

# New Ways of Vocabulary Enlargement

T. Solonchak, S. Pesina

**Abstract**—Lexical invariants, being a sort of stereotypes within the frames of ordinary consciousness, are created by the members of a language community as a result of uniform division of reality. The invariant meaning is formed in person's mind gradually in the course of different actualizations of secondary meanings in various contexts. We understand lexical the invariant as abstract language essence containing a set of semantic components. In one of its configurations it is the basis or all or a number of the meanings making up the semantic structure of the word.

**Keywords**—Lexical invariant, invariant theories, polysemantic word, cognitive linguistics.

## I. INTRODUCTION

THE concept of variant and invariant nature refers to different fields of human knowledge: mathematics, logic, linguistics, etc. But in each field this general-particular and abstract-certain relationship has its own specific nature. The change of form is an objective and inevitable consequence of the language evolution and to this effect it is feasible and useful to research and analyze invariants. Invariability in the language enables coding of polymorphous semantic information.

In analytic philosophy it is conventional to widely interpret the invariant. Here it is understood as an abstract language unit possessing the aggregate of characteristics and main features of all its certain realizations construed as variants of this unit [1]. We understand the invariant as an abstract language essence containing a set of semantic components. In one of its configurations it is the basis or all or a number of the meanings making up the semantic structure of the word in accordance with the intuition of the average native speaker. The problem is that the resulting semantic core cannot be construed as an invariant in the mathematical sense, since it is not necessarily included in all meanings of the word to the full extent. Therefore, with regard to the language it is more appropriate to use the term "lexical invariant".

The idea of invariant is opposite to the variant as a certain realization of the language unit. This opposition is associated with the dichotomy "language – speech": the invariant is the language unit, and the variant is a certain realization in the speech [2].

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## II. CRITICISM OF INVARIANT THEORIES

More studies, particularly of the recent years, indicate that detachment of the invariant meaning is considered acceptable in principle, because it is supposed to make perception of the concept easier for an individual (although the combination of two levels- mental and verbal - should be still noted). There are well-known invariant theories of the meaning organization based on the idea that every language unit has the only meaning, but it transforms depending on the context. There have been attempts to establish a link between the meanings of words (semantic bridge in the theory of "meaning-text").

The criticism of invariant theories comes down to the idea that one can very seldom link together the lexical variety of the context-dependent meanings. The only way to solve this task is to use a very abstract description, where the invariant is far from each of the certain applications of the language units. In this regard, the researchers stick to a more optimistic position, presuming that it is quite possible to bring together all the context meanings of polysemantic words, using a particular algorithm (proposed below). The resulting invariant, indeed, is of the abstract nature, but it does not prevent it from combining all existing meanings.

Another objection is due to the fact that not every word has the meaning of this abstraction level which is inherent to the invariant. It should be noted that the core is abstract, but not the meanings of the word. They can be as specific as possible and yet semantically related to the substantive core. Polysemy as a phenomenon can be explained only by the existence of the substantial core.

However there is a general skeptical attitude to the idea of invariance in the science and philosophy of language. Thus, according to some of the researches recognition of possible "extra-linguistic" meanings can result in the recognition of independently existing notions, and therefore in the idealistic concept.

The point of criticism was the following: should the out-of-context meaning of a polysemantic word be determined as its invariant meaning, realized by various contextual meanings, it have to be admitted that the word is never used in this sense in speech, and thus it cannot be treated as a language phenomenon. The invariant meaning cannot be non-language, since it is based on real attributes, though of the most general nature.

If it is impossible to list offhand all existing meanings of the polysemantic word, then why do we, without any hesitation, at lightning speed, refer these or those numerous verbal realizations to one word? The task of semantic unity of the polysemantic word should be solved by means of the out-of-context meaning. It should be determined as general, and it is formed as a result of the word functioning in the language

system. Besides it should not be equated to the notion existing on an absolutely different level.

