networks and “a more humane understanding of the mind and language” she is trying to bridge is still wide.

In the first place, *the psychic experiential context* (in Hardy’s terms, *the endo-context* – “within a person”) providing the ground for the generation of meaning, incorporates the apprehension of the circumstances of an inter-subjective act *external to the communicant* that *can be perceived*, i.e. *the perceptual context*. Hardy terms such circumstances *exo-context* and defines it as “an ensemble of environmental and situational forces that are of paramount importance in an individual’s interpretation of a given event” [Hardy 1998: 128]. The exo-context is rather complex multi-level structure: “[w]hat we typically deal with <...> is neither objects nor just objects within an isolated context, but rather levels of exo-context, nested in one another” [ibid], including levels of *a proximate exo-context* and *a broader exo-context* [ibid].

Using Hardy’s terminology, *the proximate exo-context* of an inter-subjective act will include the perceptual input which appears *in the focus of attention* of the communicants at a given moment of the flow of discourse: the *verbal utterance* (linguistic unit), vocalised and intonated and perceived by the ear and/or *co-verbal “utterance”*, objectivised by gesture, facial expression, posture, and perceived by the eye. As Langacker puts it, “it includes the full phonetic detail of an utterance, as well as any other kinds of signals, such as gestures and body language (conceivably even pheromones)” [Langacker 2008: 457]. *The broader exo-context* of an inter-subjective act incorporates all the physical, mental, social, and cultural circumstances that can be *perceived* in an inter-subjective act and appear to be *in the scope of attention* of the communicants.

Being culturally constructed (since in our modern societies we are not that much exposed to natural environment) exo-contexts are “intentionally set up” “to induce specific mental states upon the individuals present, and confer certain meanings upon the experienced events” [Hardy 1998: 132].

The psychic experiential context providing the ground for the generation of meaning *in an inter-subjective act* is understood as “a semantic lattice”, i.e. “the network organization of the whole mind-psyche of an individual” [ibid: 17], housing “all of a person’s knowledge, sensoriality, affectivity, and behavior patterns – both as memory clusters and as a living, growing experience; it constitutes the totality of an individual’s cognitive/affective dynamics, grounding the capacity for global consciousness” [ibid: 18].

The semantic lattice is hypothesised “to interconnect with neuronal and subneuronal networks – whereby semantic networks branch into neuronal networks *in a distributed, parallel and dynamical fashion*” creating “*transversal mental-neural network*: the interlacing of mental and neural networks into a single, comprehensive whole” [ibid: 59].

In a structural-systemic aspect, the semantic lattice is viewed as a dynamical matrix of semantic constellations whereby *a semantic constellation* is addressed as “the simplest semantic object, a dynamical and self-organizing system that constitutes the “unit,” so to speak, of our mental life” [ibid: 14]. These constellations “**are far more than just “belief-sets” or “declarative knowledge-sets”**” [ibid: 4]. Rather, they are “dynamical and evolving networks of meanings and related processes, organized around a nucleus. The nucleus, the central meaning, ties together interrelated concepts, internal sensations, images, sounds, colors, gestures, acts, attitudes, behaviors, moods, and so forth” [ibid: 14], while the semantic constellation is “the ensemble, the network *implicating* all these various elements” [ibid].

Clusters of semantic elements are attracted to, and link themselves to, other semantically related clusters in *the spontaneous linkage process* [ibid: 6] based upon a wide variety of connections such as contiguity, metaphor, analogy, contradiction, differentiation, sets and subsets, and more. “This highly generative dynamic, based on network connections rather than algorithmic operations, is proposed to be the ground of thought. This is what creates the network of semantic constellations that operate at the semantic level and branch into neuronal networks” [ibid].

Similarly to exo-context, endo-context is multi-level structure. Hardy proposes that “[a]t the lowest level, the organization and contents of the lattice – the accumulated experience, knowledge, and memory of the person – play the role of *a broad and remote endo-context*, a general background for the interpretation of meaning” [ibid: 129]. But there is always a specific semantic constellation, “primed” of a particular time period, called the *noo-field* and it “acts as a more delimited and *proximate endo-context*, coloring and influencing the perception / interpretation of events and objects, and thus the creation of meaning. Finally, at the most immediate level, the activated semantic constellation, filling the flow of consciousness with its numerous Links, constitutes a *focused endo-context* [ibid].

Recognising that the semantic lattice is “characterized by a degree of closure that allows for its self-organizing properties”, Hardy posits that “it extends beyond the individual, interchanging with semantic fields of the environment or of objects” what she calls *eco-fields* [ibid: 18]: “the mind informs and organizes the surrounding eco-fields, and inversely <...> it is itself influenced and shaped by environmental semantic fields” [ibid: 152].

Hardy’s account also captures *the inter-subjective nature of the generation of meaning* through the notion of the *interface-semantic constellation*, i.e. “a semantic network of shared meaning, *generated by an interaction between individuals* who are focused on a common attentional object” [ibid: 182].

The inter-subject linkages occur on several physiological and psychic levels involving rational logical thinking, feelings and affects, volition with conscious semantic processes going in parallel to nonconscious processes. Thus, in parallel to their explicit, verbal dialogue, interlocutors “will

unconsciously be engaged in other forms of exchange, such as body language, mirrored sensations or emotions, and so forth” [ibid: 181].

As a result, “the *interface-semantic constellation* includes both shared and divergent meanings, as well as emergent significations that spring forth from the exchange and that were not previously contained in the individual semantic constellations of the interlocutors. Each person will, of course, relate to the interface-semantic constellation in his or her unique way. On the other hand, the interface-semantic constellation may produce chain-linkages that may allow each of the two individuals to “penetrate” deeper into the other’s noo-field, while following the activated links. As a striking side effect of their exchange – and depending upon the level of empathy between the two individuals – a “fusional” dynamic may emerge, whereby one person is practically capable of perceiving things through the other person’s mind” [ibid: 192].

It is clear that we cannot explore the dynamics of the spontaneous linkage process directly. But we *can infer* its dynamics indirectly through *inferential analysis* of communication.

Inference is viewed here as a product of the process of the generation of meaning: contextually motivated semantic structure, emerging in an inter-subjective act as a result of complex parallel conscious and nonconscious multi-level inter-subject linkage processes recruiting the multi-level cognitive, volitional and affective elements of the psychic experiential context of the inter-subjective act.

The logic of the above discussion leads to the idea to differentiate between *classifying/qualifying inferences* and *behavioural inferences* made in the process of the generation of meaning in an inter-subjective act (this idea was proposed earlier in [Martynyuk 2016a,b]). *Classifying/qualifying inferences* (What am I dealing with? Is it good or bad for me?) are based on declarative knowledge while *behavioural inferences* (How am I to deal with it for my benefit?) rely on both declarative and procedural knowledge.

Though an inference is prototypically treated as a rational structure, in view of the complexity of the interplay of rational, volitional and emotional, conscious and unconscious in an inter-subjective act classifying/qualifying and behavioural inferences are further divided into:

1) *rational* that take shape of *identification/categorisation* of the referents of the verbal and co-verbal utterances (the participants of the referential situation of an inter-subjective act) and of the interlocutors, participating in an inter-subjective act, and also *rational assessment* of the referents and the communicative partners by the interlocutors in relation to their interests, wishes, needs and communicative goals;

2) *emotional* that result from psychophysiological states, sensations, feelings and also positive/negative emotional attitudes evoked by the referents and the interlocutors in an inter-subjective act;

3) *volitional* that are dictated by the wishes/desires and needs of the interlocutors.

It also seems plausible to speak about not only *conscious* but also *nonconscious (heuristic) inferences* fed by implicit knowledge and intuition which underpin the generation of meaning since conscious thought is just the end product of the internal connective processes at work.

Being a natural product of the working mind, **inference** appears an **efficient instrument of cognitive analysis of communication** intentionally applied by a linguist to discover not only rational but also affective and volitional aspects of experience influencing the generation of linguistic meanings. For example:

GRACE: *Karen, how about some coffee?*

KAREN: *Oh, no, I had some on the way in. Thanks.* [beat] *Oh, you want some.* (Will and Grace)

Karen, Grace’s assistant and also friend, fails to make the expected classifying/qualifying inference and interprets Grace’s utterance as an *invitation* for a cup of coffee while Karen’s intention is clearly to make a *request* for a cup of coffee. Consequently Karen makes the wrong behavioural inference *acting as a friend* instead of *performing her duties of an assistant*. This communicative failure can hardly be accounted for by the lack of declarative or even procedural (ontological, ethological or/and lingua-ethological) knowledge required to successfully participate in the usage

event “boss and assistant”, since this kind of knowledge is highly conventional. It seems more relevant to suggest that Karen’s inferences are dictated by the *volitional aspect* of generating meaning in communication, her *intentional choice* of the behavioural pattern which fits more with her interests and wishes than the expected pattern dictated by the communicative situation: having a coffee with a friend is a more pleasant experience than making and serving coffee to a superior. Her communicative/social behaviour is a good illustration of *acting on the affect* in an effort “to minimise negative affect”, to put it in Tomkins’ words. Acting on the affect, Karen adapts the interpretation of the linguistic meaning to her own interests.

A similar case is illustrated by another example:

RONDALL: *Hm. I think he has a problem with me.*

JILL: *No, he really likes you.*

RONDALL: *Does he?*

JILL: *Yeah.* [Rondall laughs].

RONDALL: *I think he’s a little bit uncomfortable with me. **And I think it’s because he’s sensing what I’ve been sensing.***

JILL: *Which is what?*

RONDALL: ***Well, you have been sending out signals.*** [Jill looks at him].

JILL: *Signals?*

RONDALL: ***Hm-mm.***

JILL: *What signals?*

RONDALL: ***Oh, you asked me out for coffee after class.***

JILL: *Oh, no, no. No, no. That was just, there were four of us, you were just across, way across the table.*

RONDALL: ***Yeah, but, y’know, everytime I turn around from the blackboard, I see you, staring into my eyes.***

JILL: *No, that’s, that’s just paying attention. That’s a good thing.*

RONDALL: ***I don’t know why you’re fighting it, Jill. There’s obviously something happening between us. I mean, I feel it, you feel it, it’s chemistry.***

JILL: *No, I flunked chemistry.* [Jill gets up and takes their coffee cups over to the kitchen. Rondall gets up].

RONDALL: ***Jill, you’re playing hard to get. I love that.***

JILL: *No, no, I’m playing no get. I am a no get woman. I’m a happy, married, no get woman, with a, with a wonderful husband.* (Home Improvement)

Rondall makes the wrong classifying/qualifying and behavioural inferences about Jill’s behaviour because he just *does not want* to accept the truth: thinking that Jill is making passes at him is more pleasant and hence more desirable for him than realising that she is just being polite and attentive. This example also reminds us about the importance of body language in communication since Ronald feeds his inferences on Jill’s and probably her husband’s co-verbal “utterances” like Jill’s “staring into his eyes” and also others implied by Ronald’s words about “sensing” that Jill’s husband is “sensing” what he himself is “sensing” which is “the chemistry” between him and Jill they both “feel”. This “chemistry” serving as the basis for inferences makes Langacker’s mentioning pheromones rather more realistic than humorous.

The next example creates an opportunity to observe communicative behaviour driven primarily by emotional inferences:

DAPHNE: *Dr. Crane...*

NILES: [Passionately:] *Yes, Daphne?*

DAPHNE: ***We’re losing the fire.***

NILES: ***No we’re not, it’s burning with the heat of a thousand suns!***

DAPHNE: [Turning to the fire:] *But it’s down to its last embers!*

NILES: [Calming down:] *Well then... I’ll put some wood on it!* (Frasier)

Seeing that the fire is going to die, Daphne asks Niles to keep it burning, putting a literary meaning into her utterance *We're losing the fire* since the focus of her attention is on the possible loss of the source of energy and getting cold. At the same time Niles whose focus of attention is on his feelings for Daphne, interprets the utterance metaphorically. The inferences Niles makes (both classifying/qualifying and behavioural) are motivated by his emotional state of love switching off his rational thinking.

Such communicative failures cannot be explained in terms of the centrality of knowledge. They are accounted for by affect, the interlocutor's conscious or nonconscious drive to adapt the concepts behind the linguistic utterance to his/her feelings and also wishes, needs and interests. And this drive informs his/her communicative and social behaviour.

The above analysis proves that "(h)uman beings generate meaning while drawing upon experiences and exchanges, contexts and perceptions, feelings and affects, needs and intentions – through a dynamic being-in-the-world involving other subjects who are themselves sources of meaning" [Hardy 1998: 16].

The inter-subjective act, proposed here as a unit of cognitive analysis of verbal/co-verbal communication, seems capable of grasping all this complexity. It also proves relevant to analyse the process of the generation of meaning in communication in terms of inference which is both the natural emergent product of conscious / nonconscious interplay of volition, cognition, and affect, triggering a motivated communicative and social action, and also a tool of discovering this key structure of human physical experience in linguistic analysis.

4. Conclusion

This article is just an initial step in the direction of building the working inter-subjective model of language and testing the units and instruments of its cognitive-communicative analysis using empirical data of TV live shows, videos of psychoanalysis sessions, feature films, etc. Going further in this direction can hopefully open a new trend in the development of Cognitive Linguistics which will take the usage-based commitment seriously and will adequately account for the creation of the linguistic meaning in communication reaching beyond the abstract concepts to interweave them with bodily sensations, feelings, affects, free will, and motivated action of the subjects interacting in the meaningful socially and culturally constructed environment.

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UDC 81'42'22:821.111-1(71)

**SIMILE:
 COGNITIVE AND SEMIOTIC PERSPECTIVE
 Ya.N. Prosyannikova (Kherson, Ukraine)**

Ya.N. Prosyannikova. Simile: cognitive and semiotic perspective. The article reveals linguistic, cognitive and semiotic characteristics of simile in English poetic texts of Canadian poetry. Cognitive peculiarities of simile are defined via cognitive and semiotic operation of comparison and reconstruction of concepts and conceptual metaphors which underlie it, while semiotic peculiarities are clarified via identification of cultural codes and word-symbols which are represented in subjective and objective parts of similes. Thus, I view simile as a multifunctional linguistic and semiotic construal representing verbal patterns of form and semantic function. Linguistic and semiotic analysis of similes enables their classification into iconic, indexical and symbolic ones. The semiotic classification of similes is premised on the type of semiotic relation that exists between a “sign vehicle” and its meaning. Iconic similes are based on similarity between a sign and its referent, while indexical similes show relations of contiguity. Symbolic similes are differentiated on the basis of conventional pairing of a signified and a signifier within a simile.

Key words: cognitive and semiotic operation of comparison, simile, iconic simile, indexical simile, symbolic simile.

Я.М. Присяннікова. Художнє порівняння: когнітивно-семіотичний аспект. У статті встановлено лінгвокогнітивні та лінгвосеміотичні особливості художнього порівняння в англійськомовних віршованих текстах канадської поезії. Художнє порівняння визначається як поліфункціональний лінгвосеміотичний конструкт, що інкорпорує концептуальний зміст та вербальне вираження. Когнітивні властивості художнього порівняння встановлені через ідентифікацію його когнітивного підґрунтя, яким є когнітивно-семіотична операція порівняння, та реконструкцію концептів та концептуальних метафор. Лінгвосеміотичні особливості художнього порівняння окреслені через аналіз культурних кодів та знаків-символів, що актуалізуються в суб'єктній та об'єктній частинах художнього порівняння. Лінгвосеміотичний аналіз художніх порівнянь уможливив їх семіотичну типологізацію відповідно до доміантного типу семіотичного зв'язку між планом змісту і планом вираження. В основу виокремлення іконічних художніх порівнянь покладено відношення подібності, у свою чергу індексальні художні порівняння побудовані на відношенні суміжності між позначуванним і позначувальним, натомість символічні художні порівняння диференціюються відношенням конвенціональності.

Ключові слова: когнітивно-семіотична операція порівняння, іконічні, індексальні, символічні художні порівняння, художнє порівняння.

Я.Н. Присянникова. Художественное сравнение: когнитивно-семиотический аспект. В статье выявлены лингвокогнитивные и лингвосемиотические свойства художественного сравнения в англоязычных стихотворных текстах канадской поэзии. Художественное сравнение представляет собой полифункциональный лингвосемиотический конструкт, в котором инкорпорируется концептуальное содержание и его вербальная манифестация. Когнитивная природа художественного сравнения установлена путем идентификации его когнитивной основы – когнитивно-семиотической операции сравнения – и реконструкции концептов и концептуальных метафор, сокрытых в семантике художественного сравнения. Определены семиотические особенности художественного сравнения путем анализа культурных кодов и знаков-символов, которые актуализируются в субъектной и объектной частях художественного сравнения. Лингвосемиотический анализ художественных сравнений позволил разработать и предложить их семиотическую классификацию на основе

доминирующего типа семиотической связи между планом содержания и планом выражения, которая включает следующие типы: иконические художественные сравнения, индексальные художественные сравнения и символические художественные сравнения.

Ключевые слова: иконические, индексальные, символические художественные сравнения, когнитивно-семиотическая операция сравнения, художественное сравнение.

1. Introduction

Comparison is a fundamental cognitive operation of almost all mental processes in human mind [Gentner 2012, 130]. Comparison as a multiple-aspect phenomenon has drawn much attention of philosophers (Aristotle, C. Helvetius, H. de Saint-Simon, G. W. Hegel, K. Ushynskii, I. Barton, I. Kodukhov) and psychologists (L. S. Vygotskii, S. L. Rubinshtein, A. R. Luriya).

Its verbal representation has been studied in multiple research papers on historical poetics (S. S. Averitsev, A. N. Veselovskii, P. A. Grintser, A. B. Kudelin, D. S. Likhachov, Ye. M. Meletiskii), theoretical poetics (A. A. Potebnya), formal poetics (B. V. Tomashevskii, V. B. Shklovskii), structural and semiotic linguistics (D. U. Ashurova, Yu. M. Lotman, S. M. Mezenin), linguopoetics (M. L. Gasparov, S. K. Gasparyan, Ye. A. Nekrasova, T. I. Nikolashyna, Ye. N. Ushakova, Ye. O. Filatova), cognitive linguistics and cognitive poetics (G. L. Denisova, L. F. Prisyazhnyuk, N. V. Yarovaya).

Modern linguistic studies are focused on defining the character of interconnection between the language and human mind. This tendency requires studying simile as a cognitive and semiotic construct which has two planes – cognitive and semiotic (verbal). Comparison as a cognitive mechanism of coding and structuring knowledge underlies the cognitive plane of simile.

The fusion of linguocognitive and linguosemiotic approaches enables comprehensive analysis of simile according to three semiotic branches – semantics, syntactics and pragmatics – in order to establish cognitive and semiotic peculiarities of its formation and functioning in English poetic texts of Canadian poetry. Consequently, a complex cognitive and semiotic approach allows exploring simile as a multifunctional linguosemiotic construal so as to comprehend and interpret it from a new perspective. Aforesaid explains the **topicality** of the present study.

The **object** of the analysis is similes in Canadian English poetic texts. The **subject matter** of the article is cognitive and semiotic peculiarities of similes functioning in poetic texts of Canadian poetry. The article is **aimed** at identifying features of comparison as a cognitive-semiotic operation and the ways and means of its representation in English poetic texts of Canadian poetry.

2. Discussion and Results

2.1. Comparison as a fundamental cognitive operation

Comparison as a cognitive operation occurs in accordance with a number of consecutive stages of cognitive processing of information despite uncontrolled and non-purposeful nature of this action. The result of the cognitive operation of comparison is not just a formal inventory of common and distinctive features of two or more subjects, but an acquisition of new knowledge, i.e. inferences [Holyoak & Thagard 1995: 15]. The cognitive operation of comparison as the basic mental action [Gentner & Smith 2012: 131] is the basis for linguocognitive operations of analogical and narrative mapping that are verbalized in poetic texts by means of similes.

Linguocognitive operations of analogical and narrative mapping allow projecting a partial structure or features of a source domain (which is the objective part or the object of simile) onto partial structure or features of a target domain (which is the subjective part or the subject of simile). [Fauconnier 1997: 9; Fauconnier & Turner 1998: 135]. This projection can be motivated by real or imaginary similarity of the things being compared which is the result of parabolic [Belekhova 2002: 234] and analogical reasoning of the external world [Gentner & Smith 2012: 131; Freeman 2002: 467; Belekhova 2002: 181].