### III. HOW TO DETERMINE LEXICAL INVARIANTS EXAMPLES?

According to cognitive scientists, the meanings of the words are originated and formed not at the semantic level but in some conceptual formations, schemes, i.e. are relevant to the cognitive system. Relatively small set of basic concepts (conceptual structures) bind and correlate derived meanings, combining them in the common pool of human knowledge. Stored in consciousness, the meanings are waiting for an impulse to be realized.

The invariant meaning is formed in person's mind gradually in the course of different actualizations of secondary meanings in various contexts. When we are talking about variation, the issue of invariant of all variants is inevitable. A child in the process of its development starts understanding why the same word means different things: for example, people use the word *hand* when they mean the multi-fingered extremity located at the end of an arm ("friends shook hands"), the way of writing, calligraphy ("she had a clerky hand"), the pointer of a clock or watch ("The clock runs behind, please, advance the hands"), help from somebody ("I need a helping hand"). However people sum up the previous experience of using those meanings in context and come to the conclusion through abstraction that the word "hand" is something connected somehow with a hand, items hold or taken by the hand. And when people deal with this word afterwards in a particular speech situation in another capacity as a neologism or occasionalism), they can easily define a new meaning on the basis of experience. It is the invariant meaningful core of the word that will be of help in such situation. Then, probably, an abstract semantic core is formed in the mind on the basis of semantic components of a general nature, which is a consequence of numerous actualizations of figurative meanings of this polysemantic word.

On the other hand when a two-year-old child says "kaboom" it might mean a "stroke", "it hurts", a "whop", as well as a "ball" or any bob in a broad sense. This example proves that from the ontological point of view the polysemy develops from "abstract" to "certain" and vice versa. The researchers have not reached a consensus yet on development of polysemy in ontogenesis.

The theory of invariants is of great importance for epistemology (theory of knowledge); it deepens and concretizes the theory of reflection. Segregation of the lexical invariant of a large group of objects results in abstraction, i.e. a collective concept encompassing the entire group of objects as a whole. Thus, the objects (meanings) making up the class (the polysemantic word) and being variants relative to the invariant (the concept of the polysemantic word in general), have features of both general and specific, that is unique for this object only. In other words, the objects are combined into a class due to their common features and differ from each other because of their differential components.

Since the meaningful core of a monosemantic word is equal to its only meaning (since there are no other lexico-semantic

variants), it is definitely irrelevant to carry out research in this field. It is typical for terms and other individual names (such as endoscope, polygamy, Collider, etc.). Such scientific terms with their single, sufficiently specified meaning, are introduced in order to overcome difficulties caused by the word polysemy of natural human language.

To derive the *systematic* meaning of the polysemantic word covering all other possible meanings, it is important to take into account the role of the first nominative underived meaning, since the native speakers usually use the first meanings when it comes to the relevant speech forms. The next stage of generalization is an extension of the first meaning with the help of comparison component [3].

Thus the word "head" has a very developed semantic structure containing more than one hundred meanings. In accordance with nationally biased units of the native English speakers, the lexical invariant of this word may be formed as follows: the head is first of all the upper part of the human body that contains the eyes, nose, mouth, ears and brain or something resembling it (the top, round and/or the most important part of a larger object; the beginning or end of it). The selected part of the definition is the abstract scheme formed in the native speaker's consciousness as a result of various actualization of more than a hundred meanings.

For instance, similar to the human head, the beginning of the human body, the "head" of a ship is the *beginning* of the ship. Similar to the human head, the most important part of the body; the head of fire is the *top* of the flame, the hottest and most active part of it. The head of a stick, roll paper, violin bow, cigar, arrow, spear, axe, etc. are all oriented in space the way the head versus the rest of the body. It means it can be located on the top position and be the beginning of the object depending on its vertical or horizontal position in space.

The "head" of a table, grave, bed is not just a beginning; it is the most *important* part. The head of a stream/river, i.e. the source, is compared with the human head in the sense of the *origin* (comparison in terms of space orientation). It means that actualization of one or another meaning of the word "head" is based on one or several components of abstract nature or the whole lexical invariant.

Each separate meaning refers to some regulative structure and points to a general rule governing the processes of categorizations and conceptualization of a social realm which are possible within the frames of some preliminary defined tunica. The lexical invariant, meeting the principle of economy, enables actualization of all existing word meanings with least possible cognitive efforts. It ensures semantic ties between the meanings of the word, keeping the polysemantic word from splitting into homonyms.

The discovered abstract semantic core helps with comprehension of the most complicated lexical semantic invariants "remote" from the original meaning: *head of beer*, *head of milk*, *head of the bridge*, etc. If the basis is the same invariant – something on the top, something important and the beginning of something – these meanings can be easily understood and explained: they are the *foam*, *cream and start of the bridge*, respectively.

#### IV. IDENTIFIABLE ATTRIBUTES OF THE LEXICAL INVARIANT

Searching of the lexical invariant (LI) is connected with determination of the basic cognitive mechanisms underlying the formation of figurative meanings, and is based on detachment of significant semantic components or attributes. The attribute is the result (anchored in the individual's linguistic consciousness) of numerous direct references, performed or observed by the individual. The nature of attributes varies depending on the relation to the ontologically involved objects or to the sphere of "reflected" linguistic formations. Attributes can be stable and variable, differential, integral, general and specific, explicit and implicit, constant, temporary and so on. Each word has its own individuality detectable through absolutely accurate and attentive examination of the whole existing usage of this word in the language.

The integrating identifiable attributes of the lexical invariant are the following: 1) *LI is a bunch of communication meaningful abstract usual meanings*; 2) *LI is a minimal bunch of integral and differential attributes vital for identification of an item (notion)*; 3) *attributes of LI cannot be derived from each other*; 4) *LI is a meaningful invariant of all meanings of the polysemantic word*; 5) *the content of LI is defined at the everyday consciousness level* [4], [5].

The findings of later studies resulted in additional identifications of LI: 6) *LI contains the program for all (or almost all) particular lexical semantic variants of the word and, vice versa each variant contains a hint on the model, its peculiar features*; 7) *LI controls the actualization process of metaphorical meanings*; 8) *a signal indicator of functioning as the basis of meanings in the bunch of abstract attributes (LI) is the meaning of general nature, «something resembling ...», in the polysemantic word structure*; 9) *the conceptual basis for LI formation is the nominative primitive meaning oriented to the average native speaker*; 10) *LI is not of declarative, but of dynamic and rather procedural nature: the actualization process of meanings by the speaker is a gradual "assembly" of more complicated structures based on integral and differential components of the meaning* [6], [7].

LI can be interpreted as an invariant associative notional set assigned to the word in the consciousness of communicants, formed not only on the basis of the semantic structure of the word, its grammatical form, word-formation structure, motivational ties, but also on the basis of traditional usage in the society.

Lexical invariant has a communicative function is based on the following hypothesis: an individual is able to understand a statement only when he has some conceptual representation, at least a generalized one, of the reference situation described by this statement. If the listener does not see and does not know this particular situation, he has to reconstruct it on the basis of his knowledge and invariant meanings of the words contained in the statement. Thus the lexical invariant is a kind of a type reference situation which helps understand the perceived statement [8], [9].

Consistent with the logic and spirit of modern research in cognitive linguistics, this theory continues the trend of

searching study of "ordinary" consciousness, construed as not every day, routine consciousness, but rather as average, mass consciousness. LI's, being a sort of stereotypes within the frames of ordinary consciousness, are created by the members of a language community as a result of uniform division of reality. Stereotypes make the communication process easier: an individual cannot process all situations alone by himself; it is enough to point to objects in general in everyday speech for the purpose of identification.