Analogical mapping includes three cognitive subprocesses such as attribute mapping, relational and systems mapping [Freeman 2002: 467], whereas narrative mapping is realized through the procedure of intertextualization [Belekhova 2002: 235]. The aforementioned cognitive subskills are aimed at specifying of similarities of the subject and the object of similes.

Attribute mapping is aimed to create similarity between the subject and the object of simile on the basis of an attribute of the object:

(1) “...*patience*

Is longer than the lives of glaciers”

(A. Milton “The natural history of elephants”);

(2) “*perfect love is like a fair green plant*”

(A. Lampman “The Growth of Love XI”);

(3) “*The mystic river ...*

Untamable and changeable as flame”

(Ch. Roberts “Ave! (An Ode for the Shelley Centenary, 1892)) [CPO].

This type of the mappings is “an analogy of the very simplest form” [Holyoak & Thagard 1995: 26] as it allows singling out a particular attribute which is common both to the subject and the object of simile, moreover, the basis of the comparison is shown explicitly (*longer than, fair green, untamable and changeable*). Therefore the process of interpretation is relatively simple and straightforward. It does not require any additional mental effort of the recipient/addressee. Successful interpretation lies in the matching attributes.

Here, we need to capture the fact that many statements of similarity (i.e. similes) depend on some structural or relational isomorphism between knowledge associated with the two concepts rather than on a match of simple attributes. So, relational mapping “plays an important role in structuring our knowledge base and provides means of identifying elements of one domain via their counterparts in the other.” [Fauconnier 1997: 11]. According to L. I. Belekhova [Belekhova 2002: 222] relational mapping should be understood as a projection of similar functions from the object onto the subject of simile, so that both show or evoke similar actions, states and emotions.

(4) “... *and the day fades out like smoke*”

(Ch. Roberts “The Potato Harvest”) [CPO].

The given example of the simile “*day like smoke*” is relatively difficult to interpret. The generation of an interpretation cannot be readily achieved as the subject and the object of simile have no dominant attributes in common, but there is a key verb *fades out* that shows how this statement of similarity should be interpreted. Smoke disappears melting in the air, just the same as a day quietly flows and comes to its end. A gripping feeling of fear when a person perceives the irreversible and fugacious nature of human life, the inevitability of the end of his/her life is relevant for an adequate decoding of the message that is conveyed by the simile.

Systems mappings or schema mappings (in terms of G. Fauconnier) “operate when a general schema, frame or model is used to structure a situation in context” [Fauconnier 1997: 11], in other words, some situations or events are projected from the source domain/the object of the simile onto the target domain/the subject.

(5) “*The bushes themselves ramble like a grandmother’s sentences*

giving birth to their own sharpness. Picking the berries

must be a tactful conversation

of gloved hands”

(S. Bolster “Many have written poems about blackberries”) [CPO].

This simile “*bushes – a grandmother’s sentences*” based on systems mapping is open to multiple interpretations. The process of interpretation is forced by metaphor *ramble* and metonymy *a grandmother’s sentences*.

There is an analogy between a process of picking up berries and the way elderly people communicate with others. When picking up berries a person goes from one bush to other ones

which are usually alike in size and colour, so sometimes it seems that they “wander” around you. To pick up a full basket of berries you need to concentrate and find every ripe fruit. Similarly, while communicating with strangers or even relatives, elderly people have to sort out their thoughts and memories which are not often related to the topic of their communication. Sometimes these people cannot accurately express their thoughts or wishes due to physical disabilities which are caused by their age. These two situations are interconnected with the interpretation “*something that is difficult to collect*”.

On the other hand, thorns of blackberry bushes and grandmother’s words are compared according to the degree of their “sharpness”. Most often grandmothers notwithstanding their long life experience say everything they think directly even if it is “bitter” truth. They do not spend much time on persuasion.

2.2. Simile as a semiotic phenomenon.

The semiotic nature of simile is realized concurrently in the semantic, syntactic and pragmatic aspects of semiosis (Yu. S. Stepanov). From the standpoint of the *semantic aspect*, simile is a verbal sign within which a signifier and a signified are united by a certain type of semiotic connection. The type of semiotic connection is determined by the type of relationship that is established between a linguistic sign and its referent. Three types of semiotic connection are discriminated, they are as follows: the relation of similarity (iconic connection), the relation of contiguity (indexical connection) and the relation of conventionality (symbolic connection). The iconic connection between the surface and the inner (conceptual) structure of simile is determined by the relation of similarity. Whereas, the relation of contiguity underlies indexical connection between a verbal sign and its denotatum and symbolic semiotic connection is characterized by the relation of conventionality (by Ch. S. Peirce) which is established between the content of a linguistic sign and its verbal representation.

Simile as a multifunctional linguosemiotic construal may display iconic, indexical and symbolic characteristics based on the relations between a linguistic sign and an object of the conceptualized real world. But the degree of their actualization is varying. According to Ch. S. Peirce’s theory of the sign “icon, index, and symbol mark the scalar movement of the sign from concrete to abstract. ... All three forms participate and interact in the language sign.” [Freeman 2007: 426]. Hence the dominant type of semiotic connection enables to distinguish three types of similes functioning in poetic texts of Canadian poetry: iconic similes, indexical similes and symbolic similes.

The *syntactic aspect* of semiosis involves the study of simile in terms of the valency of linguistic signs in its surface structure and their interaction with other constructive elements of the poetic text, as this interaction serves as the background for creating textual worlds. A system of heterogeneous textual elements of different levels is described and structured with the help of functional-semantic field model.

The *pragmatic aspect* of semiosis presupposes analysis of the influence of simile on the interpretation adequacy of an addressee, as similes and the whole poetic text are interpreted by an interpreter with his/her individual background (psychological, cultural, social, etc.).

2.3. Iconic similes

In the given study, I will give a detailed description of semiotic classification of similes in accordance with the semantic aspect of semiosis. Iconic similes are similes in the structure of which a signifier and a signified correlate on the basis of their material, structural or visual similarities [Liszka 1996: 2]. The data analyzed are English poetic texts of Canadian poetry.

Poetry is said to be inherently iconic [Freeman 2007: 433; Higara 2000: 147], that is, there is an immediate and close relationship based on similarity between the linguistic structure of a poetic text, and simile in particular, and its meaning. The relation of similarity is crucial in poetry as “in

poetry, similarity relations in form are used as cues to the meaning of the poem through poetic devices such as rhyme, semi-rhyme, alliteration, assonance, meter; general repetitions of sounds, syllables, words Far from being subordinated to meaning (as is usually the case in ordinary use of language), in poetry a sound *plays a leading role, operates in full partnership with meaning, and even helps to create meaning*" (Italics mine) [Waugh & Newfield 1986: 32].

Peculiarities of manifestation of iconic similes depend on the level on which they occur [Cuypere 2008: 2]. At the phonetic level iconic similes are discussed in terms of either onomatopoeia or sound symbolism [Prosyannikova 2012], and the iconic sign is taken "to represent its object by imagic similarity to it" [Tabakowska 2003: 361]. Thus, by inspecting the sign we may gain knowledge of the object.

In the following example the interplay of two abovementioned stylistic means may be observed:

(6) *By late August, beetles fell
from somewhere in the sky,
the click of their bodies
on cement like seconds ticking.*

(L. Crosier "The swimming pool") [CPO].

The invasion of small beetles is compared with a ticking clock. The sound of a ticking clock is reproduced by the rhythmic repetition of consonant sounds [t, k], whereas a sound form of the onomatopoeic word *click* imitates the sound of the beetles falling down from the sky onto the solid surface. The results of psycholinguistic studies prove that alliteration of some particular sounds may cause subconscious associations in the mind of the addressee. Thus, such consonant sounds as [b, d, g, k, r] evoke subconscious association with something big [Levitskii 1975: 57], in the given example it is the size of the beetles. The iconic correspondence between the subjective and the objective parts of simile is created by means of paronymic attraction of onomatopoeic verbs *click* and *tick* which are primary motivated by the sound.

Phonetic iconicity can be either motivated by a sound or by a non-sound. Here it is claimed that there are definite correlations between "certain types of sounds and certain categories of meaning, such as size, movement, feelings and distances" [Lapolla 1994: 130]. Phonetic iconicity "then, provides a means for expressing the world of the senses before the conceptualizing mind moves us toward abstraction" [Freeman 2007: 426].

As L.P. Prokof'yeva [2006: 95] claims that not only a particular sound is associated with some physical parameter, but even a grapheme has a certain match in the world of colors (*chromaesthetic iconicity* by Jakobson [1979: 188]). Hence this theory enables an interpreter to picture a poetic text in colors.

A poem "November" by Ch. Dewdney [CPO] allows us to analyze the way iconicity of color is manifested in the text. November symbolizes a place and time of an occasional meeting of two giants – winter and summer. The blue color as a symbol of winter dominates in the first stanza and is expressed in the poetic text by graphemes *b, u, m, w* (*November, month, mysterious, empty, under, illuminates, dreaming, blue, autumnal*). The blue color is associated with people's spiritual life therefore it induces to reflect on the universal laws of life and a place of every person in a complex system of human relationships. The central part of the text demonstrates an equal proportion of "winter blue" and "summer green" graphemes. Whereas the green color predominates with multiple "green" graphemes *e, f, g, n, t* in the final stanzas:

(7) *Moss thrives in November
Its greenness deepens
in a vernal expansion
/ ... /
Green apples adorn
leafless branches like*

forgotten ornaments.

In the imagination of the recipient the final green accent activates an association with a variety of lifeforms and spring freshness that is to come after cold winter. An opposition of blue winter and green summer iconically depicts cyclicity of life. The victory of life over winter “sleep” is not accidental. It is predictable as it is coded in the title of the poem “November” where there are three “green” (*n,e,e*) and only two “blue” (*m,b*) graphemes.

The second type of iconicity – *diagrammatic* – is actualized at the morphological level [Harm 2003]. According to Peirce, a diagram is a complex sign, representing a complex concept. The essence of a diagram is that the relationship between the parts of a complex sign resembles the relationship between the parts of the concept which it represents [Tabakowska 2003: 362]. Consequently diagrammatic iconicity consists in a correspondence between morphological and semantic markedness. According to Haiman, “categories that are marked morphologically ... are also marked semantically” [Haiman 1980: 528]. Thus diagrammatic iconicity results from the general “more-form-more-meaning” principle [Tabakowska 2003: 362].

Diagrammatic iconicity is considered to be a gradual matter, so W. Mayerthaler [Sigal 1997: 107] distinguishes five types or “degrees” as he puts it, of diagrammatic iconicity: 1) a maximum degree of iconic coding; 2) a medium degree of iconic coding; 3) a minimum degree of iconic coding; 4) anti-iconic coding; 5) counter-iconic coding.

I should show the way how four of five diagrammatic iconic principles may be manifested in the poetic text within a simile:

- (8) *It was forty or forty-one when*
 / ... /
and the war kissed them,
 / ... /
laid them down like children and spread
an eternity of white crosses
like corn seed
in longer and longer rows and the birds
flew north, whole flocks of them,
and never stopped,
not even for crumbs.

(G. Ellenbogen “Homecoming”) [CPO].

According to a maximum degree of iconic coding all grammatical categories are expressed explicitly in the surface structure of linguistic signs by adding inflexions. In example (8) the comparative degree of a qualitative adjective *long* is marked by the inflexion *-er* (*longer*) and means “a higher degree of a quality”. An increasing number of graphemes in the past tense forms of the verbs *kiss-ed*, *stop-ed* corresponds to the remoteness of events in time expressed by the given verbs. The category of number is displayed in the morphemic structure of nouns by adding the ending *-s* (*crosses*, *rows*, *birds*, *flocks*, *crumbs*). A medium degree of iconic coding appears both in the modulation of a root vowel and in the inflexions that verbalize grammatical categories. Here degree of iconic coding is embodied in the plural form of the noun *children* and the past tense form of the verb *laid* in comparison with their unmarked forms *child* and *lay*. The modulation of the root vowel with its corresponding diagrammatic explication in the past tense form of the verb *flew* (compare: *flow* – *flew*) implements a minimal degree of iconic coding in the structure of a simile. An example of anti-iconic coding is the past tense form of the verb *spread*, which does not undergo any changes compared to its unmarked present tense form.

Syntactical iconicity is defined according to three principles recognized by T. Givon [1995] and many others [Rohdenburg 2003; Belekova 2002; Jakobson 1983; Dirven & Verspoor 2004]: (1) the quantity principle, (2) the distance principle and (3) the principle of linear order.

The **quantity principle** states that “A larger chunk of information will be given a larger chunk of code” [Givon 1995: 49]. Less predictable and more important information is given more coding material. Thus a long obligatory life to-do list iconically corresponds to a long syntagmatic sequence of the objective part in the following simile:

(9) *I line up all
those Shoulds like an endless freight train highballing it
across the prairies.*

(B. Howell “Across the street from the tree of life”) [CPO].

“Entities that are closer together functionally, conceptually or cognitively are placed closer together at the code level, i.e. temporally or spatially” [Givon 1995: 53] according to the **proximity principle**. In the following example (10) linguistic sings *thunderclouds, dangers, death, earthquake, war* are placed at a minimal distance as they are interrelated conceptually. *Thunderclouds, earthquake* and *war* constitute a menace for people, as well as they may cause a single or multiple *deaths*:

(10) *and we pass as thunderclouds or,
dangers like death, earthquake, and war,
ignored because it's no use worrying.*

(M. Acorn “Hummingbird”) [CPO].

According to the **linear order principle** the temporal sequence of depicted events corresponds to the linear arrangement of linguistic signs within the simile [Givon 1995]. Additionally the most important information is actualized in the initial position of the simile.

As for the principle of initial position for the most important information we should say that sometimes authors intentionally change the direct word order of the simile (that is a subject-ground-object order):

(11) **High** *as the firmament she flies
and hides the sun.*

(M. Jenoff “The Orphan and the Stranger”) [CPO].

The statement of the linear order principle concerning iconic correlation between the chronology of the depicted events and the syntagmatic sequence of the simile may be illustrated with the following example (11) from the poem “Immigrants: the second generation” written by K. Irie [CPO]:

(12) *his first
language fell away like milk teeth.
Only his mother,
stranded by his side
still speaks in the old tongue alone.*

As time goes by children of immigrants treat their mother tongue as something rudimentary. Their mother tongue loses its cultural and social significance. Older generations try to preserve their kindred ties with their ancestors, their cultural heritage via the mother tongue. On the contrary, present and forthcoming generations repudiate their native languages in order to “join” a new life and be a part of the country that has absorbed them. A process of repudiation is displayed diachronically from past (*fell away*) to present (*still speaks*).

2.4. Indexical similes

Alluding to Peirce an *index* can only indicate its object but it cannot convey any information about its qualities since it “forces the attention to the particular object intended without describing it” [Peirce: CP 1.369]. A distinctive feature of the index is its ability to establish a relation of contiguity between an object and a linguistic sign that point to it.

Indexical simile is defined as a construal with an index/indices functioning in its structure. To decode indexical similes both linguistic and extralinguistic contexts are required as indices are

context sensitive linguistic units whose meaning stable while their reference shifts from utterance to utterance [Braun 2001]. Their indexical (indicative) function is to regulate correlation of a poetic text including similes with the external world [Lefebvre 2007: 2].

D. Kaplan states that pure indices (or indexicals as he puts it) and true demonstratives should be singled out. Pure indexicals are linguistic units with temporal or spatial meaning. Demonstrative and personal pronouns are defined as true demonstratives [Kaplan 1989: 490].

In the present study we differentiate *pronominal*, *temporal* and *spatial* indexical similes. Pronouns in pronominal indexical similes draw attention of the addressee towards the communicants of the indirect communicative situation, i.e. the poetic text while temporal and spatial indexical similes inform the recipient about time and place parameters of communication.

In the fragment from the poem “Early Morning” by L. Dudek a lyrical hero observes a situation that is happening in his visual field:

(13) *the salesman who made a deal,*
the young woman who paid him,
the red-lipped college girls, bold, a bit shy,
the counter girls on a coffee break,
the macho men
 / ... /
And I observe, and I am like them
only for a day [CPO].

The opposition of two worlds “my world” vs “an alien world” is manifested by indexical units *I* and *them*. The world of the lyrical hero is considered as “his own personal world”, while all the other characters are attributed to the alien one.

It is perhaps significant in this connection to admit that the definite article (*the salesman, the young woman, etc.*) functions as a pointer. The lyrical hero is understood as a central figure and the others are remote from him. The remote distance between the characters is lexicalized in the tense forms of the verbs. “The alien world” belongs to the past (*they – paid, made*) and the world of the lyrical hero is in the present (*I – observe, am*). The similarity existing between the lyrical hero and the other people is temporary and fleeting as it may be observed from a broader linguistic context (*Something that never was, / that now is / and that again will not be / of which I am the observer*).

2.5. Symbolic similes

The third type of signs presented in Peirce’s trichotomy is symbol which is claimed as “the general name or description which signifies its object by means of an association of ideas or habitual connection between the name and the character signified” [Peirce: CP 1.369]. It means that the principle of symbolicity refers to the conventional pairing of form and meaning.

In the present study we define symbolic similes as verbal complex signs that incorporate three semiotic characteristics – iconicity, indexicality and symbolicity (conventionality) where symbolicity predominates. Symbolic similes should be treated as linguosemiotic construals which contain symbol signs in their structure and cultural codes are found out in their subjective or objective parts.

The analysis of the corpus allowed distinguishing ten cultural codes that are manifested both in the subjective and the objective parts of similes: anthropomorphic, somatic, spiritual, biomorphic, subject (physical), temporal, spatial, astral, color (chromatic) and mythological. The identification of cultural codes makes it possible to study the worldview of the English-speaking Canadian community, which is reflected in the poetic texts by means of similes.

In the simile (14) “*He turned, like a hunted lion*” from P. Johnson’s poem “The Cattle Thief” [CPO] we may observe an interaction of anthropomorphic and biomorphic cultural codes. A starving enslaved but undefeated leader of the Indian tribe is compared to a “noble” animal – lion. The symbolic component of the simile is activated by the symbol sign *lion*. Dignity, courage,

audacity, determination, devotion to the pride (i.e. family, tribe) are inherent features of the lion's character, consequently these features also characterize the leader of the tribe. Once surrounded by armed coward enemies he, who is full of untamable inner strength, resist them without any fear. His proud posture and highly-raised head, his strong Indian spirit, his will to fight fiercely to the end, to withstand numerous enemies, to struggle for his holy land is a symbol of the spiritual superiority of the Indians over the weak-hearted Europeans.

As a result of linguosemiotic analysis we arrive at the conclusion that the dominant cultural codes of the subjective part of symbolic similes are biomorphic, anthropomorphic, spiritual, subject (physical) and somatic. Whereas biomorphic, subject (physical), spiritual and anthropomorphic are the most frequently used cultural codes in the objective part of the similes.

3. Conclusion

In the study, the cognitive operation of comparison is determined as the basic and the one that forms the basis of other cognitive operations and mechanisms of perception and processing of information. The cognitive operation of comparison is aimed at obtaining new knowledge as a result of matching homogeneous or heterogeneous comparable entities. Linguocognitive operations of analogical and narrative mapping are derived from the basic cognitive operation of comparison. Linguocognitive operations of attributive, relational, systems mapping and the procedure of intertextualization are aimed at clarifying the basis of comparison, which establishes the similarity between subject and object of the simile.

Simile as a multifunctional lingosemiotic construal is studied in accordance with three aspects of semiosis – semantic, syntactic, and pragmatic. The semantic aspect of the semiosis involves identifying the features of the interaction between the content side and the expression side within a simile. This interaction may be based on the iconic, indexical or symbolic connection. The study of the syntactics of the simile aims at studying the valency of verbal signs in its surface structure and its horizontal compatibility with other elements of the poetic text, which ultimately serves as the basis for the creation of text worlds. The pragmatic potential of simile can be described due to its ability to influence the interpretation adequacy of the addressee.

The three-dimensional classification of similes suggested in the study is based on the dominant type of the semiotic connection (iconic, index, symbolic). Thus, iconic, indexical and symbolic similes are singled out.

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UDC 811-111

**METAPHOR
 IN THE LIGHT OF CONCEPTUAL METAPHOR THEORY:
 A LITERATURE REVIEW**

O.V. Vakhovska (Kiev, Ukraine)

O.V. Vakhovska. Metaphor in the light of conceptual metaphor theory: a literature review. This paper reviews some of the central insights on metaphor that come from the domain of cognitive linguistics and originate, for the most part, from the conceptual metaphor theory in its standard version. The review focuses upon the nature, origin, function, components, systematicity and types of metaphor, and upon metaphorical meaning; lays a special emphasis upon the mapping mechanism of metaphor; contrasts metaphor to metonymy and addresses the interaction and overlap of these. A large portion of this paper is a review on the issue of metaphorical creativity. Metaphorical creativity is, to the best of my knowledge, a little-studied topic in cognitive linguistics. There are some claims concerning metaphorical creativity in the review that might appear rigid, decisive and conclusive, but they are definitely not intended as such. Research on metaphorical creativity is still being launched, and numerous aspects of creative metaphorical concepts remain undisclosed so far. This, on the one hand, is reflected in the at times cursory nature of my review and, on the other, indicates a need for further investigations. In my review, I cite literature with a fundamental standing in the cognitive linguistic field mainly. The literature selection for this paper is ultimately shaped by my affiliation with the cognitive linguistic community and by my ambition to eventually formulate a conceptualization of metaphor and of creative metaphor that would lend these to computation. I introspect and comment on some of the assumptions and claims that the literature puts forward. In the review are Modern English metaphorical expressions that come from the cited literature, or are prompted by my own research and introspection; these data help support or, though scarcely, challenge the assumptions and claims. In prospect, this paper will grow into a larger-scale research on the issue of metaphorical creativity. The review might have implications for cognitive linguistic theorizing and research, and be of particular purpose for Ukrainian cognitive linguists aiming their research at the international, in particular European, scholarly community.

Key words: conceptual metaphor theory, metaphor, metaphorical creativity, metaphorical mapping, metaphorical meaning, target and source of metaphor.

О.В. Ваховська. Метафора у світлі теорії концептуальної метафори: огляд літератури. Стаття пропонує огляд деяких стрижневих поглядів на метафору, запропонованих у когнітивній лінгвістиці, а саме теорією концептуальної метафори в її (теорії) стандартній версії. В огляді висвітлено природу, виникнення, функцію та компоненти метафори, систематичність і типи метафор, метафоричне значення. Особливу увагу приділено механізму перехресного мапування, який лежить в основі метафори. Обговорено питання протиставлення метафори та метонімії та їхньої взаємодії. Значне місце в огляді посідає проблема метафоричної креативності, яка, наскільки мені відомо, є на даний момент мало вивченою у когнітивній лінгвістиці. Огляд містить окремі твердження про метафоричну креативність, які можуть здатися остаточно та категорично сформульованими, хоча такими жодною мірою не є. Вивчення метафоричної креативності тільки починається, і численні аспекти креативних метафоричних концептів залишаються недослідженими. Це, з одного боку, відбивається в дещо уривчастому характері запропонованого мною огляду, а, з іншого, свідчить про необхідність подальших розвідок у цьому напрямі. У статті я оглядаю головним чином літературу, яка є в когнітивній лінгвістиці основоположною. Вибір такої літератури визначається моєю приналежністю до лінгвокогнітивної спільноти, а також моєю дослідницькою метою запропонувати у своїх подальших роботах такий підхід до метафори та креативної метафори, який може бути

покладений в основу їхньої формалізованої моделі. Деякі з моментів, що оглядаються у статті, я дозволяю собі супроводити авторським міркуванням та коментарем. В огляді у якості доказів та, зрідка, спростувань теоретичних положень наводяться сучасні англомовні метафоричні вирази. Ці вирази цитуються згідно з літературою, з якої їх вилучено, або ж вони підказані моїми власними дослідженнями та інтроспекцією. Перспективою дослідження є глибоке вивчення проблеми метафоричної креативності. Запропонований у статті огляд може мати певну цінність для лінгвокогнітивних студій та, зокрема, бути корисним для українських лінгвістів-когнітологів, які визначають або починають визначати себе у рамках міжнародної, зокрема європейської, наукової спільноти.

Ключові слова: метафора, метафорична креативність, метафоричне значення, метафоричне мапування, референт і корелят метафори, теорія концептуальної метафори.

О.В. Ваховская. Метафора в свете теории концептуальной метафоры: обзор литературы.

Статья предлагает обзор некоторых центральных точек зрения на метафору, предложенных в когнитивной лингвистике и восходящих, преимущественно, к теории концептуальной метафоры в ее (теории) стандартной версии. В обзоре освещаются природа, происхождение, функция и компоненты метафоры, систематичность и типы метафор, метафорическое значение. Особое внимание уделяется механизму перекрестного картирования, лежащему в основе метафоры. Обсуждаются вопросы противопоставления метафоры и метонимии и их взаимодействия. Значительное место в обзоре занимает проблема метафорической креативности, которая, насколько мне известно, является на данный момент мало изученной в когнитивной лингвистике. В обзоре встречаются утверждения о метафорической креативности, которые могут показаться окончательно и категорично сформулированными, хотя таковыми ни в коей мере не являются. Изучение метафорической креативности только начинается, и многие аспекты креативных метафорических концептов остаются все еще не исследованными. Это, с одной стороны, отражается в несколько фрагментарном характере предложенного мной обзора, а, с другой, свидетельствует о необходимости дальнейших исследований в этом направлении. В статье я обозреваю главным образом литературу, являющуюся в когнитивной лингвистике основополагающей. Выбор такой литературы определяется моей принадлежностью лингвокогнитивному сообществу, а также моей исследовательской целью предложить в своих дальнейших работах такой подход к метафоре и креативной метафоре, который может быть положен в основу их формализованной модели. Некоторые из обозреваемых моментов я позволяю себе сопроводить авторским рассуждением и комментарием. В обзоре в качестве доказательств и, редко, опровержений теоретических положений приводятся современные англоязычные метафорические выражения. Эти выражения цитируются согласно обозреваемой литературе либо же подсказаны моими собственными исследованиями и интроспекцией. Перспективой исследования является глубокое изучение проблемы метафорической креативности. Предложенный в статье обзор может представлять определенную ценность для лингвокогнитивных студий и, в частности, быть полезен украинским лингвистам-когнитологам, определяющим или начинающим определять себя в рамках международного, в частности европейского, научного сообщества.

Ключевые слова: метафора, метафорическая креативность, метафорическое значение, метафорическое картирование, референт и коррелят метафоры, теория концептуальной метафоры.

1. Introduction

In mental construals, information about entities of the experiential world is reduced to prominent features, and it is ultimately these features that emerge into concepts and are exposed by linguistic meanings. On the other hand, concepts continuously expand through associations that the human mind construes between similar entities of the experiential world. These associations are metaphorical in nature. This paper **aims** to review some of the insights on metaphor that come from the domain of cognitive linguistics and that pertain mainly to the conceptual metaphor theory in its standard version. This paper is not intended as the latest version of truth with respect to conceptual metaphor, however, nor does it claim to be complete and sweeping both about metaphor and the theory. The reviewed literature is often not the most recent one, and is cited because of its fundamental standing in the field. There is ample literature that suggests alternative interpretations

of metaphor in the light of different scientific traditions; this literature remains outside of my review. The literature selection for this review is ultimately shaped by the particular scholarly community I belong to and by my ambition to formulate a conceptualization of (creative) metaphor that would lend (creative) metaphor to computation, which is a **non-trivial** task.

The review I suggest here is therefore a prerequisite for a research with a somewhat different focus, and I do not have in mind to instruct the reader with my review. I do, however, **introspect** and comment on some of the assumptions and claims that the literature puts forward, and invite the reader to do so, too. In the review are Modern English metaphorical expressions that come from the cited literature or are prompted by my own research and introspection; these **data** help support or challenge the assumptions and claims.

In **Section 1** of this paper, I address the nature, origin, function, components, systematicity and types of metaphor; metaphorical meaning; the mapping mechanism of metaphor; and metaphor in its relation to metonymy. **Section 2** is a literature review on the issue of metaphorical creativity. Cognitive linguistic literature on the issue of metaphorical creativity is, to the best of my knowledge, presently scarce. This is reflected in the nature of my review. There are some claims in the review that might appear rigid but they are definitely not intended as such. Cognitive linguistic research on metaphorical creativity is still at its dawn, and numerous aspects of creative metaphorical concepts have to be put light on and checked. There are few conclusive statements and sometimes there are few/no ready-made examples in the literature. I am just starting my own investigation on metaphorical creativity and do not dare to doubt the claims that the literature makes, neither do I provide any examples of my own when there are no examples in the literature. My review shows that the issue of metaphorical creativity is little studied indeed and that there is a need for further investigations. I give in the paper some of my intuitions on the existing claims, and hope to be able to develop my own informed perspective on metaphorical creativity in prospect [see Vakhovska 2017]. I **conclude** my paper with a summary of the review it offers.

2. Conceptual metaphor theory and the issue of metaphor

Metaphor was first brought to light by Aristotle who defined it as a specific skill of finding similarities. Since then, metaphor has attracted philosophers' attention and today remains a research topic in philosophy, in linguistics and cognitive linguistics, in philosophy of language, in semiotics, psychology, psychoanalysis, religious studies, cultural anthropology, mythology, aesthetics, poetics and cognitive poetics, the arts, philology, hermeneutics, rhetoric, stylistics, etc. The parameters along which metaphor is studied are its nature, function, components, origin, systematicity, and meaning. There has been a reperspectivization of metaphor with the emergence of the conceptual metaphor theory in the field of cognitive linguistics [see Lakoff, Johnson 1980b]. The element *conceptual* in the name of this theory suggests a departure from traditional views that confine metaphor to language and limit its function to naming and aesthetics. Traditional metaphor is a figure of speech, a fanciful and deliberate decoration and bells and whistles of a poet. Conceptual metaphor is a fundamental mechanism of the human mind. It structures human experience and automatically and unconsciously shapes human cognition, perception and action. Human thought is metaphorical in nature, and the cognitive mechanism of metaphor is manifested not in language alone but also in myth, in social rituals, in performing and visual arts, in politics, in foreign policy, in social institutions, etc. Linguistic and nonlinguistic manifestations of metaphor are the result of and the evidence for the actual being of conceptual metaphor.

Conceptual metaphor is understanding and experiencing one concept in terms of another concept. The formula of metaphorical relation is **CONCEPT A is CONCEPT B**, where CONCEPT A is the target, CONCEPT B is the source, and the link *is* stands for the mapping mechanism that results from a set of systematic correspondences between the target and the source. In a conceptual metaphor, 'the target domain A is comprehended through a source domain B. This

comprehension is based on a set of mappings that exist between elements of A and elements of B. To know a conceptual metaphor is to know this set of mappings' [Kövecses 2002: 29].

Conceptual metaphors are manifested in natural language with the help of *metaphorical expressions*. The SINS are CRUMBS OF BREAD metaphorical concept, for example, is manifested in modern English discourse with the help of the metaphorical expression *About the fishes who swallow human sins, and carry them away to the ocean* (BNC). One and the same conceptual metaphor often underlies a number of metaphorical expressions, each activating this metaphor in the human mind. The SIN is AN ABYSS conceptual metaphor, for example, is activated by the metaphorical expressions *Flaubert was joking on the edge of a sin he fears to commit*, *He prayed that Clare would not fall into mortal sin*, and *This was the intent to extricate him from the depths of sin and set him on the path of prosperity and happiness* (BNC). Linguistic manifestation of conceptual metaphor can employ similes that use the explicit connectors *like*, *as*, etc. and tend to be reserved for poetic language [Lakoff, Turner 1989]. The SINS are CONFETTI metaphor, for example, is manifested in English with the help of the simile *Small sins strewn around their minds like dirty confetti from a party long past* (BNC). Whereas metaphorical expressions are automatic and spontaneous and go unnoticed in discourse, similes are apparent and may be readily perceived by the understanding as instances of a peculiar character of naming.

I omit the element *conceptual* and use the term *metaphor* instead of *conceptual metaphor* henceforth, which is not intended to deny the insights on the cognitive nature of metaphor but is a common practice in cognitive linguistics where the terms *conceptual metaphor*, *cognitive metaphor* and *metaphor* are used interchangeably. Linguistic expressions that manifest conceptual metaphors are termed *metaphorical expressions*; linguistic manifestation of metaphors employs words, phrases, sentences, or (groups of) texts.

There are two major issues that are brought into consideration by the formula of metaphorical relation. These issues are, roughly, the nature of mental entities involved into metaphor and the character of their relation.

Issue 1. Mental entities involved into metaphor and their nature. The conceptual metaphor theory defines *the target and source of metaphor* as concepts that belong to different domains. Whole knowledge domains that comprise a number of individual concepts can also be associated through metaphor as long as these domains are distinct realms of conceptualization and remain separate in human thought. This extends the formula of metaphorical relation to CONCEPT/DOMAIN A is CONCEPT/DOMAIN B but does not transform the overall approach to metaphor because domains are in essence broad concepts offering a coherent background for semantically related concepts that are narrower in scope [see Langacker 2008]. The target and source of metaphor are conventionally explained in terms of *image schemas* that have different degrees of complexity and are abstracted by the human mind through interaction with the experiential world. Image schemas can either engage in mapping as indivisible wholes or lend to mapping their particular features and components only. The MORE is UP metaphor (*The price of shares is going up*, *She got a high score at her exams*), for example, makes use of most abstract schemas of fundamental human experience that are not separable into parts, while the PEOPLE are MACHINES metaphor (*He is a human calculator*, *He has had a nervous breakdown*) associates only specific elements of the two image schemas because people and machines are complex phenomena whose mental representations are equally intricate [Evans, Green 2006: 296]. As a rule, the schema of the source is simpler, less abstract and more clearly structured than that of the target [Grady 2007]. The source is often perceptive in nature; it is immediately given to experience and is culturally entrenched.

When literature is more specific, it argues that metaphors can be based either on (propositional) knowledge structures or on image schemas; this point is made explicit in [Lakoff, Johnson 1980b; Kövecses 2002]. In metaphors that employ knowledge structures, basic conceptual elements of the source are mapped onto the target. In metaphors that employ image schemas, basic

conceptual elements of the source image schema are mapped onto the target image schema. This distinction may appear irrelevant because (propositional) knowledge structures are generally assumed to have image schemas at their conceptual basis. As [Kövecses 2002: 37–38] puts it, ‘an interesting property of image-schemas is that they can serve as the basis of other concepts. Thus, for instance, the motion schema underlies the concept of a journey. The motion schema has the parts, initial point, movement, and end point, to which correspond in journeys the point of departure, the travel, and the destination. In this way, *most apparently nonimage-schematic concepts (such as journey) seem to have an image-schematic basis.* The target domains of many structural metaphors can then be seen as image-schematically structured by their source (such as LIFE *is* A JOURNEY)’ (italics added -- O.V.). With respect to schematicity/specificity of metaphor cf. also the latest views expressed in [Kövecses 2017].

Metaphor is a cognitive mechanism whose emergence is determined by the embodied mind but whose operation is shaped by culture [Lakoff 1993]. Metaphors that are based on bodily experience alone are **primary metaphors** [Grady 1999; Lakoff, Johnson 1999]. They are primary in that they are initial, basic, and simple. A primary metaphor is a stimulus-reaction pair where the target is a subjective reaction to a sensory stimulus represented by the source; for example, SIMILARITY *is* NEARNESS (*That color is quite close to the one on our dining-room wall*), IMPORTANCE *is* SIZE (*We’ve got a big week coming up at work*), QUANTITY *is* VERTICAL ELEVATION (*The price of shares has gone up*), DESIRE *is* HUNGER (*We are hungry for a victory*) [Evans, Green 2006: 304–305]. The target does not have an immediate perceptive basis but at the same time is not completely abstract. The source is perceptive in nature and represents properties of entities of the experiential world but not these entities themselves. Both the source and the target are simple mental representations that can not be divided into parts, which determines the **poverty of mapping** in primary metaphors. The source and the target are not imagistic; they are modeled as **primary scenes** motivated by bodily experience, for example, lifting a heavy object that is followed by muscle tension, sweet taste that causes pleasant feeling, focusing attention on bigger objects due to their potential significance as that of a menace, a reward, etc.

Primary metaphors are simplest unconscious associations between the domains of subjective and sensorimotor experience. They relate to fundamental bodily experience and due to this are cross-culturally widespread or even universal. For example, the INTIMACY *is* CLOSENESS primary metaphor (*We’ve been close for years, but we’re beginning to drift apart*) represents the primary experience of being physically close to people one is intimate with, and this is a universal physical experience; the LINEAR SCALES *are* PATHS primary metaphor (*John’s intelligence goes way beyond Bill’s*) explains the subjective judgment of degree against the sensorimotor domain of motion and represents the universal human experience of observing progress made by an object in motion.

Primary metaphors merge into **complex metaphors**, and complex metaphors, in their turn, merge into even more complex metaphors. For example, the PURPOSES *are* DESTINATIONS and ACTIONS *are* MOTIONS primary metaphors merge into the A PURPOSEFUL LIFE *is* A JOURNEY complex metaphor (*He got a head start in life, He is without direction in his life*). In complex metaphors, bodily and cultural experiences interact; cultural models can influence the mind in its construing bodily experiences, and cultural importance can be ascribed to some of the bodily processes and products, for example, to breath, birth, blood, sweat, tears, etc. [Gibbs 1999]. It is complex metaphors that incorporate cultural models and culturally determined knowledge. By virtue of this, complex metaphors are culture-specific. The THEORIES *are* BUILDINGS complex metaphor, for example, emerges into consciousness due to the universal bodily experience represented by the PERSISTING *is* REMAINING UPRIGHT and ORGANIZATION *is* PHYSICAL STRUCTURE primary metaphors. The cultural experience that shapes this metaphor is that buildings are prototypes for upright complex objects in this culture. Buildings are complex in structure and lasting and enduring in time, and these features are attributed to theories through

metaphor [Grady 1997]. Embeddedness of the conceptualizing mind into a different culture would have shaped the bodily experience of persistence differently, and theories might have been metaphorically represented as something different from buildings.

Particular aspects of metaphor allow its different classifications. A classification based on the cognitive function of metaphor distinguishes orientational, ontological and structural metaphors [Lakoff, Johnson 1980b]. ***Oriental metaphors*** organize their targets in terms of orientation in space (UP and DOWN, INSIDE and OUTSIDE, CENTER and PERIPHERY) and are based on fundamental bodily and cultural experience, cf. the orientational metaphors HAPPY *is* UP and SAD *is* DOWN, CONSCIOUS *is* UP and UNCONSCIOUS *is* DOWN, HEALTH AND LIFE *are* UP and SICKNESS AND DEATH *are* DOWN, HAVING CONTROL OR FORCE *is* UP and BEING SUBJECT TO FORCE OR CONTROL *is* DOWN, MORE *is* UP and LESS *is* DOWN, FORESEEABLE FUTURE EVENTS *are* UP (AND AHEAD), HIGH STATUS *is* UP and LOW STATUS *is* DOWN, GOOD *is* UP and BAD *is* DOWN, VIRTUE *is* UP and DEPRAVITY *is* DOWN, RATIONAL *is* UP and EMOTIONAL *is* DOWN. Orientational metaphors vary cross-culturally but are systematic within a given culture. Each orientational metaphor organizes ***an internally systematic metaphorical system***; if, for example, *I am feeling up* means *I am feeling happy* in this system, then *My spirits rose* can not mean *I became sadder*. Conversely, ***an externally systematic system*** is, for example, the one organized by the GOOD *is* UP metaphor and the HAPPY *is* UP, HEALTH AND LIFE *are* UP, HAVING CONTROL OR FORCE *is* UP metaphors as its instances. Orientational metaphors are historically stable within a given culture. The SINS *are* TO THE LEFT (*They felt all their heavy sins in a heap on their left side* (Dickens 2010)) and SIN *is* DOWNWARDS (*The sudden fissures hint at the Catholic underworld of sin* (BNC)) metaphors, for example, are diachronically invariant in English secular discourse throughout the 14th–21st centuries [Vakhovska 2011] where they associate upward movement and movement to the right with the good and downward movement and movement to the left with the bad.