Use of the proposed prototype approach to the study of lexical meaning appears appropriate for examination of formation mechanisms of the word semantic structure. Determination of such meaningful core of polysemantic words enables to reveal cognitive structures underlying semantic alterations and simulate processes causing polysemy with relative precision. Examination and research of a cognitive paradigm of problems of generation, assimilation and storage of polysemic units in mental spaces and their functioning in mental lexicon enable the researcher find a key to the mystery of organization, development dynamics and functioning of the cognitive system as a whole.

#### V. THE LANGUAGE AS THE SUBJECT OF PHENOMENOLOGY RESEARCH: INTENTIONALITY AND SIGNIFICANCE OF THE LANGUAGE

Currently there are two basic trends observed in the cutting-edge research in the field of language philosophy: one pertaining to the frameworks of analytical tradition and the other one – within the frameworks of phenomenology. Studies and investigations in the area of analytic philosophy imply a specific way of philosophic thinking oriented towards ideals of clarity, precision and logical strictness as well as its verbal expression which can be achieved by methods of formal logic, language analysis with clarification of its underlying logical structures and using the findings of the natural sciences. Phenomenologists focus their attention on the presupposition-free description of experience perceiving consciousness, placing emphasis on its essence features, as well as primary experience; Edmund Husserl cognizes the experience perceiving consciousness where the consciousness is not treated as an empirical subject of psychology but as "pure" or "transcendental I" and pure seeing of essence (intentionality). The reality meanwhile plays the role of just a raw amorphous material subject to ultimate processing by the consciousness. The most critical thing in this regard is finding out the features of so called "pure consciousness", "pure subjectivity" since they define all possible forms of the existential world and consequently the form of scientific and practical activity of the individual. The consciousness plays a double role here: it is both the subject and the means of analytical activity.

It should be noted for the sake of justice that investigation of consciousness through the consciousness itself is as fascinating as hardy possible task since the consciousness itself is a fiction: "ideation" is possible only on the basis of the really existing human consciousness,

In other words, since it is necessary to position one both as the target of research aimed at investigation of the inward man

and the subject exploring this world, it is evident that the language nature will never be understood entirely.

It is conventional to make distinction between the "linguistic phenomenology" and the "phenomenology of language". While the linguistic phenomenology analyses the language itself as a functional system within which frames semantic variability of words and expressions is studied, the phenomenology of language endeavors to clarify the "existential" conditions of the language including the linguistic phenomenology. In this regard the linguistic phenomenology can be qualified as an integral part of the language phenomenology.

Phenomenologists who study the functioning of language, in the same way as the analytic philosophers, exploring consciousness, focuses on those aspects that are involved in the constitution of the meaning and sense of Genesis. The crucial aspect of this study is to understand how the phenomenologists treat the verbal and mental processes. To solve this task it would be feasible to refer to Edmund Husserl, the founder of this school, whose phenomenology deals with the "world conceptualization" and the consciousness is treated as the one and only "field for the meaning assigning.

Edmund Husserl declares the "transcendental phenomenology" as the "universal philosophy which can act as an instrument for methodological revision of all sciences". Traditionally for the German idealism he attempts to find some Absolute supposed to be the basis of any knowledge. The way R. Descartes did, E. Husserl assumes that there is something called consciousness which would continue existing even if there were nothing else, and which is not a "natural object" since it is not a part of any empirical science subject [10].

At the same time, contrary to R. Descartes, phenomenology delved into solving of the problems of revealing an endless field of transcendental experience.

To comprehend the mental process analytically and scientifically E. Husserl introduces the phenomena of noema and noemata - notional unit of cognition which role is quite significant since it concentrates the results of the individual's cognitive activity. The aggregate of noemas forms the ideal world of scientific knowledge which enables us understand each other. Though the noema itself can vary under the influence of noetic cognitive activity, it always contains a sense-core enabling the noema to be identical in spite of adjustment and amendment of its separate aspects.