Ontological metaphors explain their targets in terms of physical objects, for example, SIN *is* AN OBJECT (*Do not cast over my heart the shadow of thy sin!* (Taylor 2010)). Conceiving of their targets in terms of bounded things, orientational metaphors allow different manipulations with abstract concepts as if they were objects given to the immediate human experience. Personification metaphors whose sources are concepts for human beings and CONTAINER-metaphors where objects, substances, events, actions, states, visual scenes, etc. are organized as containers are also ontological in nature; for example, SIN *is* A HUMAN BEING (*Sin has many tools, but a lie is the handle which fits them all* (CCAÉ)) and SIN *is* A CONTAINER (*They are souls in mortal sin* (BNC)).

In ***structural metaphors***, elaborate cognitive organization of the culturally entrenched source is mapped onto the target that inherits this organization and is explained in its terms; for example, TIME *is* MONEY (*You are wasting my time, This gadget will save you hours*) and ARGUMENT *is* WAR (*Your claims are indefensible, He attacked every weak point in my argument*). Orientational, ontological and structural metaphors are not always clearly delineated divisions; they may overlap.

Issue 2. Mental entities involved into metaphor and the character of their relation. Systematic correspondences between the target and the source form ***the mapping mechanism of metaphor*** [Lakoff, Johnson 1980b]. This mechanism is better exposed from the blending theory perspective [Zhabotynska 2014]. The blending theory [see Fauconnier, Turner 2000, 2002; Fauconnier 1985; 2007; Turner 2007a; Turner, Fauconnier 2000] is concerned with ***conceptual integration*** mechanisms and introduces the notion of a mental space to explain them. Mental space is a dynamic mental representation of experience that results from interaction of a cognizing subject with the world. Conceptual integration employs four mental spaces -- two input spaces, the generic space, and the blend. Each of the input spaces can be structured as an organizing frame whose slots are connected by vital relations, for example, by the notions of time, space, transformation, cause and effect, part and whole, representation, role, analogy, anomaly, uniqueness, property, similarity,

category, intention, etc. Vital relations connect both slots inside the input spaces and the input spaces themselves. The generic space contains a conceptual structure that is shared by the input spaces. In the blend, the information that is partially borrowed from the input spaces is arranged according to the conceptual structure of the generic space. The emergent structure of the blend does not reproduce the structures of the input spaces because only some elements of these structures and their relations are highlighted and borrowed into the blend. In the blend, they are activated through mental operations of composition, completion, and elaboration, or running the blend. Composition is a mere juxtaposition of slots that belong to frame structures of input spaces and of vital relations that connect these slots. Completion brings into the blend additional structures, for example, cultural models, beliefs, opinions, theories, etc. These additional structures are further elaborated and the blend is run. As a result, the blend contains a new image that is different from the images of the input spaces.

The blending theory distinguishes the following types of emergent structures: simplex networks, mirror networks, single-scope networks, and double-scope networks. Out of these, only single- and double-scope networks result into metaphorical meanings. Their input spaces, according to [Zhabotynska 2014], correspond to the target and source of metaphor, their generic spaces are structured through a mechanism that corresponds to metaphorical mapping, and their blends correspond to metaphorical meaning.

In simplex networks, one of the input spaces contains a conventional organizing frame whose slots are biologically or socially grounded roles, while the other input space contains the entities that become the values for these slots. For example, one of the input spaces is structured by the FAMILY frame that comprises the roles of father, mother, son, daughter, etc. and the other input space has the values of Paul and Sally. These input spaces are compatible and produce the *Paul is Sally's father* blend, and this blend is not a metaphorical one. In mirror networks, the two input spaces, the generic space and the blend are structured by one and the same organizing frame. This frame comprises slots and their relations and specifies a particular event and its participants, which makes the input spaces compatible and the mapping immediate. For example, the A RECORD FOR A ONE-MILE RUN frame is shared by both the input spaces but the values for the slots of this frame are different in each space. One of the input spaces represents an event in running where a runner whose name is Johnson established a record for a one-mile run in the year of 1999. The other input space represents an event in running where a runner X established a record for a one-mile run in the year of Y. The *He has beaten Johnson's 1999 record for a one-mile run* blend borrows the A RECORD FOR A ONE-MILE RUN frame and represents an imaginary event in running where the runner Johnson and the runner X compete for a record, and the runner X wins the competition, although this competition has never taken place. Mirror networks can compress vital relations, and, in this example, the time of real events in running is not borrowed into the blend.

In **single-scope networks**, the two input spaces have different organizing frames. Only one of these frames is borrowed into the blend, while the other frame lends to the blend the values of its slots. The input space whose frame is borrowed corresponds to the source, and the other input space corresponds to the target of metaphor. For example, the *Murdoch knocked Iacocca out* (DOING BUSINESS is BOXING) blend borrows the BOXING frame from the source space, while the values for its slots, namely the media mogul Murdoch (agent) and the Ford executive Iacocca (patient), come from the DOING BUSINESS frame of the target space. In **double-scope networks**, the two input spaces have different organizing frames. The blend borrows from the input spaces only fragments of their frames and develops an emergent structure of its own. This structure is individual to the blend and does not replicate those of the input spaces. The *This surgeon is a butcher* (THIS SURGEON is A BUTCHER) blend, for example, results from integration of the source space for the job of a butcher and of the target space for the job of this surgeon. Their generic space is structured by a frame whose slots are agent, undergoer, sharp instrument, work space, and procedure (goal and means). The blend leaves some of these slots unspecified but

highlights the incompatibility of the goal of healing this surgeon has with the means of butchery he uses to achieve this goal. The emergent meaning not contained in any of the input spaces is that of this surgeon's incompetence.

Metaphor in its manifestation through metaphorical expressions may invite the assumption that occurrence of a conceptual blend is automatically detected by an integrated linguistic sign. This symmetry has been assumed, in particular, in a mathematical elaboration on conceptual blending [Gomez Ramirez 2016]. The relation between conceptual blends and integrated linguistic signs is not regular, however. An integrated linguistic sign does not necessarily activate a conceptual blend, and a conceptual blend is not necessarily manifested by an integrated linguistic sign [Zhabotynska 2012: 182]. At the lexical level of language, conceptual blends are conventionally manifested by lexical blends and by compounds. The examples below show that relations between these are not symmetric:

- a conceptual blend as a lexical blend. The lexical blend *smog* manifests the conceptual blend SMOG (SMOKE + FOG), and *smog* is neither smoke nor fog but air pollution that is a morbid mixture of smoke and fog and some other atmospheric contaminants.

- a conceptual blend as a compound. The compound *a houseboat* manifests the conceptual blend A HOUSEBOAT (A HOUSE + A BOAT), and a houseboat is a large boat equipped for use as a buoyed dwelling on water.

- not a conceptual blend as a lexical blend. At the same time, the lexical blend *gaydar* that combines *gay* and *radar* into a single word with the meaning 'a sense for assessing the sexual orientation of others that resembles a radar' has no conceptual blend of A GAYDAR (A GAY + A RADAR) behind itself. A GAYDAR is a metaphorical concept.

- not a conceptual blend as a compound. Similarly, the compound *a sabertooth* manifests the concept of the feline whose teeth resemble sabers, and this concept is not a conceptual blend as long as a sabertooth is neither a saber nor a tooth nor a combination of these into something emergent and new. A SABERTOOTH is a metaphonymic concept.

- a conceptual blend as a non-integrated linguistic sign. On the other hand, the conceptual blend A MERMAID (A WOMAN + A FISH) is manifested in Russian and German by the non-integrated nouns *русалка* and *die Nixe*, respectively, with the meaning 'a folklore marine creature that is half a woman and half a fish'; the equivalent English noun *a mermaid* is a non-integrated noun synchronically but its etymological history is that of a compound.

The interpretations for the examples are mine. Otherwise, the examples are not non-trivial and may be found elsewhere in dictionaries and in scientific literature on compounding and lexical blending.

Conceptual integration mechanisms are selective and fragmentary, and metaphorical meaning is, by virtue of this, a conceptualization (in the sense imparted to this term by [Talmy 2000; Evans, Green 2006: 467; Langacker, 2008] and others). Metaphorical meaning is shaped by cognitive **highlighting** of particular components in the conceptual structure of the target and by **utilization** of particular components in that of the source [Lakoff, Johnson 1980b; Kövecses 2002]. The JOHN *is* A LION metaphor (*John roared*), for example, structures the JOHN concept only partially; it highlights John's courage, fearlessness and some other character traits but hides the shape of his teeth and nails.

Highlighted features of the target are those that are relevant for the given cognitive and communicative purposes; hidden features do not bear upon these purposes and are not coherent with this particular metaphorical concept. The ARGUMENT *is* WAR metaphor (*He won the argument*), for example, highlights the conflicting nature of an argument hiding its orderliness, while the ARGUMENT *is* A JOURNEY metaphor (*We'll proceed in a step-by-step fashion. We have covered a lot of ground*) highlights the orderliness of an argument hiding its confrontational nature [Evans, Green 2006: 303–304]. Those features and components of the target that are hidden form **gaps** in metaphorical mapping [Grady 2000]. Similarly to partial highlighting of the target, the source is

utilized only partially as well. The metaphorical expressions *We've constructed the framework for a solid argument, If you don't support your argument with solid facts, the whole thing will collapse, You should try to buttress your argument with more facts* [Lakoff, Johnson 1980b], for example, manifest the ARGUMENT *is* A BUILDING metaphor but utilize different parts of the A BUILDING concept, and many aspects of this concept remain unutilized. The features and components of the source that are utilized in mapping are *the used part of metaphor*; the unutilized features of the source are *the unused part of metaphor*.

Background knowledge about the target and the source that is not engaged immediately into a metaphor can be inferred. These inferences are *metaphorical entailments* of a mapping [Lakoff, Johnson 1980b]. Metaphorical entailments are independent metaphors that highlight or hide and, in doing so, organize certain aspects of the target that the original metaphor does not show. In the LOVE *is* A JOURNEY metaphor (*We've hit a dead-end street, We can't turn back now*), for example, LOVE is explained in terms of A JOURNEY and the metaphorical entailments of this mapping are the LOVERS *are* TRAVELERS, A LOVE RELATIONSHIP ITSELF *is* A VEHICLE, EVENTS IN A RELATIONSHIP *are* EVENTS IN A JOURNEY, THE PROGRESS MADE *is* THE DISTANCE COVERED, DIFFICULTIES EXPERIENCED *are* OBSTACLES ENCOUNTERED, CHOICES ABOUT WHAT TO DO *are* DECISIONS ABOUT WHICH WAY TO GO, THE GOAL OF A RELATIONSHIP *is* THE DESTINATION OF A JOURNEY metaphors, etc. Metaphorical entailments have entailments of their own and, in their interrelation and complexity, expose subcategorization of concepts within a single and coherent *metaphorical system*. The TIME *is* MONEY metaphor, for example, entails the TIME *is* A LIMITED RESOURCE metaphor that, in its turn, entails the TIME *is* A VALUABLE COMMODITY metaphor in accordance with the specification relation between MONEY, A LIMITED RESOURCE and A VALUABLE COMMODITY. The most specific metaphorical concept, TIME *is* MONEY in this example, is conventionally used to refer to the entire metaphorical system it belongs to. Metaphorical systems can be rather large and complex; such systems are structured by expansive networks of entailments.

The LOVE *is* A JOURNEY and TIME *is* MONEY metaphors are instances of *congruent mapping*; in each of these metaphors and their entailments, projections of multiple sources that belong to one domain onto one and the same target result into autonomous metaphors whose targets have compatible metaphorical roles within a single cognitive event and whose entailments are equally compatible. Opposite to it is *incongruent mapping* where the autonomous metaphors have targets with incompatible metaphorical roles and incompatible inferences [Zhabotynska 2011]. Incongruent mapping represents different cognitive events and results into *a split of metaphor* as is the case, for example, in the THEORY-CONTAINER metaphorical pair that splits into THEORY *is* A CONTAINER WITH CONTENT (*This insight can contribute to the content of his theory*) and THEORY *is* CONTENT INSIDE A CONTAINER (*They squeeze their theories into the shared understanding of culture*) where THEORY is explained in terms of entities that are incompatible within a single cognitive event.

Metaphor is intrinsically pluralistic. Metaphorical targets are complex concepts that require several sources to explain their particular aspects each. The set of sources mapped onto one and the same target in a piece of discourse is *the range of metaphor* [Kövecses 2002]. The metaphorical range of SIN in the English secular discourse of the 14th–21st centuries, for example, comprises the following historically invariant and variant sources: SIN *is* DOWNWARDS / UPWARDS / INSIDE / OUTSIDE / TO THE LEFT / A BURDEN / MORTAL FLESH / A CONTAINER / WATER / A STONE / DIRT / A STAIN / A ROAD / A POINT OF DESTINATION / COMMODITY / A HUMAN BEING / AN ENEMY / A SICKNESS / A MENTAL AFFLICTION / A HUNTER / A PREY / A BAIT / A TRAP / SLAVERY / AN ANIMAL / A BEAST / A WORM / A PLANT / A WEED / INFECTION / A SPIDER'S WEB / A CAGE / A PRISON / A SLEEP / A ROCK / A SEA / A RIVAL / A CRIMINAL / A GRANDEE / A SPIDER / A SCORPION

[Vakhovska 2011]. These metaphors are a concerted characterization of the SIN concept; each of them is separate, however, in that it gives one perspective on SIN only and organizes metaphorically only one of the numerous aspects of SIN. Metaphorical sources of SIN, at the same time, can be mapped onto other targets as well. The set of targets onto which one and the same source is mapped is *the scope of metaphor* [Kövecses 2002]. The source A TRAP, for example, is mapped in modern English discourse not onto SIN alone but also onto the targets LOVE, RELATIONSHIP, A GLANCE, A SMILE, A MARRIAGE, A JOB, A FAMILY, AN INSTITUTION, A HUMAN BODY, A BUILDING, THE MIND, AN EVENT, A SOUL, AN IDEA, A NOVEL, etc.

The range and scope of metaphor hang together due to used parts of respective metaphors. In using particular components of a source, metaphorical mappings obey certain conceptual constraints that are imposed onto the image-schematic properties of this source. There are metaphorical mappings that do not use all of their potential and possible entailments. The CAUSATION OF AN EXPERIENCE *is* TRANSFER OF AN OBJECT metaphor, for example, produces the metaphorical expressions *She gave him a headache* and *She gave him a kiss* that are interpretable against the literal expression *She gave him a book*. The metaphorical entailment of having an object after it has been transferred is used in *She gave him a headache, and he still has it* but is prohibited in **She gave him a kiss, and he still has it*. In such cases, entailments are blocked by *the invariance principle* that reads: ‘given the aspect(s) that participate in a metaphorical mapping, map as much knowledge from the source onto the target as is coherent with the image-schematic properties of the target. <...> When this basic structure of the source conflicts with that of the target, we get cases of *incoherence* between the two domains. Thus, the invariance principle consists of two parts: (1) the part that says what can be mapped from the source, and (2) the part that says what cannot and why’ [Kövecses 2002: 103]. In the example, a headache is a state that is lasting in time, while a kiss is an event that is momentary. States and events have different generic-level image-schematic structures, and the image-schematic structure of an event blocks the entailment of having an object that was transferred because having is a long-term state.

The invariance principle is originally formulated in [Lakoff 1990, 1993]. Invariance is, however, not a universal principle, and many metaphorical conceptualizations can not be explained in its terms. Although the principle ‘correctly handles metaphorical cases like giving someone a kiss or idea (as opposed to the literal case of giving someone a book), it cannot handle many other metaphorical cases. As Grady and his colleagues point out, there is no logical contradiction between a building having a window and a theory having a window; theories could have a window, just as much as they have a framework. But while the latter is metaphorically acceptable, the former is not. The invariance hypothesis does not offer a solution to this and many similar cases’ [Kövecses 2002: 104].

The invariance, in my opinion, can not be a satisfactory explanation of legitimate and illegitimate metaphorical mappings, if there is a notion of illegitimacy with respect to metaphor at all. There are no boundaries on human imagination, and the mind is free to construe an infinite number of metaphorical associations between entities of whatever kind, cf. [Grady 1999: 97]. Lakoff [1993: 233 and further] observes, for example, that personification of death in English poetry employs the images of ‘drivers, coachmen, footmen; reapers, devourers and destroyers; or opponents in a struggle or game (say, a knight or a chess opponent). <...> Why these? Why isn’t death personified as a teacher or a carpenter or an ice cream salesman? Somehow, the ones that occur repeatedly seem appropriate <...>. The preservation of generic-level structure explained why death is not metaphorized in terms of teaching, or filling the bathtub, or sitting on the sofa’. But I can well imagine death filling and overflowing a bathtub, or teaching, sitting on the sofa and doing whatever else as long as my imagination reaches thus far. Or, for me, there is nothing that prevents my imagination from construing a possible world where the recipient metaphorically has a kiss for hours or days after the kiss has been given, and where a theory has a window and a windowsill. The mind can metaphorically conceptualize literally anything in terms of literally anything, and all the

invariance principle explains is certain tendencies in these conceptualizations. In light of human metaphorical productivity, the range and scope of metaphor are infinite sets. Metaphorical concepts can not be exhaustively catalogued, and a linguistic analysis exposes metaphors with their ranges and scopes in a particular piece of discourse only.

Metaphor is not solitary in type of semantic relations between entities. Another relation of this type is *metonymy*. Whereas metaphor is a semantic mapping that is based on similarity, metonymy is a semantic mapping that is based on contiguity. Metonymy is not a phenomenon of language alone; similarly to metaphor, metonymy is a mechanism of the human mind. It is systematic and structures human cognition, perception and action. Conceptual metonymy is using one concept to refer to another concept that is contiguous to it. The formula of metonymic relation is CONCEPT B for CONCEPT A where CONCEPT A is the target and CONCEPT B is the vehicle [Kövecses 2002; Dirven, Pörings 2002; Croft 2006; Barnden 2010]. Metonymy is explained not in terms of mapping as it is the case with metaphor but in terms of *mental access* to the target through the vehicle that is contiguous to it within one and the same domain [Kövecses, Radden 1998]. Conceptual metonymies are manifested in language with metonymic expressions; for example, A PART for THE WHOLE (*We don't like longhairs*), AN OBJECT USED for THE USER (*The gun he hired wanted fifty grand*), and A PLACE for THE INSTITUTION (*Hollywood isn't what it used to be*) [Lakoff, Johnson 1980b].

Metaphor and metonymy are mental mechanisms that perform a cognitive function but contribute to this function differently. If metaphor explains one entity in terms of another entity and its major function is that of providing understanding, metonymy allows one entity to substitute another entity and its major function is that of providing reference. Metaphor involves two knowledge domains, while metonymy involves one domain. Metaphorical associations are based on particular features shared by entities, while metonymic associations are based on particular relations (part-whole, space, time, causation, etc.) between entities [Warren 2002; see also Barcelona 2000, 2003; Kövecses 2002; Dirven, Pörings 2002; Croft 2006; Barnden 2010].

Metaphor and metonymy interact and overlap. Interaction between metaphor and metonymy is assumed to employ four patterns -- metaphor from metonymy, metonymy from metaphor, metonymy within metaphor, and metaphor within metonymy. Prevalent among these are metaphor from metonymy and metonymy within metaphor. The cognitive mechanism that combines features of both metaphor and metonymy is sometimes termed *metaphonymy* [Goossens 1995]. *Metaphonymic* is, for example, the mental construal that underlies the noun *a sabertooth*. This noun is a name for the feline whose teeth resemble sabers, and the naming techniques employed here are the A TOOTH is A SABER metaphor and the A PART (A TOOTH) for THE WHOLE (THE ANIMAL) metonymy in their interaction. Similarly, *metaphonymic* is the name *houndstooth* for the cloth with an ornament that resembles the teeth of a dog on it, the nouns *a bluebell*, *Snow White* etc.

Metaphorical and metonymic concepts broaden conceptual categories. For example, the concept that underlies the noun *woman* in *Take that woman away -- she is sin* is a mental construal whose metaphorical or metonymic nature is unspecified [Vakhovska 2011]. It can be a metaphor where THAT WOMAN is explained in terms of SIN due to peculiar behavioral patterns, for example, that woman is seductive and licentious and her influence on people is as if that of a sin that depraves a soul of its moral good; it can be a metonymy where THAT WOMAN substitutes SIN as a cause substitutes the consequence, and there is indeed a Biblical tradition to ascribe the original sin to Eve who was the first sinner and caused the fall of man in Eden; it can be a metaphonymy where the THAT WOMAN is SIN metaphor and the THAT WOMAN for SIN metonymy interact and overlap. Irrespective of its nature, the THAT WOMAN concept broadens the category of sins in Catholic theology, and the conceptual category for this example may look the following way:

- original sin
- actual sin
 - sin of omission, sin of commission
 - sin of thought, sin of word, sin of deed
 - sin against God, sin against oneself, sin against fellow creatures, sin against society
 - sin of malice, sin of ignorance, sin of passion or infirmity
 - venial sin, mortal sin
 - Mortal sins
 - spiritual sins
 - pride ◦ avarice ◦ sloth ◦ jealousy ◦ anger
 - carnal sins
 - gluttony ◦ lust ◦ that woman.

In cognitive semantics, there is a growing body of research on metonymy and on metonymy in its interaction and overlap with metaphor. Metonymy may be a cognitive operation that is more fundamental than metaphor. Metaphorical concepts may often prove to be the result of demetonymisation, and the metaphor-from-metonymy evidence invites a conclusion that it is metonymy that forms the basis for metaphor. For example, in the *GENERIC is SPECIFIC* metaphor [Lakoff, Turner 1989], a specific schema is mapped onto an unlimited number of other specific schemas that, together with this schema, belong to one and the same generic schema; this generic schema becomes the target of metaphor as in *RISK TAKING* (a generic concept) *is* *GAMBLING* (a specific concept) where the prototype of the category (*GAMBLING*) substitutes the whole category (*RISK TAKING*). This metaphor associates a type (source) with the kind (target) that includes this type as its prototypical member, and can well be a metonymy. Similarly, the target and source in primary metaphors belong to one and the same domain of sensory experience and are associated as different degrees of subjectivity of this experience. Primary metaphor is therefore metonymic in nature.

Various theoretical languages on metaphor and metonymy remain only positions of truth, however, while the truth, if there is one, is hardly a matter of preferred terms. Some frameworks eliminate the distinction between metaphor and metonymy altogether. Barnden [2010: 31] introduces a conception of dimensions -- ‘instead of worrying about whether some utterance is metaphorical or metonymic, or even about how far along a literal/metonymic/metaphorical continuum it is, we should often be asking instead: What degree and type of similarity does it involve, if any? What sort of contiguity does it involve, if any? <...> Considering the dimensions in themselves helps to free us from a mindset that seeks clear-cut differences between metaphor and metonymy when these may not exist’. Ritchie [2006: 11] develops a conception of interpretive connections -- ‘metaphor, and figurative language generally, is but a convenient way of identifying and discussing a widely-recognized but fuzzily defined subset of these interpretive connections’. Fauconnier [2009] sees no use in differential definitions of metaphor and metonymy. Both metaphor and metonymy have blending as their underlying mechanism but neither metaphor nor metonymy is capable to explain the operation of the human mind, and it is the mechanism of blending that provides this explanation. In sum, there is a tendency to depart from arguing about intuitiveness of terms and to focus on the nature of mental entities and operations that these terms are assumed to denote, and this nature appears to be intrinsically the same.

3. Conceptual metaphor theory and the issue of metaphorical creativity

Metaphor is an instance of maturationally controlled behavior in humans [Vosniadou 1986]. The ability to produce and understand metaphors emerges naturally by the age of five in healthy children who grow up in normal social and cultural settings, and is further promoted by biological

and psychological patterns of gaining overall maturity. Metaphorical performance develops gradually but rapidly and is assisted by continuous knowledge acquisition and improved information processing. Initially, metaphor encompasses a limited number of knowledge domains but then at a certain point comes to embrace their greater array and to augment competence in these and other domains. Whereas younger children produce and interpret conventional metaphorical expressions occasionally and in highly predictable contexts only, older children make a rapid advance in organizing their conceptual categories and are able to produce and comprehend more elaborate, context-independent and creative metaphorical expressions.

Metaphor is a mental mechanism that arises from the higher cognitive needs, primarily from the needs for exploration and abstract aesthetics (for a detailed specification of these needs, see [Maslow et al. 1987; Dörner 1999]). Exploration helps acquire confidence about a particular environment, and metaphor, by virtue of its cognitive function, is one of the instruments of this acquisition. Through abstract aesthetics, humans strive to find structure in their mental representations and to substitute current mental representations by more satisfactory, effective and elegant ones.

Metaphorical creativity in humans is ‘the production and use of conceptual metaphors and/or their linguistic manifestations that are novel or unconventional (with the understanding that novelty and unconventionality are graded concepts that range from completely new and unconventional through more or less new and unconventional to well-worn, entrenched and completely conventional cases)’ [Kövecses 2010: 656]. Creative metaphorical concepts communicate meaning and have aesthetic effect. They meet the criteria of novelty and usefulness a creative product generally has to satisfy, and shed light on those features of metaphorized entities that conventional metaphorical conceptualizations fail to capture for a variety of reasons. These features, for example, may be most difficult for comprehension and verbal report [Vakhovska 2017]. Evaluation of metaphors in terms of creativity has no hard-and-fast rules, however, as long as any evaluation is approximate and average and requires that the evaluator enter a multitude of possible worlds.

A pioneering systematic cognitive linguistic study on the issue of metaphorical creativity appeared in 1989; it was *More Than Cool Reason: A Field Guide to Poetic Metaphor* by G. Lakoff and M. Turner. Since then, there have been occasional publications on metaphorical creativity in the field, but, to the best of my knowledge, they have developed isolated frameworks only, and there are no shared comprehensive accounts of creative metaphorical concepts in terms of their nature, structure, mapping mechanisms, systematicity, and of processes that allow their emergence and understanding. Research on metaphorical creativity appears to be still at its dawn, and there is, to me, a felt immaturity about the issue.

There are two long-standing myths that surround metaphorical creativity in popular opinion. First, metaphors in ordinary and literary forms of language are expected to be different regarding their creative load. Second, metaphors are expected to liberate and boost creativity in (gifted) humans. These myths are the product of traditional approaches to metaphor as to a rhetoric device, and it is these myths that the conceptual metaphor theory has discarded so far.

Myth 1. Literary metaphors are distinct from ordinary metaphors. Contrary to this, gifted individuals (poets, writers, artists, journalists, etc.) have been shown to share with ordinary individuals the largest part of metaphors they use in their creations. These metaphors are usually conventional. *Conventional metaphors* have fixed and static mappings that bring entrenched and well-worn metaphorical expressions into a language; conventional metaphorical expressions often enter dictionaries and thesauri of this language and are not generally perceived as markers of metaphorical conceptualization by native speakers. Conventional metaphors are the background against which unconventional, or novel, metaphors are distinguished. Similarly to neologisms and words of common word stock, entering a lexicographical source might be a borderline between conventional and novel metaphors, but there is no stating this explicitly in the literature on metaphorical creativity that I have surveyed. *Novel metaphors* are (instances of) metaphorical

creativity. Novel metaphors, as a rule, are based on and made out of conventional metaphors through a number of strategies that the mind has for this purpose; there is a class of genuinely novel metaphors that do not derive from conventional metaphorical thought but these genuinely novel metaphors are rare. Novel metaphors are not a privilege of gifted individuals and may well be made and used by ordinary people in their everyday lives. It is important to emphasize that there is no denying the difference between ordinary and literary discourses as far as their metaphoricality is concerned. But the difference between these discourses is not in the conventional and novel metaphors; their difference is in the complexity and density of novel metaphors that literary discourse produces.

There are several *types of metaphorical creativity*: creativity induced by the source, by the target, and by concept integration mechanisms. *Source-induced creativity* varies between source-internal and source-external cases. In source-internal creativity, the originally unutilized components of the source become utilized to conceptualize the target. In source-external creativity, a target receives new sources, and these sources are its unconventional conceptualizations. In *target-induced creativity*, the originally hidden components of the target become highlighted, and corresponding components of the source are mapped onto them. More specifically, in target-induced creativity, ‘a particular target that is conventionally associated with a source “connects back” to the source taking further knowledge structures from it’; for example, ‘metaphorical expressions, such as *fire-exit*, are selected from the source domain of BUILDING on the basis of target domain knowledge in the EUROPE *is* A BUILDING metaphor, though they are not part of the conventional mappings’ [Kövecses 2010: 657]. In *integration-induced creativity*, the components of both the target and source are combined into an unconventional way, with the result of creative metaphorical blends [Kövecses 2010]: ‘the two inputs have different (and often clashing) organising frames, and the blend has an organising frame that receives projections from each of those organising frames. The blend also has emergent structure on its own that cannot be found in any of the inputs. Sharp differences between the organising frames of the inputs offer the possibility of rich clashes. Far from blocking the construction of the network, such clashes offer challenges to the imagination. The resulting blends can turn out to be highly imaginative’ [Turner 2007b].

Metaphorical creativity employs certain conceptual devices, or strategies, that are applied to conventional metaphors to transform them into novel ones. Among the *strategies of metaphorical creativity* are extending, elaboration, questioning, and combining [Kövecses 2002: 47–49]. Certain creative metaphorical concepts, however, fall, according to [Kövecses 2010], outside these strategies. Therefore, the list is hypothetically not complete, and there is a need for comprehensive research with bigger data: ‘My further hope is that others will join us from diverse disciplines, such as cognitive linguistics, relevance theory, cognitive poetics, cognitive psychology, cognitive anthropology, applied linguistics, multimodal communication and media studies, cognitive semiotics, and the like, in the study of figurative creativity within (and beyond) the framework proposed in the paper’ [Kövecses 2010: 686].

Extending and elaboration are instances of source-internal creativity. *Extending* a conventional metaphor is adding new, originally unutilized, elements to the source; *elaboration* is adding new unconventional detail to existing elements of the source. The LIFE *is* A JOURNEY conventional metaphor, for example, is extended by Dante in his lines *In the middle of life’s road / I found myself in a dark wood*; here, a novel fragment of knowledge about journeys, namely, that journeys may make use of roads that go through dark woods, is introduced. The ANGER *is* A HOT FLUID IN A CONTAINER conventional metaphor may become elaborated as ANGER *is* ACETYLENE IN A CONTAINER THAT EXPLODES [Kövecses 2002: 47–49].

In other words, conventional metaphors and novel metaphors that result from extending and elaboration are distinguished through their used and unused parts, and a conventional used part is less creative than a novel one. One and the same metaphor A THEORY *is* A BUILDING, for

example, underlies the metaphorical expressions *His theory has solid foundations* and *His theories are always baroque, He prefers massive Gothic theories covered with gargoyles, Complex theories usually have problems with the plumbing, and His theory has thousands of little rooms and long, winding corridors* (the example comes from [Lakoff, Johnson 1980a]). The target and source of this metaphor enter mapping as image schemas whose organization is that of a prototypical category with central and peripheral members. The element of a building highlighted in conventional metaphors for theories is the foundation. Highlighting architectural style, gargoyles, plumbing, and rooms and corridors is not conventional for theories, which is employed by the novel metaphorical expressions in this example. Conventional metaphors therefore recruit (elements of) sources from the centres of prototypical categories, while novel metaphors take (elements of) sources from the peripheries of these categories. Sources that are furthest to the periphery might, presumably, furnish metaphors that are most creative. Also, the closer to the periphery a chosen component is, the more cross-domain the respective metaphor. This choice of peripheral elements from the image-schematic structure of the source is observed in involuntarily creative metaphorical concepts coined by young children and by schizophrenics who, although through different reasons, do not handle conceptual categories properly and are apt to recruit wrong members out of these.

Cf.: According to [Nikitin 2007], metaphors are based on negimplications of linguistic meanings. For example, it is owing to the negimplications of meanings of the words *a tooth*, *a knife* and *an eye* that a tooth can not be attributed the property of being brave, a knife -- of being able to smile, and an eye -- of being able to drone. Attribution of incompatible and improbable semantic components detects metaphors in *Your teeth are brave, / Like the smile of a knife, / And drone, like bumblebees, / Golden eyes* (a line from A. Voznesenskiy's poem; rendering from Russian into English is mine) where the negimplications are used to create unusual metaphorical images intended to impress the reader more than it would have been possible with the rhyme only. Unusual images created through metaphor (and metonymy) are often more important for poetry than the rhyme and the form, provided it is not poetry of formalism where the form predominates. In a similar fashion, oxymorons *deafening silence*, *virtual reality*, etc. and paradoxes *I can resist anything except temptation* (O. Wilde), *I am a deeply superficial person* (A. Warhol), etc. rely on negimplications. In the A THEORY is A BUILDING example, having a foundation is an intensional characteristic of a building, while architectural style, decorations, planning, etc. are characteristics only implied for buildings with diverging degrees of probability. These characteristics are implicational. In this light, metaphorical concepts that employ intensional characteristics are conventional; metaphorical concepts that employ implicational characteristics are more or less conventional/novel; metaphorical concepts that employ negimplicational characteristics are novel.

Through **questioning**, conventional metaphors become cast doubt upon. For example, the A LIFETIME is A DAY and DEATH is NIGHT conventional metaphors may beg for doubts concerning the ability of death to turn into life just as if night would turn into a day. **Combining** is a conceptual strategy of evoking several conceptual metaphors through a single metaphorical expression. In the line *the twilight <...> / Which by and by black night doth take away*, for example, W. Shakespeare combines the LIFETIME is A DAY, LIFE is LIGHT, LIFE is A PRECIOUS POSSESSION, DEATH is NIGHT, and EVENTS are ACTIONS conventional metaphors [Kövecses 2002: 47–49].

Genuinely novel metaphors are scarce. They do not build upon any of conventional metaphorical conceptualizations and 'have a tendency to be noteworthy by virtue of their frequently anomalous character. Consider the following example from Gabriel García Márquez's novel *Love in the Time of Cholera* <...>. *Once he tasted some chamomile tea and sent it back, saying only, "This stuff tastes of window." Both she and the servants were surprised because they had never heard of anyone who had drunk boiled window, but when they tried the tea in an effort to understand, they understood: it did taste of window.* <...> What is tea like that tastes like window?

This is obviously an unconventional metaphor that was created by the author in order to offer a new and different perspective on an aspect of reality' [Kövecses 2002: 43]. Other examples of genuinely novel metaphors brought into consideration by the cognitive linguistic literature are CLASSICAL THEORIES are PATRIARCHS (*Classical theories are patriarchs who father many children, most of whom fight incessantly*) and LOVE is A COLLABORATIVE WORK OF ART [Lakoff, Johnson 1980a]. Creative metaphors of this kind are often ambiguous in meaning but rich in imagistic detail and interpretations. Entailments of creative metaphors may be both novel and conventional metaphorical conceptualizations that shape a fragment of reality in a peculiar way.

Humans do not rework conventional metaphorical conceptualizations into novel ones on purpose, neither do they consciously and purposely coin genuinely novel metaphors. Creative metaphors are unconscious and spontaneous; they are (often) induced in individuals by *context*. It is from various contexts that people derive novel conceptualizations when they think, speak and act metaphorically. And again there is nothing in the contextual motivation for novel metaphors that would be a privilege of gifted individuals: 'the same contextual factors that lead conceptualizers to produce unconventional and novel metaphors in everyday forms of language are also at work in poetry and literature in general' [Kövecses 2010: 657].

There are two major types of context: global contexts influence all individuals within a language community, local contexts are immediate circumstances that surround a particular individual. *Global contexts* are universal frames of experience; they range over the physical environment, social, cultural and historical factors, and values, norms and mores. *Local contexts* are varied experiences that include conceptualizers with their unique personal backgrounds and interests, their biological and physical condition, their mental state, their emotions, their immediate physical, social and cultural settings, their (subconscious) knowledge about themselves and the topic of conceptualization; the immediate linguistic context, and, presumably, some other contextual factors. Various global and local contexts seldom apply in isolation; most often, they co-occur and jointly shape metaphorical conceptualizations in real discourses. Contexts are conceived of as nested frames, 'such that the physical setting as the outermost frame includes the social frame that includes the cultural frame, where we find the speaker/conceptualizer, the hearer/conceptualizer, and the topic, as well as the diagram for the flow of discourse (functioning as the immediate linguistic context). <...> Potential resemblances between entities are legion, but what helps (triggers, prompts, etc.) us (to) choose a source domain would be some contextual factor' [Kövecses 2010: 682–686].

Myth 2. Metaphors liberate and boost human creativity. This popular belief has been shown to be only partially true, however: 'Much of our conceptualization of experience is metaphorical, which both motivates and constrains the way we think creatively. The idea that metaphor constrains creativity might seem contrary to the widely held belief that metaphor somehow liberates the mind to engage in divergent thinking' [Gibbs 1994: 7]. Metaphorical conceptualization of the world in humans is motivated and at the same time constrained, with graded strength, by embodiment and context. Kövecses [2010] suggests the term *pressure of coherence* for this latter constraining role that the human body and context have in metaphorical conceptualization of the world. This means that the human body both facilitates particular metaphorical conceptualizations and sets limits on them because humans have to be coherent with their bodies, and that context both facilitates particular metaphorical conceptualizations and sets limits on them because humans have to be coherent with the context they are in.

The body and context in their facilitating and constraining roles are equally important in metaphorical conceptualization. And whereas the embodied nature of metaphorical concepts accounts for their cultural universality and stability in time, context-induced properties of these concepts account for their variation. Kövecses [2010: 683] observes that 'many context-induced metaphorical expressions appear to be novel and unconventional. This is because the (immediate) context of discourse varies from one discourse to another, and with it the linguistic metaphors that

are based on the context will also vary'. It is therefore variation that bears on metaphorical creativity in the first place.

4. Conclusion

In this paper, I have reviewed a more or less extensive selection of publications from the field of cognitive linguistics that address from a variety of perspectives the issue of metaphor. The views expressed in these publications are generally subsumed into the conceptual metaphor theory. The theory defines metaphor as understanding and experiencing one concept/domain in terms of another concept/domain. Conceptual metaphors are manifested in natural language with the help of metaphorical expressions. The formula of metaphorical relation is CONCEPT/DOMAIN A *is* CONCEPT/DOMAIN B, where CONCEPT/DOMAIN A is the target, CONCEPT/DOMAIN B is the source, and the link *is* stands for the mapping mechanism that results from a set of systematic correspondences between the target and the source. The metaphorical target and source are (propositional) knowledge structures that may have at their basis image schemas. As a rule, the source schema is simpler, less abstract and more clearly structured than the target one; it is often perceptive, immediately experienced and culturally entrenched.

The mapping mechanism of metaphor is selective and fragmentary. Metaphorical meaning is therefore a conceptualization that is shaped by cognitive highlighting of particular components in the conceptual structure of the target and by utilization of particular components in that of the source. The features and components of the source that are utilized in mapping are the used part of metaphor; the unutilized features of the source are the unused part of metaphor. Background knowledge about the target and the source that is not engaged immediately into a mapping can be inferred. These inferences are metaphorical entailments of this mapping. Metaphorical entailments are independent metaphors that organize certain aspects of the target that the original metaphor does not show. Metaphor is intrinsically pluralistic; it has its range and its scope that hang together due to respective used parts. In using particular components of a source, metaphorical mappings obey certain conceptual constraints imposed by the invariance principle.

Particular aspects of metaphor allow its different classifications. The classification of metaphors into primary and complex ones is driven by the role that the embodied mind and culture have in them. Orientational, ontological and structural metaphors are distinguished due to peculiar cognitive functions they perform. Another classification issue with respect to metaphor is how distinct the latter is from metonymy. Metaphor and metonymy are semantic relations that may interact and overlap, and there is evidence that metaphor at its basis may well be metonymic.