Since the same linguistic units can be understood ambiguously by the transmissive and percipient consciousness, it is sensible to define the factors that are conducive to the formation of the generalised semantics. In the work **the lexical eidós** is postulated as the invariant of all word's meanings. It is free from semantic components of emotional and sensuous nature, from connotative meanings of all kinds, and being a model and a form of a word, it manages the formation process of the figurative meanings.

The lexical eidós can be understood as the total of the most substantial general semantic components which are defined instinctively and which remain permanent in the flow of the

variation of meanings, thus comprising the semantic form of a word or a phrase. Including the "lexical" feature we emphasize the linguistic essence of this phenomenon and point out that it is about the analysis of specific cases. E.g. the English word *tree*, apart from its first meaning, includes seven more figurative meanings (e.g. "a venous or blood circulatory system of channels in an animal body" "a computer system" "a genealogy" "a net of telephone numbers", etc.). If we make the reduction as in the phenomenology and put aside the specific and subjective components, it will turn out that all the meanings of this polysemantic word together with the first meaning are based on the same components – a system, with many branches, in which every branch can be traced to a single origin.

The metaphorical reframes which are included in the structure of this word result from the processes of the assimilation of different objects to the tree. These assimilations occur due to the falseness of one of the situations, because these situations are not congruous. Thus, the metaphor "family tree" is based on the similarity of the scheme (in form) with all the curves that reflect relations with the construction (layout) of the tree. As with the tree all the numerous parts of the object begin from one part common to all other ones.

The meaning of the phrase "computer tree (system)" is based on the assimilation of the computer derivational system of information in form to the construction of the tree. To the extent that every branch of the tree is connected through the thicker branches to the trunk and, ultimately, to the root, to the same extent is every bit of information connected through the certain channel with the single source. The semantics of this word including the most substantial features implies the same schemes as in the previous meaning: 'a system', 'with many branches', 'in which every branch can be traced to a single origin'.

In a metaphorical reframe "tree of an animal body" a venous or blood circulatory system of an animal body as multichannel branches from the single source is presented, where bigger vessels and arteries are also assimilated to the tree, i.e. the trunk with divergent branches. The meaning is based on the same abstract components: 'a system', 'with many branches', 'in which every branch can be traced to a single origin'.

The presented lexical eidós has identifying features and, being "stereotypes" within scientific and logical thinking, it is created by the members of linguistic group as a result of a uniform division of reality and of multiple actualization of meanings. The lexical eidós functions at the level of system, while the actualization of certain meanings functions at the level of speech. In the process of communication the lexical eidós performs the function of the "phenomenological substitution", eliminating "running through" endless phenomena and objects of the world.

## VI. FUNCTIONS OF WORDS IN THE LEXICON AND ITS SUBSTANTIVE CORE

The critical issues related to functions of words in verbal

and mental processes are linked to the problems of the lexicon structure and functionality. A closer look needs to be taken at the theories of organization and functioning of the lexicon as a mental and lexical component of the communication activity.

Initially the term "lexicon" was used to characterize a list of morphemes of a specific language different from a word list. As the ideas of transformational generative grammar developed, some researchers started to treat the lexicon as a component of the generative language model playing an auxiliary role in respect of grammar. The word was defined as a meaningful unit that can be identified in a syntactic chain, and the lexicon was seen as a list of indivisible finite elements regulated by morphological rules.

Later lexis was included into the so-called «basic component» of a language along with the transformational rules which operate the original dictionary units. It was believed that inclusion of words occurred in the last phase, when the issue of sentence phrasal markers was already resolved; and the rules of transcription of these symbols lead to their substitution with specific lexemes (according to the categorical meanings of the latter). To make this step, the speaker must recall units reflecting his/her concepts from his/her memory. Thus, one started to treat the lexical component as lexicon, and no special differences were made between the dictionary and its reflection in the consciousness.