Metaphor serves to satisfy in humans their need for abstract aesthetics. Metaphorical creativity is instantiated through novel conceptual metaphors. Whereas conventional metaphors have fixed and static mappings that bring entrenched and well-worn metaphorical expressions into a language, novel metaphors are the result of variation; they communicate meaning and have aesthetic effect. Novel metaphors often derive from conventional ones through the conceptual strategies of extending, elaboration, questioning, and combining. Among the types of metaphorical creativity are source- and target-induced creativity and creativity induced by concept integration mechanisms. Genuinely novel metaphors that do not build upon any of conventional metaphorical conceptualizations are infrequent occurrences. Creative metaphors are unconscious and spontaneous; they are often prompted by various global and local contexts in their interaction.

Metaphorical creativity is little-studied so far and remains an issue of favorable promise to cognitive linguistic theorizing and research. It is this issue that has particularly instigated the review; and it is this issue that sets me forth in my further research.

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UDC 81'42'22:82-343(73)=111

**MYTHOLORIC SPACE OF AMERINDIAN PROSAIC TEXTS:
 COGNITIVE-SEMIOTIC AND NARRATIVE PERSPECTIVES**

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S.V. Volkova. Mytholoric space of Amerindian prosaic texts: cognitive-semiotic and narrative perspectives. The paper suggests a new cognitive facet of ethnolinguistics for exposing ethno-cultural features embodied in mytholoric characters of literary prosaic texts. The term "mytholoric" is a coinage that reflects syncretic unity of mythic and folk lore of Amerindian culture. Mytholoric space is defined as cognitive and semiotic construct that incorporates different types of mytholoric characters. *Author's mytholoric character* is a cumulative cognitive and semiotic textual construal, which reflects behavior and deeds of the person who stands for the interests of Amerindian in modern American society and tries to adapt to the rules of existing in that new world. It has been proved that metamorphosis is a dominant linguistic means in creating mytholoric and author's mytholoric character. Semiotic and cognitive analysis made it possible to construe the model of the main character, interpreted as ethnocultural symbol. Narrative analysis of the Amerindian prosaic texts outlined the ways and means of narrative perspectives highlighting metamorphosis and reverse perspective as the major ones in creating and interpreting the mytholoric space in literary text. The paper suggests linguistic and cognitive mechanism of reverse perspective in literary text. Models of mytholoric space are determined by the genre of the literary text and eclecticism of mytholoric characters.

Keywords: Amerindian, reverse perspective, metamorphosis, mytholoric characters, mytholoric space.

Волкова С.В. Мифолорное пространство америндианских прозаических текстов: когнитивно-семиотический и нарративный аспекты. В статье предлагается новое направление в отечественной лингвистике – когнитивная этнолингвистика, – открывающее перспективы исследования средств формирования и способов включения конститuentов мифолорного пространства в общее семантическое пространство современного художественного текста. *Мифолорное пространство* определяется как когнитивно-семиотический конструкт, инкорпорирующий разные типы *мифолорных* образов. Мифолорно-авторский образ определяется как кумулятивный когнитивно-семиотический конструкт, отображающий особенный тип личности, поведение и поступки представителя америндского общества, который пытается адаптироваться в современном мире американского общества. Семиозис мифолорно-авторского образа осуществляется посредством метаморфозы, когнитивно-семиотическая природа которой служит воплощению идеи преобразования образа персонажа в знак этнокультуры. В работе дана характеристика нарративных способов интерпретации мифолорного пространства, к которым относятся метаморфоза и обратная перспектива. Представлен лингвокогнитивный механизм обратной перспективы в художественном тексте. В работе построены модели мифолорного пространства, тип которых определяется жанром художественного текста и эклектикой мифолорных образов.

Ключевые слова: америндский, обратная перспектива, метаморфоза, мифолорные образы, мифолорное пространство.

Волкова С.В. Міфолорний простір америндіанських прозових текстів: когнітивно-семіотичний і нарративний аспекти. У статті пропонується новий напрям вітчизняної лінгвістики – когнітивна етнолінгвістика, що відкриває перспективи дослідження засобів формування і способів

уключення елементів міфолорного простору в загальний семантичний простір сучасного художнього тексту. Міфолорний простір визначається як когнітивно-семіотичний конструкт, що інкорпорує різні типи міфолорних образів. Міфолорно-авторський художній образ є кумулятивним когнітивно-семіотичним конструктом, що втілює риси особистості, представника амеріндіанської культури, який адаптується до нових умов існування в сучасному американському суспільстві. Семіозис міфолорно-авторського образу відбувається засобом метаморфози, когнітивно-семіотична природа якої слугує втіленням ідеї перетворення образу персонажа в знак етнокультури. У роботі схарактеризовано нарративні способи інтерпретації міфолорного простору, до яких віднесено метаморфозу і зворотню перспективу. Запропоновано лінгвокогнітивний механізм зворотної перспективи в художньому тексті. Побудовано моделі міфолорного простору, тип яких визначається жанром художнього тексту й еклетикою міфолорних образів.

Ключові слова: амеріндіанський, зворотна перспектива, метаморфоза, міфолорні образи, міфолорний простір.

1. Introduction

A handful of Native novelists – Navarr Scott Momaday (Kiowa), Leslie Marmon Silko (Laguna Pueblo), Louise Erdrich (Ojibwa), Linda Hogan (Chicksaw), James Welch (Blackfoot), and Gerald Vizenor (Ojibwa) – constitute the **material** of investigation. The plural nature of Native American literatures stems from the plurality of Native American cultures (Kiowa, Laguna Pueblo, Chicksaw, and so on) and the multiplicity of different genres (stories, novel-myth, novel-legend, essay, literary tale).

The history of Native American Literature is often divided between works published before and after Navarr Scott Momaday's 1969 Pulitzer Prize for *House Made of Dawn*. Momaday's Pulitzer brought academic and public attention to Native writers. Lincoln states that it is not often, indeed seldom, that a writer word for word, character by character, action to action, story following story, surprises, upsets, delights, saddens, amazes a reader – as this one does [Lincoln 1985: 1]. The floodgates opened up interest in a host of other contemporary Native authors as a result of Momaday's award. Lincoln refers to the period surrounding Momaday's achievement as a Native American Renaissance [Lincoln 1985: 11].

The Native American Renaissance took three forms: confidence on the part of contemporary Native authors in reclaiming their heritage in their own literary expressions; concern with finding and re-evaluating early literary works by Native authors; and renewed interest in anthropologies of translations of traditional artistic impressions – myths, prayers, ceremonies, rituals, love songs, oratory, etc. [Lundquist 2004: 38].

Therefore, Native literary themes pivot around various descriptions and confrontations with the causes and effects of native fragmentation, while at the same time imagining how healing from such debilitating fragmentation may occur. Consequently, Native writers share a common approach to creating the space full of cultural metaphors [Toelken 1976]. Cultural metaphors, according to noted folklorist Barre Toelken, shape individual and collective assumptions about the world operates [Toelken 1976: 15-16]. Navajo, for example, have the tendency to recreate the pattern of the circle at every level of the culture highlighting set of concepts, codes, patterns and assumptions grounded in the characters of prosaic texts. The characters, which are constructed on this or that cultural metaphor, form the mythologic space [Volkova 2016] defined in my work as cognitive and semiotic construct that incorporates different types of mythologic characters [Volkova 2017].

My **objective** in writing this paper is therefore two-fold. In cognitive semiotics perspective I state that mythologic space consists of author's mythologic characters identified as ethnocultural symbols which incorporate different codes. Decoding them helps to draw up their ethno-cultural implicatures, and to make the link between image, sign and symbol. In narrative perspective I reveal that metamorphosis and reverse perspective are effective means that serve as narrative tools for construing the character interpreted as ethnocultural symbol. While illustrating semiotic and narrative perspectives of interpretation the mythologic space in literary text, the paper integrates

linguocognitive, ethnocultural and semiotic **methods** showing the net of mind and language in highlighting ethnocultural concepts, values and way of thinking, embedded in the mythologic characters, which constitute mythologic space of prosaic text.

2. Author's mythologic character as ethnocultural symbol

American anthropologist Edward M. Bruner claims that "Every telling is an arbitrary imposition of meaning on the flow of memory, in that we highlight some causes and discount others; that is, every telling is interpretive. The concept of an experience, then, has an explicit temporal dimension in that we go through or live through an experience, which then becomes self-referential in the telling" [Bruner 1986: 7].

From Bruner's words it may be inferred that there is a reality in our experience or consciousness and then our interpretation of that reality follows through verbal expression.

Meaning is not inherent in objects, objects do not signify by themselves. Meaning, rather, is constructed by what is known as a competent observer, that is, by a subject capable of 'giving form' to objects [Martin 2006: 10].

Donald Sandner explains that "life symbols make of a culture what it is specifically, and govern the thoughts and feelings of the people, who are part of it" [Sandner 1991: 14-15].

Sandner reminds us, referring to an American anthropologist Leslie Alvin White, that "all human behavior originates in the use of symbols" [Sandner 1991: 15].

In modern prosaic texts created by such contemporary Amerindian writers as Navarr Scott Momaday, Lesli Marmon Silko, Linda Hogan central characters find themselves on the border of two different worlds – native and another, alien to them in way of life, values, attitude to people, animals and so on so forth. Each of these worlds influences on the main character and changes his inner world in some way.

For instance, it occurs with a central hero in novel-myth *House Made of Dawn* who behaves, thinks and feels differently in different narrative situations:

Narrative situation 1 'Hero and his native world': "*In the morning sunlight the Valley Grande was dappled with the shadows of clouds and vibrant with rolling winter grass. The clouds were always there huge, sharply described, and shining in the pure air. Such vastness makes for illusion, a kind, a kind of illusion that comprehends reality, and where it exists there is always **wonder** and **exhilaration**. [...] Then he saw the **eagles** across the distance, two of them, riding low in the depths and rising diagonally toward him. He did not what they were first, and he stood watching them, their far, **silent flight erratic** and **wild** in the bright morning. They arose and swung across the skyline, veering close at last, and he knelt down behind the rock, **dump with pleasure and excitement**, holding on to them with his eye.*" (House Made of Dawn, 16). Watching the birds' behavior Abel is going to make magic contact with their souls: he kneels down and this sign means 'I honor you and express deep respect'. Such deep feeling that looks like great estimation in attitude to the birds, which are considered to be sacred ones in Amerindian culture, is the expression of some magic interconnection between this human being and eagles, the signs of Great Spirit. So, in his native world the **hero is** strong, powerful **Eagle**.

Narrative situation 2 'Hero in another, alien world': "*Now, here [Лос Анджелес], the **world** was open at his back. He had lost **his place**. He had been long ago **at the centre**, had known where he was [...].*" (House Made of Dawn, 92). Antithesis *native world* :: *alien world* is activated by means of literary details serving as triggers of the meaning that interpreter should 'reread': "*Why should Abel think of **fishes**? He **could not understand the sea**; it was **not of his world**. It was an enchanted thing, too, for it lay under the spell of the moon*" (House Made of dawn, 87). In alien world the hero is at a loss. He thinks about fishes, which are helpless at some period of time. Narrator expresses his character inner state by putting rhetoric question (*Why should Abel think of fishes?*), speaking about the sea, which is not his [Abel] world. The word *fish* is the trigger, that recollects in reader's memory the episode about fishes, given by the author in the earlier narrative

on page 79 in *House Made of Dawn*: "There is a small silversided **fish** that is found along the coast of southern California. In the spring and summer it spawns on the beach during the first three hours after each of the three high tides following the highest tide. These fishes come by the hundreds from the sea. They hurl themselves upon the land and writhe in the light of the moon, the moon, the moon; they writhe in the light of the moon. **They are among the most helpless creatures on the face of the earth.** Fishermen, lovers, passers-by catch them up in their bare hands" (House Made of Dawn, 79). In another world the **hero** is **helpless fish**.

Interpretation of the given above narrative situations makes us think about metamorphosis of hero's mind. At first he was alone: "Abel was running. **He was alone and running**, hard at first, heavily, but then easily and well. The road curved out in front of him and rose away in the distance. He could not see the town. It was dawn. The valley was gray with rain, and snow lay out upon the dunes. The first light had been deep and vague in the mist, and then the sun flashed and a great yellow glare fell under the cloud. The road verged upon clusters of juniper and mesquite, and he could see the black angles and twists of wood beneath the hand white crust; there was a shine and glitter on the ice. **He was alone and running, running**" (House Made of Dawn, Prologue, 1). And at the end of his symbolic running he became unsubdued: "He was running and a cold sweat broke out upon him and his breath heaved with the pain of running, but he was **unsubdued**. His legs buckled and he fell in the snow, but he was **unsubdued** and got up and ran on. The rain fell around him in the snow and he saw his broken hands, how the rain made streaks upon them and dripped soot upon the snow. And he was **unsubdued**, got up and ran on" (House Made of Dawn, 185). Passing through many difficulties the hero remains unsubdued, he continues his running being strong, tough and full of willing to work for his people.

He passes through some internal changes that lead to another his world understanding and world perception. The following scheme illustrates the mechanism of such metamorphosis (Fig. 1):

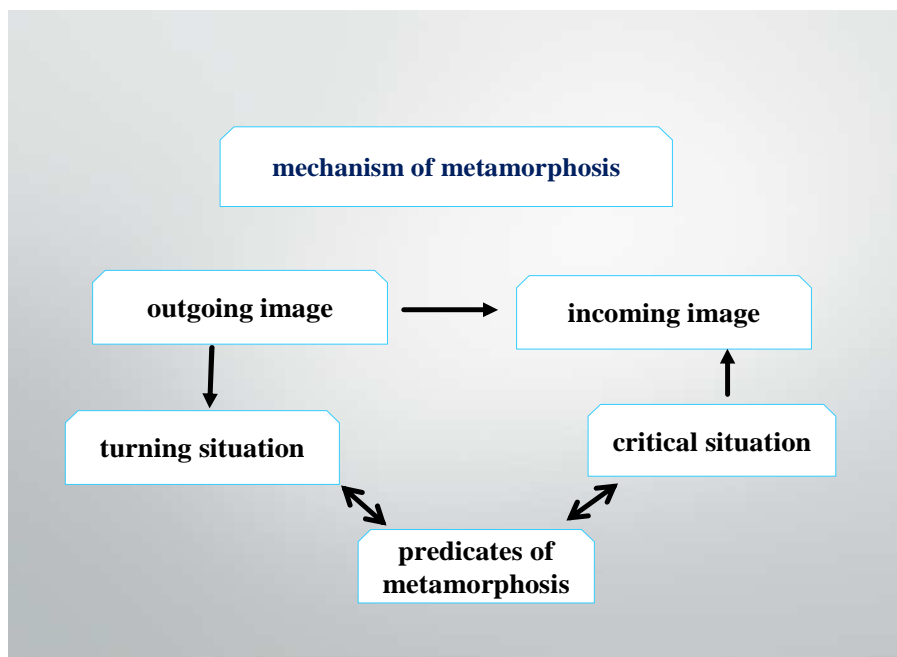


Figure 1. Mechanism of metamorphosis

Outgoing image is revealed in the first narrative situation which I titled as 'Hero is alone' (see the sample above).

Turning situation is developed in some narratives that contrast the central hero and his antagonist who is a white man: "The white man was **large and thickset, powerful and deliberate in his movements.** The white man held the rooster up and away in his left hand while its great wings

beat the air. The **albino** was **huge and hideous** at the extremity of the terrified bird. It was then her eyes were drawn to the **heavy, bloodless hand** at the throat of the bird" (House Made of Dawn, 39);

"He rode beside Abel, turned suddenly upon him, and began to flail him with the rooster. The white man was **too strong and quick** for him. The white man leaned and struck, back and forth, with only the mute **malice** of the act itself, careless, undetermined, almost composed in some final, **preeminent sense**. The bird was dead" (House Made of Dawn, 39);

"The **white man laughed** and each time ended in a strange, inhuman cry. **Abel grew silent**, watching him, with a hard, transparent mask upon his mouth and eyes" (House Made of Dawn, 73).

Critical situation coincides with describing the hero's feeling in another world, when he thinks of his past, of his being in the centre of events: "Now, here, *the world was **open at his back***. He **had lost his place**. He had been long ago at the center, had known where he was, had lost his way, had wandered to the end of the earth, was even now reeling on the edge of the void" (House Made of Dawn, 92); "He tried to think **where the trouble had begun**, what the trouble was. There was trouble; he could admit that to himself, but he had no real insight into his own situation. Maybe, certainly, **that was the trouble ...**" (House Made of Dawn, 93).

And incoming image is highlighted in final running of the hero, when he is no longer alone, he is unsubdued that symbolizes hero's rebirth.

Semiosis of the main character as ethnocultural symbol based on metamorphosis provokes me to make some analogy between the main character who changes his mind, worldview, behaviour and butterfly, who also passes through some changes during its life period.

In early Christianity, the butterfly was a symbol of the soul. In China, it was used as a symbol of conjugal bliss and joy. The butterfly was particularly revered by the tribes of the American southwest. Its dance is performed by both Navajo and Hopis. In the Hopi tradition, unmarried girls of the butterfly clan wore their hair in the shape of butterfly wings to advertise their availability. To Native Americans, the butterfly is a symbol of change, joy and colour. The exquisite butterfly was considered a miracle of transformation and resurrection [Lake-Thomb 1997].

Butterfly symbolizes the power of air, the ability to float upon a breeze. It is known for its darting flight, thus, it represents the mind and the ability to change it when necessary. Butterfly encodes the never-ending cycle of life; therefore, its medicine bestows not only the ability, but the clarity of mind needed before self-transformation [Alexander 2005].

Symbols act powerfully, according to Sandner, to "change the psyche by converting energy into a different form, a form that can heal" [Sandner 1991: 14]. Jung in his theory of the importance of symbolism [Jung 1964] came to the conclusion that symbols act as transformers, their function being to convert libido from a 'lower' into a 'higher' form. This kind of psycho/social/spiritual healing processes thrust patients into liminal space – a space where the sick person is willing to leave one mode of being (a death) and enter into another (a rebirth).

In *House Made of Dawn* the main character also passes from one mode of his life into another. Having found himself at the abyss he is willing to enter new stage of his developing, to be reborn. He makes his ritual running and understands that he is not alone and he has a chance to start a new life. Semiotic model of such character is construed in the form of Butterfly (Fig. 2):

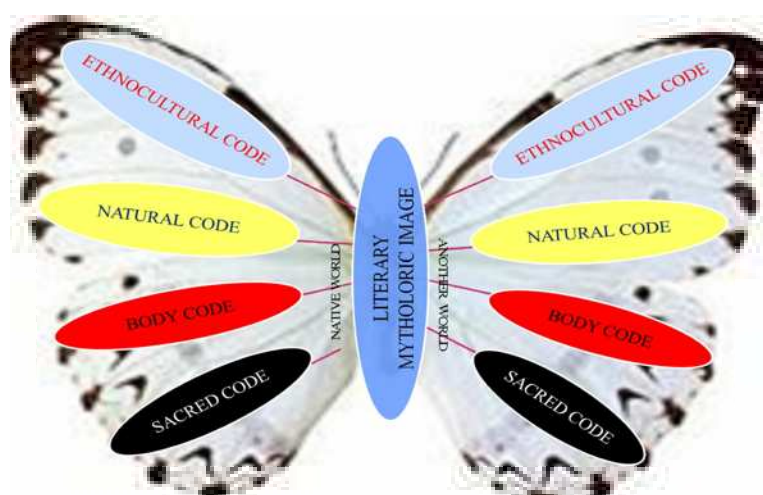


Figure 2. Semiotic model of author's mythologic character

The model illustrates that the character belongs to two worlds: native and alien. He incorporates some codes (ethnocultural, natural, body and sacred) which are mirrored in these two worlds. And at last he passes through his own rebirth making his ritual running, changing his attitude to the world, realizing his sacred function in the world and starting a new life.

The semiotic facet is a useful tool to illustrate the basic semantic or thematic oppositions underpinning a text. It also allows, however, a demonstration of textual dynamics by plotting essential stages or transformations in a story and following the narrative trajectory of the subject.

3. Narrative perspective of mythologic space interpretation

Text is a set of narratives [Schmid 2003], in which verbal signs imply different information about signified object. Postmodern narrative incorporates modes of narration, which at once departs from traditional ways of depicting events.

In my analysis of mythologic space in literary text, in finding the means of interconnection between two worlds – real one referring to the objective reality, in which the hero accidentally finds himself, and mythologic, full of myths, legends and symbols, which influence the character of the hero and play an important role in reader's perception him as ethnocultural symbol, who came to the world to perform some sacred mission, – such narrative technique as *reverse perspective* is the most effective one in connecting similar plots and structures, predictable situations, episodes, conflicts and resolutions [Volkova 2016]. The concept of 'reverse perspective' is borrowed from Pavel Florensky's work *Reverse Perspective* (2002), in which he explains perspectival relations in icon painting of the fourteenth, fifteenth and part of the sixteenth centuries [Florensky 2002].

Applying the principle of reverse perspective onto linguistic interpretation of the text *reverse perspective* is regarded in two dimensions: 1) as narrative way of forming mythologic images by means of cumulating literary details divergently put in the space of the text and 2) as the way of interpretation the mythologic space and its elements by mapping and projecting events and motifs of the characters [Volkova 2016: 376]. Linguistic and cognitive mechanism of reverse perspective is based on repetition, parallelism, similarity, analogy, mapping and projecting.

Reverse perspective in narrative is the method that marks an important milestone in the development of central character as ethno-cultural symbol. Reverse perspective in literary text is something different from retrospective narration defined by Genette [Genette 1980]. Retrospective means that narrative is broken by some other narrative, which has reference to the events happened with the hero in the past. This 'other narrative' introduces some additional information and is connected to the main narrative by means of word-trigger.

To explain the mechanism of reverse perspective in narrative (Fig. 3) it should be understood that the text manifests one space with different levels, different images, and different textual worlds. In the case with reverse perspective the narrative isn't interrupted by another narrative. Just the other way round, as the narrative contains lexical triggers, which activate reader's cognition and return him to some previous event in the text in order to realize and fulfill some conceptual gaps for understanding the actions and motifs of the character.

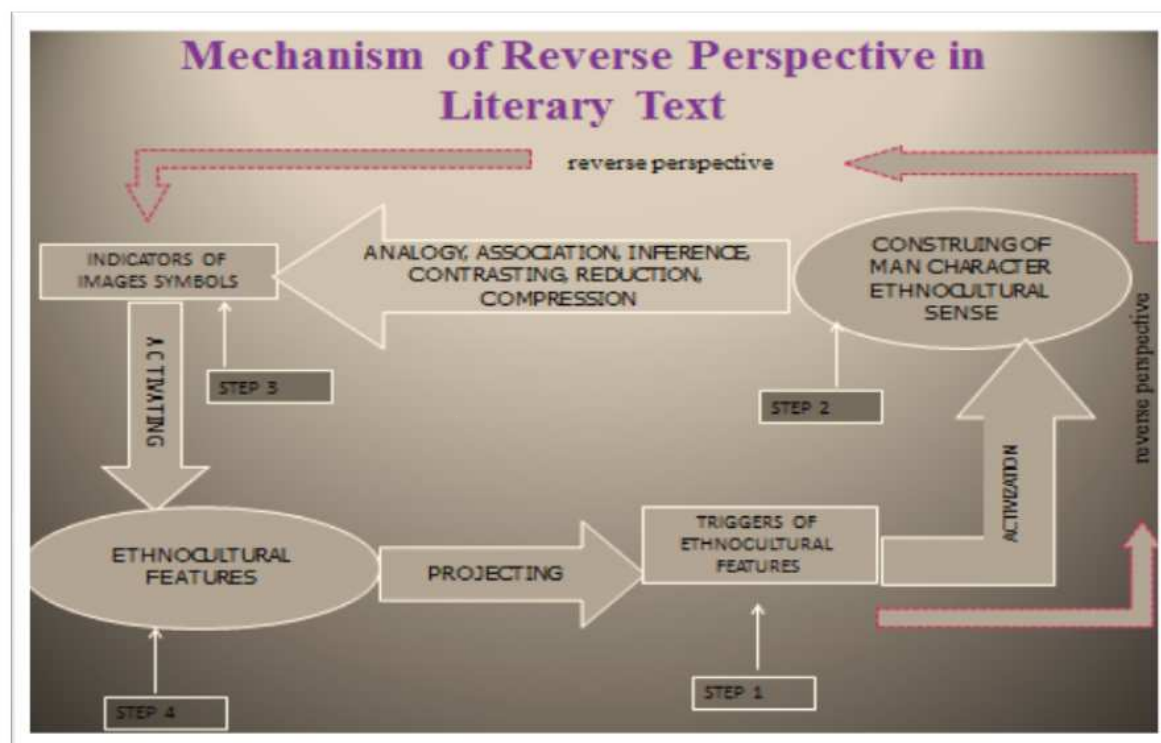


Figure 3. The mechanism of reverse perspective in literary text

Different spaces are interconnected in textual world. Their interconnection is invisible at first glance. But there are literary details which trigger some association or analogy between different events happening in different spaces. Mapping one event onto another helps to explain the intentions and behaviour of the main character and, what is the most important, to identify the main character as mythologic image-symbol. Reverse perspective is the means of interpretation as it is triggered by key word that is repeated in different fragments of the text.

To understand the connotative meaning of a word *trigger* I turn to *Macmillan English Dictionary* [2002] which gives such its definition: as a noun 1) the part of a gun that you move with your finger to make the gun fire; 2) something that produces an immediate result; and as a verb 1) to make something happen; 2) to cause someone to have particular feelings or memories; 3) to cause someone to do or say something, as trigger a response / reaction [Macmillan English Dictionary 2002: 1537].

In the first narrative situation (Fig. 3 step 1) I underline the triggers, which are ethno-cultural implicatures, describing the author's character as author's mythologic one: "*They [Abel and white man] went out into the rain and darkness. All around was silence, save for the sound of the rain and the moan of the wind in the wires. **Abel looked at him with eagle eyes. He stood as if he were male eagle watching from the very top of a mountain. The white man raised his arms as if to embrace him. Then he closed his hands upon Abel and drew him closer. Abel felt the blue shivering lips upon him, felt even the scales of the lips and the hot slippery point of the tongue, like a snake's sting. He was sick with terror and revulsion, and he tried to fling himself away, but the white man held him close. The hands of the albino lay as if silver rope curving Abel's throat. In his terror***

Abel leaned inside the white man's arms and drove the knife up under the bones of the breast and across. Abel threw down the knife and the rain fell upon it and made it clean" (House Made of Dawn, 73-74).

The number of comparisons, based on linguistic and cognitive operations of analogy, association, with their key lexemes (eagle and snake) which are verbal images with symbolic meaning help us to construe main character as ethno-cultural symbols (Fig. 3 step 2). Abel is associated with Eagle (*looked with eagle eyes, male eagle*) and his action is approved with *the rain*, the symbol of purification, which '*fell upon it [the knife] and made it clean*', while the actions of white man are compared with those of the snake (*as if to embrace him, like a snake's sting*).

The comparisons also become triggers of reverse perspective. To interpret the semiotic sense of them we should return to the very beginning of the novel when eagles' flight is described and followed by the narrator's running commentary on their killing a black rattlesnake (Fig. 3 step 3): "*They were golden eagles, a male and a female, in their mating flight. She carried a black rattlesnake, it hung shining from her feet. And then she let it go. It fell slowly, writhing and rolling, floating out like a bit of silver thread against the wide backdrop of the land. First the male eagle let the carrion drift by; then suddenly he hit the snake in the head, crackling its long body like a whip. At the top of his glide he let go of the snake. Abel watched the eagles go. It was an awful, holy sight, full of magic and meaning" (House Made of Dawn, 16).*

In the excerpt which describes one of the animals' day of life the words *eagles* and *snake* are repeated several times. Lexical repetition makes us turn to a *Guide to Native American Nature Symbols, Stories and Ceremonies* [Lake-Thom 1997] to learn how to interpret good and bad signs, their symbolic meaning embedded in these verbal images: "*Eagles are always very special and good signs. They represent protection, wealth, wisdom, foresight, strength, and spirituality*" [Lake-Thom 1997: 109]; "*The Rattlesnake can be used for good or bad power. The Rattlesnake that is predominantly black in color is a bad power*" [Lake-Thom 1997: 153]. So, the interpretation of that 'holy sight' described in the given above abstract leads to the revelation of the following symbolic meaning: The Good (Eagles) destroys the Evil (Black Rattlesnake).

The two narratives have equivalent syntactic constructions' structure (*he hit the snake in the head* SPOA = *Abel drove the knife up under the bones of the breast* SPOA), stylistic comparative device (*like a bit of silver thread, as if silver rope, like a snake's sting*), common motif (the fight between Good and Evil in which Good is the winner).

4. Eclecticism of mythologic characters, narratives and genres in Amerindian novels

In art, the term "eclecticism" is used to describe the combination of elements from different historical styles in a single work, chiefly in architecture and, by implication, in the fine and decorative arts (Fig. 4):



Figure 4. Samples of eclectic in architecture and arts

The sample of narrative eclectic is the novel-legend *The Way to Rainy Mountain* (1969) by N. Scott Momaday.

In three major sections of this work, Momaday has organized events into twenty-four triads (units of three paragraphs each). Each triad tells about particular Kiowa reality spread in three different genres: myth, history and personal witness. While the entire work proceeds chronologically, each unit is organized vertically or synchronically, thus demonstrating the timelessness of mythic events and their interaction with or influence on particular moments of life as lived by tribal members – on Momaday in particular.

The eclectic of different narratives (mythologic, autobiographic and historical) in one textual world looks like triptych in painting (Fig. 5):



Figure 5. Triptych in painting

Based on the technique of triptych in painting and design I have construed the triptych model of narrative (Fig. 6) in the novel *The Way to Rainy Mountain*. It looks like the combination of three narratives (mythologic, historical and autobiographical):

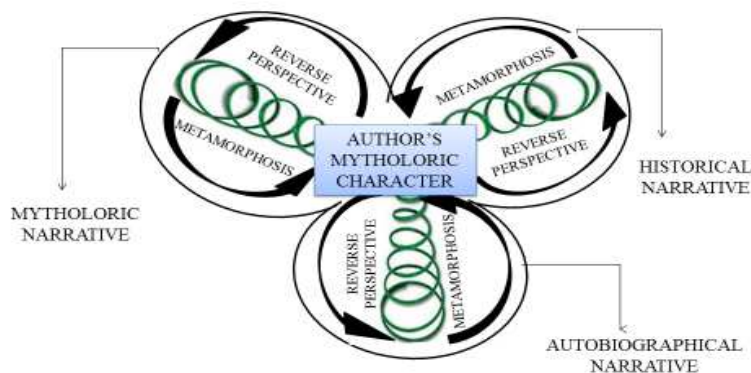


Figure 6. Triptych model of narrative in the novel *The Way to Rainy Mountain*

Each narrative in this novel tells the story, and the narration develops in a spiral. The main narrative technique in each of the narrative is reverse perspective as in each of the triads we find triggers of ethnocultural images and due to them may return to the details given in any of twenty-four triads.

Sample of step-by-step narrative is in novel-essay *Dwellings* (1995) by Linda Hogan. In the preface to the novel Hogan explains: "It has been my lifelong work to seek an understanding of the two views of the world, one as seen by native people and the other as seen by those who are new and young on this continent. It is clear that we have strayed from the treaties we once had with the land and with the animals. It is also clear, and heartening, that in our time there are many – Indian and non-Indian alike – who want to restore and honor these broken agreements".

Dwellings consists of 17 essays. As a writer of Chickasaw heritage, Linda Hogan seeks to restore the balance and to offer ancient wisdom about nature in mythological yet contemporary terms. Narrative model of mythologic space in this novel looks like step-by-step vision (Fig. 7):

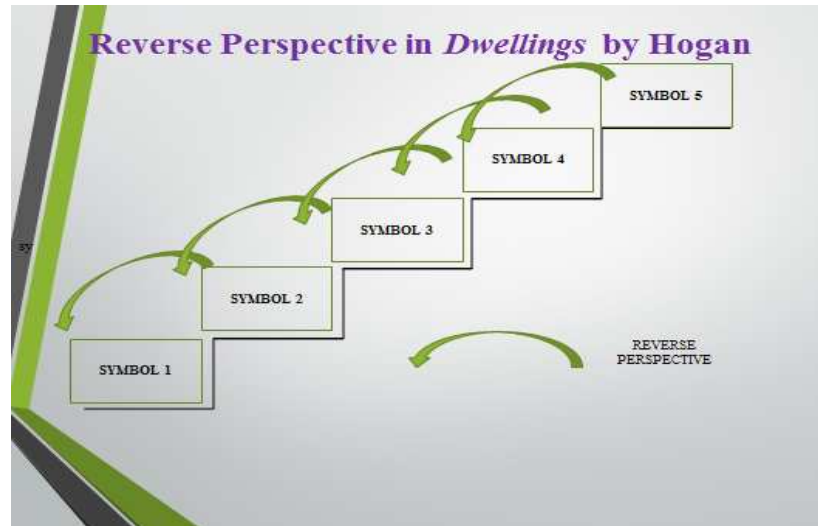


Figure 7. Step-by-step model of mythologic space in the novel-essay "Dwellings"

With each step the narrator develops the theme showing the eclecticism of ethnocultural concepts (Fig. 8), which are of great value for Amerindians:

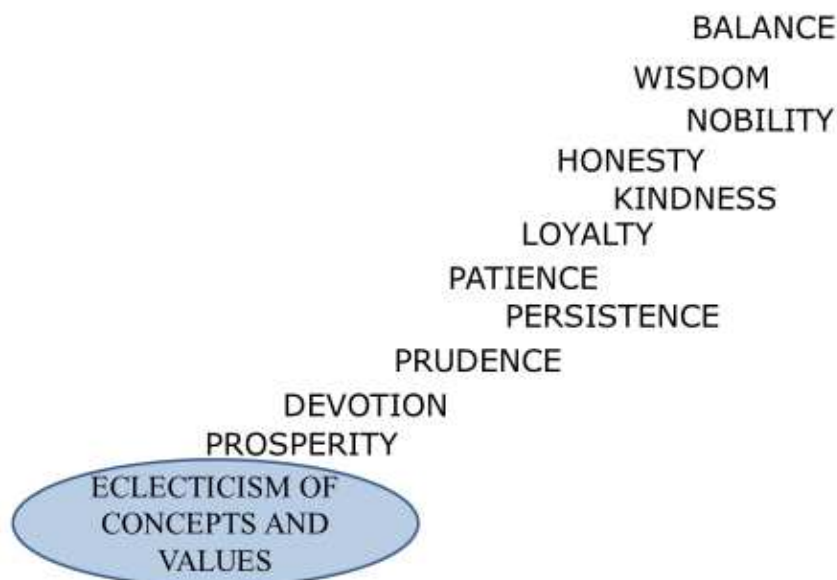


Figure 8. The eclecticism of ethnocultural concepts in *Dwellings*

In *Dwellings* reverse perspective as semantic bridge makes it possible to project the sense of one event onto the other and hence connect them semantically. So, fragments which are joined semantically may be both close and far from each other in the text:

- (1) *In earlier days, before the springs and caves were privately owned, **they were places of water healing for Indian people**, places where **conflict between tribes and people was left behind**, neutral ground, a sanctuary outside the reign of human differences, law, and trouble. Men and women travelled across the wide green plains, down the red mountains and rounded hills, to rest inside earth's cauldron (29-30).*
- (2) *One of the Indian women talks about **water medicine**. She was sick and had lost her faith in the medicine ways, she says, and has come back to the **healing waters** of the earth. We are welcome here. I love this inner earth, its murmuring heartbeat, the language of what will consume us. Above is the beautiful earth that we have come from. Below is heat, stone, fire. I am within the healing of nature, held in earth's hand (35).*

In the second excerpt our attention attracts the expression *healing water*. And it's not clearly understood: Why are we welcome here? What for? Then we return to the legend about healing places (excerpt 1) and realize that there were water healing places without conflict, separating the land between Indian people and New World people, but it was freedom and harmony between man and nature.

So, the narrative model here looks like step-by-step model (Fig. 8) with ethnocultural symbol dominating on each of the steps. The narrative iconically resembles [Freeman 2007] the multiconceptuality of Amerindian worldview, representing the eclecticism of images, symbols and concepts. The coherence and cohesion between them through the whole novel-essay is possible to interpret by means of reverse perspective.

5. Conclusion

In the book *The pleasure of the text* [Barthes 1975] Barthes declares the choice between pleasure and the more ravaging term to be precarious, revocable, the discourse incomplete, but of course he cannot come up with "coming" which precisely translates as what the original text can afford: ideological structures, intellectual solidarities, the propriety of idioms, sacred armature of syntax. It is a powerful gush of words, a ribbon of infra-language [Barthes 1975: 7]. Interpreting this 'gush of words' may be possible if we read the text not only for deriving pleasure from it, but also for revealing invisible meanings hidden in its narrative structure. So, cognitive linguistics approach to interpretation of the text is just the focus combining semantic, semiotic, syntactic and narrative analyses.

Cognitive linguistics, in its insistence that language is a phenomenon of the mind and can therefore only be properly understood in relation to the mental processes of which it is a manifestation, is a radical rejection of linguistics and its modular view of language as practiced for much of the twentieth century from Saussure to Chomsky. As Langacker points out: 1) the language is a self-contained system amenable to algorithmic characterization, with sufficient autonomy to be studied in essential isolation from broader cognitive concerns; 2) grammar (syntax in particular) is an independent aspect of linguistic structure distinct from both lexicon and semantics; and 3) if meaning falls within the purview of linguistic analysis, it is properly described by some type of formal logic based on truth conditions [Langacker 1990].

Today's readers are no longer passive receivers of an author's constructed world. They are instead supposed to participate and take an active role in ascertaining a text's meaning before them, to ruminate on the plausible interpretations of a given narrative so as to work things out for themselves.

Every text is a system of signs organized according to codes and subcodes which reflect certain values, attitudes, beliefs, assumptions and practices [Chandler 2007: 157]. Codes transcend single narratives, linking them together in an interpretive framework, which is used by their

producers and interpreters. In reading texts, we interpret signs with reference to what seem to be appropriate codes. Textual codes do not determine the meanings of texts but dominant codes do tend to constrain them. In the paper the dominant code is considered to be ethno-cultural one which greatly influenced the revealing ethno-cultural meanings hidden in those verbal signs that describe the characters, interests, beliefs of man and animal characters.

This is the case with Amerindian writers' prosaic texts, expecting the readers to be active participants, to cooperate with the author during the reading process in creating the narratives' meanings. They have made use of strategies and techniques that both violate readers' expectations, and simultaneously invite them not to sit passively before the text. By employing techniques and strategies which are associated with postmodern fiction writers seek to present different contradictory outcomes for events on the one hand, and to accentuate the ethno-cultural values and concepts on the other.

Text is a set of narratives in which verbal signs imply different information about signified object. Postmodernist narrative incorporates modes of narration which at once departs from traditional ways of depicting events. The study highlights narrative techniques peculiar for postmodern prosaic texts. Special scientific attention is paid to the technique of reverse perspective which helps to connect similar plots and structures, predictable situations, episodes, conflicts and resolutions, and finally reveal the markers of mythologic space and the way of the embedding of its elements into the semantic space of prosaic text. Linguistic and cognitive mechanism of reverse perspective is based on repetition, parallelism, similarity, analogy.

Given results of textual analysis with special focus on mythologic space and author's mythologic character from narrative and cognitive semiotic perspectives can yield for textual linguistics, ethnocultural linguistics, and cognitive linguistics.

The cognitive facet of ethnolinguistics suggested in the paper may find further application in developing the principles for narrative and semiotic construing the models of different spaces and characters in prosaic as well as in poetic texts. In **prospect** I intend to characterize the principles of syntax and narrative interconnection in iconically resemblance the ethnocultural meaning in literary text.

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GUIDELINES FOR CONTRIBUTORS

Article formats: Research Article, Book Review.

All materials should be Times New Roman, 12, font 1; indentation 1,0 cm, margins: left – 2 cm., right – 2 cm., top & bottom – 2.5 cm. Manuscripts may be submitted as email attachments in Microsoft Word 97-2003 (...doc) if they do not contain unusual fonts. If special symbols are used their fonts should be sent separately.

Contributions should be in English. Spelling should be either British or American English consistently throughout. If not written by a native speaker of English it is advisable to have the paper checked by a native speaker.

Papers should be reasonably divided into numbered SECTIONS and, if necessary, sub-sections.