The commitment inspired by C. Osgood [11] to find the internal (categorical) structure of the lexicon and to identify the peculiarities of its development in children had a significant impact on the lexicon concepts. Experimental research results were published with a focus on word's connotative meaning and on the united verbal and cognitive structure. The research also stressed that words are means of experience organization, while the set of attributes associated with the word represents its major part. The studies of this kind laid a foundation for establishment of the cognitive approach to be used for analysis of the "brain lexicon". It was mentioned that the lexicon represents one of the most important mechanisms of cognitive processing of information linked to the level of representation and responsible for recoding in two directions: from perceived units – percepts (perceptive and language signs) to meanings and from intentions to the activity program (language or other). The lexicon is rather a process, than «storage». The lexicon contains a very large set of links between signs and codes of semantic attributes.

Since mid-1960s many representatives of generative grammar started analyzing the problem of word synthesis, its assembly from semantic attributes. This meant that a word is not reproduced, but constructed from components. When a concept of a sentence is born, firstly, its semantic representation is generated, then, if a certain configuration of semantic elements coincides with the semantic representation of lexical units, then this configuration is replaced with a phonological form.

During that period the mental lexicon (*lingua mentalis*) was postulated, i.e., nonverbal units of the conceptual system – images, schemes of actions, *gestalts*, pictures, on one hand,

and the language lexicon where concepts and notions have verbal form, on the other hand. The hypothesis that words are synthesized in the lexicon and not simply stored arose from a suggestion that the thought is created in the word, and was not given beforehand. Moreover, the concept groupings are so much linked with the sign language that they do not involve synthesis and exist as *gestalts*.

Some researchers of the Soviet period lexicon merit to be called cognitive scientists. They believed that there existed the world and its projection in the human brain, and that reflection of the world refracted as a united conceptual system with its images, concepts and notions had a powerful verbalized part (proper lexicon). While the language itself in no way reflected the world, it gave a concept of the latter by verbalizing (symbolizing) individual concepts of the world obtained through active world cognition.

The lexicon concepts which gained a language form and meaning are used for two functions – representation of the contents of an individual quant of information about the world and for its storage, accumulation and further use. Words help to easily and naturally combine two types of knowledge, two levels of consciousness: verbal and nonverbal. They act as means required, firstly, to detect the object in question from the totality of objects, and, secondly, to identify it verbally in the subsequent speech. A word represents a body of the sign for a concept or a group of concepts, as a carrier of a certain quant of information attributed to its shell in the act of nomination of a respective object. Simultaneously, it acts as an operator which brings to life a chain of complex associations, whatever long, when the consciousness is activated. The operational role of the word also involves "matching" of the speaker's knowledge with that of his/her partner; in normal speech a word (especially in the identifying position) is used with an aim of transferring segregated knowledge.

Important is to mention that some researchers consider the lexicon not as a passive storage of data about the language, but as a dynamic functional system which organizes itself due to continuous interaction between processing and structuring of the verbal experience and its products. The new in the verbal experience which goes beyond the system leads to its restructuring; each subsequent system status serves as the basis for comparison in further processing of the verbal experience.

It would be naïve to believe that the lexicon is «storage» of lexical units or a set of certain mental conditions. Many authors admit that it has an internal structure with diverse links between units and inside them. In terms of speech production, a lexicon unit meaning can represent a list of conceptual conditions which must be satisfied so that a certain unit could be chosen for a relevant message. A lexical unit can also contain syntactic, morphological and phonological information. However, there are grounds to believe that speakers construct a "scheme" of an expression without addressing the phonological part of the word. V. Levelt, a lexicon researcher, applies the term *lemma* for the non-phonological part of lexical information used for construction of such a scheme taking into account the syntactic

environment of a word [12].

In his theory J. Morton asserts that each word is stored in the mental lexicon as a logogen which includes not only phonological and semantic information about the word, but also its morphological characteristics. Logogens accumulate data about word frequency. Each logogen sets a certain threshold of word accessibility which decreases when word frequency grows making it more accessible. This explains a faster perception of frequent words compared to words of low frequency [13].