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Next Author Name and Surname (Times New Roman, 14, Bold)

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Abstract: (in three languages (English, Ukrainian, Russian), Times New Roman, 11)

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Keywords: (List five to ten pertinent keywords specific to the article; use singular nouns).

1. Introduction

The body of a manuscript opens with an introduction that presents the specific problem under study and describes the research strategy. The structure of the introduction should necessarily comprise the author's aims / tasks / objectives, the subject-matter and the material of the study.

Exploring the importance of the problem the article should state how it is related to previous work in the area. If other aspects of this study have been reported previously, how does this report differ from, and build on, the earlier report?

Describe relevant related literature. This section should review studies to establish the general area, and then move towards studies that more specifically define or are more specifically related to

the research you are conducting. Your literature review must not be a series of quotations strung together; instead it needs to provide a critical analysis of previous work.

State hypotheses and objectives, their correspondence to research. The statement of the hypothesis should logically follow on from your literature review and you may want to make an explicit link between the variables you are manipulating or measuring in your study and previous research. The present tense is used to state your hypotheses and objectives.

Sections and subsections of the paper. (Times New Roman, 12). Divide your article into clearly defined sections. Any labeled sections / subsection should be numbered (i.e. 2. or 2.1, 2.2 if necessary) and given a brief heading marked in bold (without full stops at the end). Each heading should appear on its own separate line.

A good paragraph should contain at least the following four elements: transition, topic sentence, specific evidence and analysis, and a brief concluding sentence. A transition sentence acts as a transition from one idea to the next. A topic sentence tells the reader what you will be discussing in the paragraph. Specific evidence and analysis support your claims that provide a deeper level of detail than your topic sentence. A concluding sentence tells the reader how and why this information supports the paper's thesis.

2. Method

The Method section describes in detail how the study was conducted, including conceptual and operational definitions of the variables used in the study. It also permits experienced investigators to replicate the study.

The method section should be written in paragraph form with as little repetition as possible. This section will often be broken down into subsections such as participants, materials and procedure. The subsections you use will depend on what is useful to help describe and explain your experiment.

In the method section of the paper you should use the past tense since you are describing what you did; for example, e.g. *An experiment was performed...*, *The participants were instructed to ...* .

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This section describes but does not explain your results; it provides the reader with a factual account of your findings. You can, however, draw attention to specific trends or data that you think are important. Your aim in your results section is to make your results as comprehensible as possible for your readers/markers.

If you are presenting statistical results, place descriptive statistics first (means and standard deviations) followed by the results of any inferential statistical tests you performed. Indicate any transformations to the data you are reporting; for example, you may report percentage correct scores rather than straight scores. Raw data and lengthy whole transcripts of qualitative data should be put in the appendices, only excerpts (descriptive statistics or illustrative highlights of lengthy qualitative data) should be included in the results section.

In the results section you will need to use both the past tense and the present tense. The past tense is used to describe results and analyses; for example, *The knowledge scores were analyzed ...*, *The results indicated ...* .

The present tense is used with results that the reader can see such as means, tables and figures; for example, *The means show that ...*, *The weekly growth rate illustrated in Table 3 illustrates how ...* .

Authors should refer in the text to all tables and figures used and explain what the reader should look for when using the table or figure. Focus only on the important point the reader should draw from them, and leave the details for the reader to examine on her own. Each table and figure

must be intelligible without reference to the text, so be sure to include an explanation of every abbreviation (except the standard statistical symbols and abbreviations).

Give titles to all tables and figures number all tables sequentially as you refer to them in the text (Table 1, Table 2, etc.), likewise for figures (Figure 1, Figure 2, etc.).

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If necessary an article may have more sections and subsections.

All examples are italicized. One word or word-combination examples are given within the body of a paragraph.

Sentence or textual examples, preferably numbered through the article, are given in separate paragraphs in italics with indentation 1,25 cm for the whole paragraph and separated from the previous / following text by one blank line. Example:

- (1) *"I'm Prendergast," said the newcomer. "Have some port?"*
"Thank you, I'd love to." [Waugh 1980:46]

5. Conclusions

This section simply states what the researcher thinks the data mean, and, as such, should relate directly back to the problem/question stated in the introduction. By looking at only the Introduction and Conclusions sections, a reader should have a good idea of what the researcher has investigated and discovered even though the specific details of how the work was done would not be known. After moving from general to specific information in the introduction and body paragraphs, your conclusion should restate the main points of your argument.

Conclusions should finish up with an overview of future possible research.

Acknowledgments (not obligatory and not numbered paragraph). Identify grants or other financial support (and the source, if appropriate) for your study. Next, acknowledge colleagues who assisted in conducting the study or critiquing the manuscript. End this paragraph with thanks for personal assistance, such as in manuscript preparation.

In-text citations. If you are directly quoting from a work and the author is not named in a signal phrase, you will need to include the author, year of publication, and the page number for the reference: [Почепцов 1976: 15; Leech 1985: 373].

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In case of six or more authors, cite only the last name of the first author, followed by "et al." and the year of publication: *Barakat et al. [1995] attempted to . . .*

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For materials in Latin:

Author, A.A. (Year of Publication). *Title of a book*. Publisher City, State: Publisher.

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Author, A.A. (Publication Year). Article title. *Journal Title, Volume* (Issue), pp.-pp.

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For materials in Ukrainian or Russian:Articles:

Shevchenko, I.S., & Morozova, Ye.I. (2003). Diskurs kak myselekomunikativnoe obrazovanie [Discourse as a mental and communicative phenomenon]. *Visnyk Kharkiv. nats. un-tu im. V.N. Karazina. – V.N. Karazin National Univ. Messenger*, 586, 33-38 (in Russian)

E-materials:

Zagurenko, A.A. (2002). Ekonomicheskaya optimizatsia [Economic optimization]. *Neftyanoe khozyaistvo – Oil Industry*, 11. Available from: <http://www.opus>

Conference papers:

Zagurenko, A.A. (2002). Osobennosti proektirovaniya [Features of design]. Trudy 6 Mezhdunarodnogo Simpoziuma: *Novye tekhnologii – Proceedings from 6th Int. Symposium: New technologies*. Kyiv, 267-272 (in Russian).

Books:

Zagurenko, A.A. (2002). *Ekonomicheskaya optimizatsia [Economic optimization]*. Kyiv: Nauka Publ.

Dissertations:

Zagurenko, A.A. (2002). *Ekonomichna optymizatsia. [Economic optimization]*. Unpublished candidate dissertation, National Teachers' Training University of Ukraine, Kyiv, Ukraine (in Ukrainian)

Dissertation thesis (abbreviations: dokt./ kand.):

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For transliteration use <http://translit.kh.ua> (from Ukrainian) and <http://www.translit.ru> (from Russian). Use <http://apareferencing.ukessays.com/generator/> to created reference list according to APA citation style.

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**РЕКОМЕНДАЦИИ АВТОРАМ ЖУРНАЛА «ККД»
по оформлению статей научных журналов
для включения в зарубежные индексы цитирования**

Материалы принимаются в объеме не менее 0.5 авторского листа (10 стр.) предпочтительно на английском языке в текстовом редакторе Microsoft Word (.doc), шрифт Times New Roman, размер шрифта 12, интервал 1. Текст форматируется по ширине. Отступ для абзаца 1,0 см, поля: слева и справа – 2 см., вверху и внизу – 2,5 см. В левом углу указывается УДК. По центру заглавными буквами жирным шрифтом пишется название статьи. На следующей строке по центру указываются инициалы и фамилии авторов, в скобках – город, страна. Например:

УДК

ВТОРИЧНАЯ РЕПРЕЗЕНТАЦИЯ ЗНАНИЙ В КОГНИЦИИ И ДИСКУРСЕ

А.Н. Петренко (Киев, Украина)

Далее 11 кеглем приводятся аннотации на английском, украинском и русском языках. Авторам рекомендуется структура аннотации, повторяющая структуру статьи, однако, предмет, тема и цель работы указываются в том случае, если они не ясны из заглавия статьи. Текст резюме должен быть максимально информативен, не повторять формулировки в названии статьи, не содержать вводных предложений, типа «В статье автор рассматривает...». Результаты работы представляются максимально точно и информативно. При этом предпочтение отдается новым результатам, и данным долгосрочного значения, важным открытиям и выводам, которые опровергают или дополняют существующие теории. Разрозненные положения в тексте должны логично вытекать одно из другого. Допускаются только общеизвестные аббревиатуры, либо дается расшифровка авторских аббревиатур при первом их употреблении. Объем аннотации – минимум **200 – 250 слов**. В конце аннотации с новой строки после фразы жирным шрифтом с абзацным отступом «Ключевые слова» в алфавитном порядке перечисляются основные понятия из статьи (в единственном числе). Не рекомендуется приводить термины, не употребленные в аннотации.

Аннотация является, практически, единственным источником, на основании которого иностранный читатель может составить представление о сути и ценности статьи. Поэтому главными требованиями к ней являются: информативность (отсутствие общих и вводных фраз), содержательность (отражение основного содержания статьи и результатов исследований), структурированность (следование логике аргументации статьи), аутентичность (качественный английский язык), компактность. В тексте авторского резюме следует употреблять синтаксические конструкции, свойственные языку научных и технических документов, избегать сложных грамматических конструкций. Рекомендуется включение в аннотацию следующих структурных компонентов: Purpose (цели и задачи исследования), Results (результаты и выводы) и Discussion (практическое значение и перспективы). Текст должен быть связным с использованием слов «следовательно», «более того», «например», «в результате» и т.д. («consequently», «moreover», «for example», «the benefits of this study», «as a result» etc.), либо разрозненные излагаемые положения должны логично вытекать один из другого. Необходимо использовать активный, а не пассивный залог, т.е. «The study tested», но не «It was tested in this study» (частая ошибка российских аннотаций).

В конце после фразы жирным шрифтом с абзацным отступом «Key words» в алфавитном порядке перечисляются основные термины, употребляемые в статье. Желательно употребление терминологии, общепринятой в мировой науке. См. рекомендации зарубежных издательств (Emerald Publishing, <http://www.emeraldinsight.com/authors/guides/write/abstracts.htm>).

Структура статьи после аннотаций различается для эмпирической и теоретической статей.

Эмпирическая статья (Empirical/Case Study)

Статья представляет результаты экспериментального исследования, иллюстрации выявленной проблемы; анализ способов решения проблемы; обоснование необходимости исследований в какой-либо сфере. Структура эмпирической статьи, как правило, включает разделы:

Аннотация эмпирического исследования должна отражать: проблему исследования; его гипотезу; полное описание выборки; основные особенности методологии и метода исследования; краткое описание полученных результатов, их надежности и сферы применения.

1. Введение (Introduction): постановка и обоснование проблемы, анализ последних исследований и публикаций; выявление нерешенных проблем и предложение пути их решения; актуальность исследования; определение цели (теоретической и практической) и гипотезы исследования; описание хода изложения материала в статье.

2. Методология исследования (Methods) – описание степени разработанности проблемы в научных публикациях, методологических основ и методов, процедуры проведения исследования, описание выборки, возможные погрешности результатов. Этот раздел призван дать четкое представление об объективности полученных результатов.

3. Результаты исследования (Results) – описание результатов (с иллюстрациями, таблицами, которые нумеруются и снабжаются названием) и их анализ. Этот раздел статьи можно дополнительно структурировать на подразделы. Результаты проведенного исследования оформляются в виде списков.

4. Обсуждение и дискуссия (Discussion) – интерпретация полученных результатов; их сравнение с аналогичными результатами других исследований по тематике статьи; предложения по применению собственных выводов; предложение дальнейших направлений исследований. Этот раздел всегда насыщен ссылками. Задача автора – подготовить в дискуссионной части статьи обоснованную поддержку всем выводам, которые он планирует сделать по результатам исследования.

5. Выводы (Conclusions) – важнейшая часть статьи, краткое изложение тезисов, которые автор предлагает на профессиональное обсуждение по результатам проведенного исследования, имея целью показать важность своего исследования и его перспективы.

Благодарность (факультативный раздел) выражается ученым, коллегам, друзьям, помогавшим в работе, а также спонсорам, грантодателям и т.д.

Теоретическая статья (Theoretical article)

В статье на основе существующей литературы разрабатываются имеющиеся / выдвигаются новые теоретические положения. Она содержит анализ развития теории, уточнение теоретических конструктов, представление новой теории, сравнение нескольких теорий, демонстрация преимуществ одной теории по сравнению с другой. Структура такой статьи зависит от ее содержания. Эмпирические данные вводятся, если они важны для решения теоретической проблемы.

Структура теоретической статьи, как правило, включает разделы:

Аннотация для теоретической статьи должна описывать: как теория или модель работает; принципы, на которых она основана; основные особенности представленной теории / метода, какие явления она учитывает и объясняет; ее надежность и связи с эмпирическими результатами.

Введение (Introduction). Постановка проблемы; актуальность исследования; краткий анализ последних исследований и публикаций для выделения нерешенных ранее частей общей проблемы, которым посвящается данная статья; определение цели, задач (как правило, нескольких) (Aims / tasks / objectives).

В основной части (под соответствующим теме названием) статья может иметь

дальнейшие подразделы (Sections and subsections). Как правило, она начинается с детального изложения и всестороннего анализа известных результатов и теорий. Далее приводится нужное количество подразделов, отражающее ответы на каждый поставленный автором вопрос и дискуссию с обоснованием полученных результатов. При необходимости свои доводы автор подкрепляет нумерованными примерами, таблицами, рисунками.

Выводы (Conclusions) суммируют полученные результаты и дают ответы на все поставленные ранее вопросы (в соответствии с целью и заданиями статьи). Намечаются конкретные перспективы дальнейших исследований в этом направлении.

Благодарность (факультативный раздел) выражается ученым, коллегам, друзьям, помогавшим в работе, а также спонсорам, грантодателям и т.д.

Перечень обязательных элементов любой статьи включает:

Введение (Introduction), **актуальность, цель, задачи** (Aims / tasks / objectives) исследования, его **объект, предмет, материал; подзаголовки** статьи (Sections and subsections), **выводы** (Conclusions) и **перспективы** исследований в этом направлении.

Все структурные элементы необходимо выделять полужирным шрифтом.

Примеры и их перевод выделяются *курсивом*, нужное в них подчеркивается. Примеры – слова и словосочетания приводятся внутри соответствующего абзаца. Примеры – предложения и текстовые фрагменты, желательно нумерованные, выносятся в отдельный абзац, располагаются на расстоянии абзацно отступа слева и отделяются от предшествующего и последующего текста пустой строкой.

Разделы и подразделы нумеруются, важнейшие понятия даются жирным шрифтом; авторы могут использовать подчеркивание. Растяжка шрифта, подстрочные сноски в электронных изданиях не допускаются. При необходимости возможны примечания после текста статьи перед списком литературы.

Рекомендуемое среднее число ссылок в статье составляет 10–30 публикаций. Внутрестатьейные ссылки на литературу оформляются в квадратных скобках по образцу [Арутюнова 1976: 15; Leech 1985: 373].

В конце статьи приводится список литературы.

ЛИТЕРАТУРА (заглавными буквами полужирным шрифтом без двоеточия в конце) дается как нумерованный список в алфавитном порядке, где по требованиям ДАК Украины сначала размещаются публикации на кириллице, затем – на латинице. Тире и дефис различаются.

Пример:

1. Демьянков В.З. Когнитивная лингвистика как разновидность интерпретирующего подхода / В.З. Демьянков // Вопросы языкознания. – 1994. – № 4. – С. 17–33.
2. Смушинська І.В. Модальність французького художнього тексту: типи та засоби вираження : дис. ... доктора філол. наук : 10.02.05 / Смушинська Ірина Вікторівна. – К., 2003. – 478 с.
3. Карпова Е.В. Стратегии вежливости в современном английском языке (на материале малоформатных текстов) : автореф. дис. на соискание учен. степ. канд. филол. наук : спец. 10.02.04 «Германские языки» / Е.В. Карпова. – СПб, 2002. – 17 с.
4. Попова З.Д. Когнитивная лингвистика / З.Д. Попова. – М. : АСТ: «Восток – Запад», 2007. – 314 с.

Для статьи, написанной по-русски, список литературы приводится дважды: сначала ЛИТЕРАТУРА, затем ее дублирование в латинице REFERENCES. Для статьи, написанной по-английски или на другом европейском языке, дается только REFERENCES.

После слова **REFERENCES** (заглавными буквами полужирным шрифтом без двоеточия в конце) приводится нумерованный алфавитный список всех источников по

образцу APA style 6th (порядок авторов в двух списках может быть разным в соответствии с конкретным алфавитом).

Оформление REFERENCES по стандарту APA style (6^e изд.):

Названия журналов, издательств транслитерируются латиницей и не переводятся.

Для изданий на кириллице:

Статья:

Shevchenko, I.S., & Morozova, Ye.I. (2003). Diskurs kak myslekomunikativnoe obrazovanie [Discourse as a mental and communicative phenomenon]. *Visnyk Kharkiv. nats. un-tu im. V.N. Karazina. – V.N. Karazin National Univ. Messenger*, 586, 33-38 (in Russian)

Электронный источник:

Zagurenko, A.A. (2002). Ekonomicheskaya optimizatsia [Economic optimization]. *Neftyanoie khozyaistvo – Oil Industry*, 11. Available from: <http://www.opus>

Материалы конференции:

Zagurenko, A.A. (2002). Osobennosti proektirovaniya [Features of design]. Trudy 6 Mezhdunarodnogo Simpoziuma: *Novye tekhnologii – Proceedings from 6th Int. Symposium: New technologies*. Kyiv, 267-272 (in Russian).

Книга:

Zagurenko, A.A. (2002). *Ekonomicheskaya optimizatsia [Economic optimization]*. Kyiv: Nauka Publ.

Диссертация:

Zagurenko, A.A. (2002). *Ekonomichna optymizatsia. [Economic optimization]*. Unpublished candidate dissertation, National Teachers' Training University of Ukraine, Kyiv, Ukraine (in Ukrainian)

Автореферат диссертации (сокращения: dokt./ kand.):

Zagurenko, A.A. (2002). *Ekonomichna optymizatsia. [Economic optimization]*. Unpublished candidate dissertation synopsis, National Teachers' Training University of Ukraine, Kyiv, Ukraine. (in Ukrainian)

Для изданий на иностранном европейском языке

Книга одного автора:

Lakoff, G. (1980). *Metaphors We Live By*. Chicago: Chicago University Press.

Книга БЕЗ автора, под. редакцией:

Lakoff, G. (Ed.). (1980). *Title of the book*. Chicago: Chicago University Pres.

Книга нескольких авторов:

Jung, C., & Franz, M. (1964). *Man and his symbols*. New York: Doubleday Publ.

Статья:

Author, A. Author, B.B., & Author, C.C. (2005). Title of the article. *Title of the journal*, 10 (2), 49-53.

Глава в книге:

Shuman, A. (1992). Entitlement and authoritative discourse. In: J.H. Hill, & J.T. Irvine (Eds.). *Responsibility and evidence in oral Discourse* (pp. 135-160). Cambridge and New York: Cambridge University Press.

Обязательно указывать идентификаторы DOI для тех источников, где они есть, например: Brownlie, D. (2007). Toward effective poster presentations. *European Journal of Marketing*, 41, 1245-1283. doi:10.1108/03090560710821161

Транслитерацию рекомендуется делать автоматически на сайтах <http://translit.kh.ua/> (для украинского языка) и <http://www.translit.ru> (для русского). Оформление в соответствии с APA-6 citation style рекомендуется делать на сайте <http://apareferencing.ukessays.com/generator/>

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SCHOLARLY JOURNAL
COGNITION, COMMUNICATION, DISCOURSE

International on-line scholarly journal.. 2017, № 15
Series "Philology"

English and multilinguals

Computer version

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НАУКОВЕ ВИДАННЯ

КОГНІЦЯ, КОМУНІКАЦІЯ, ДИСКУРС

Міжнародний електронний збірник наукових праць. 2017, № 15
Напрямок «Філологія»

Англійською та іншими мовами

Комп'ютерне верстання

Л.П. Зябченко

Комп'ютерна підтримка сайту

В.О. Шевченко

61022, м. Харків, майдан Свободи, 4
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