The modularity problem is discussed in parallel with the issues of existence of different approaches to the lexicon and the proportion between the linguistic and encyclopedic knowledge. The module is a relatively autonomous knowledge domain for processing of specific information with limited access to other information types. Thus, visual perception and syntax are separate autonomous systems of knowledge; they function relatively independently from contextual information and are linked to certain brain divisions. There are evidences (especially, in aphasiology), which support the modular organization idea: a certain mental ability may be disrupted, while the other continues to function normally.

The modular organization of the lexicon obviously envisages a special «compartment» for functioning of morphologically complex words. Thus, morphologically complex words may originally belong to the basic lexicon as a whole, i.e., without decomposition into constituents. As similar cases accumulate, an “auxiliary storage” is formed. There words are arranged by morphologically similar elements, thus, a special lexicon component, the so-called lexical tool-kit is created. Native speakers remember lexical units in contexts, in thematic groups. Therefore, words are not as interchangeable as it is normally believed.

In fact, words are not «so interchangeable» because absolute synonyms do not exist. One needs to clarify the thesis about lexical units being remembered in contexts: a person keeps the most frequent context actualizations in his/her memory, but «assembly» from the main dictionary is based on functions of the speech mechanisms (derivational, combinational etc.) which apparently have intrinsic nature. For instance, in an individual's consciousness words are subject to unconscious processes of synthesis, analysis, comparison, i.e. conceptualization and categorization, interacting with the products of processing of what was perceived before. So, the meanings are decomposed into attributes and attribute characteristics (differentiation processes). Besides, there is deviation from differing attributes (integration processes) which leads to higher extent of generalization. This allows creation of two types of units: differential attributes and *generalizing components* which differ in the integrity level. The results of these processes may exit via «the consciousness window». They may resist verbalization, since they remain «behind the scenes», thus providing for actualization of some recoding products available to enter the consciousness.

As a result, a word is included into the broadest network of multilateral links and relationships. These relationships must include bringing the results to a common code and its further

use as an abstract thinking tool. Visual impressions associated with the word may be integrated into complex mental images which act as higher rank units and ensure synchronous storage of a vast information volume.

The lexicon of an individual language is deemed by many authors as the final code. Lexical meanings just codify stable sets of abstract semantic properties. This means detachment from the context which is connected with the experience of the majority of language use aspects in the social life. Lexicon researchers also believe that it is structured not as a list, since it would be quite primitive. Instead, it has a complex structure with many outputs. Some linguists propose interesting opinions about the lexicon core. When expressions are formed, the chosen concepts are brought to those signs for which the lexicon has units with a required list of semantic components. Thus, the lexicon core and the periphery are formed. The lexicon core signifies words in the «nearest» meanings reflecting everyday notions: The core comprises units of specific meaning which easily evoke mental images. They are central for a group of other words belonging to this category which are more abstract in their meanings. Core words ensure transition from «sensual concretes» to «abstracts».

It is worth while noting that in a human memory all similar objects are merged into average results. These average products are signs which substitute multiple homogeneous objects. Thus, a person thinks about an oak, a birch, a fir-tree as generalized images, although during the lifetime he/she saw these objects a thousand times in various forms.

A plain analysis of how we recall a forgotten word prompts us that there are many different “paths” to get the forgotten word. Obviously, words are arranged in alphabetical order; there exist synonymic and antonymic word rows. Apparently, words are linked into lexico-semantic or thematic fields and belong to stylistic and terminological groups. Undoubtedly, along with such paradigmatic organization, there are also grammar and syntactic differentiations, as well as integration, for instance, by parts of speech, functions in expressions etc.

The lexicon core should obviously consist of the most frequent vocabulary. Therefore, one can assume that consciousness contains a «counter» which continuously counts the number of usages (certainly, conventional) and produced an index of word usage or citing frequency of a phrase or an expression. Frequent words and structures «accumulate» extensive links, so access to them is easier; they are always «on the tongue». «Assembly» from the main dictionary during formation of expressions can occur on the basis of mechanisms (derivational, combinational etc.) which exist in the lexicon.

On the whole, one can state that the semantic organization of the lexicon comprises a multitude of diverse models. This is true, because for our lexicon's efficient functioning the word must have as many outlets and interrelationships as possible.

The above theories of mental lexicon description focus on various features of its structure and functioning. In some concepts these features are linked with speech production processes. Other concepts relate to speech understanding. One

can admit that among all structures of knowledge representation in linguistics the most popular were the frames theories and the memory network models. There are also interesting theories which explain easy access to highly frequent words forming the lexicon core. Obviously, such theories are to be studied yet.

In our opinion, in the lexicon each unit is associated with an abstract *complex meaning*. This complex meaning represents a stem common for all variants of a polysemantic word and consists of semantic primes. In many cases complex meanings do not reflect natural concepts. They rather mean open conceptual schemes which gain a meaning depending on the context, and this occurs as a result of operations at the conceptual level.

The central meaning of a polysemantic word will be the one from which derivative meanings can be generated with least cognitive efforts. Linguists A. Caramazza and E. Grouber have discovered a dependency between the extent of a lexeme polysemy development and the abstractness level of its core meaning: «The core meanings will vary in the degree of abstractness, being essentially determined by the degree to which they allow polysemy; the more polysemous, the more abstract the representation, while the less polysemous, the less abstract the representation» [14].

The meanings of a polysemantic word represent notional domains, unique semantic fields whose components are linked by a common conceptual core. The meaning of any lexical unit is presented at the semantic level as the core. The core meanings represent the semantic composition of the lexeme, and lexicalized concepts determine an adequate context choice.

In our opinion, «presence» of all lexico-semantic variants of a word in the consciousness does not guarantee that at first request one can reproduce a full list of all these meanings. Very often some meanings are omitted in reproduction. Native Russian speakers would hardly recall all meanings of any polysemantic word at once. Therefore, uncertainty about the choice of required meanings coincides with psycholinguists' observations about the fact that consciousness does not store words. This provision can be used as an argument against listed representation of word meanings in the mental lexicon.

Some word functioning models in the lexicon describe meanings as self-sufficient independent essences. Conversely, we believe that it is strictly necessary to keep a polysemantic word in a generalized form (as a substantive core), because due to communicative time pressure such substantive core is able to cover more real and potential "precise" individual notions, if required, saving time and cognitive efforts.

Obviously, at the language system level in the long-term memory polysemantic words have a single direct link between the shape image and one generalized (invariant) meaning. It is updated at the speech level as one of individual variants. In other words, both levels (language and speech) demonstrate the principle «one shape – one meaning».

## VII. CONCLUSION

The very important conclusion from the presented cases is

the statement that in the process of communication every speaker acts just within their cognitive field. The function of language consists of directing a person in their own cognitive field, namely in the process of communication there is no communication activity by means of language, because the listener creates information themselves, making the uncertainty less by means of interactions in their communicative fields.

The special feature of the natural language with its polysemanticism, metaphorical reframes and implications very often turn out to be an obstacle to a successful communication. The difficulty is about the impossibility of using all the semantic wealth and the constant need of choosing the most substantial components of meanings of a polysemantic word.

The interaction of all meanings of a polysemantic word in the constant communicative time pressure (minimum time to comprehend and react in the flow of speech) would not meet the most important principle of economy that implies the usage of the least cognitive effort in the verbal and cognitive processes. The neglect of this and other factors presented above will cause the fragment knowledge without advancing us to the synthesis in the understanding of the language and thinking phenomena.

Denial of the meaning representation in the polysemic word structure implying that the word is present in the consciousness in the whole meaning system was the ground to look at a hypothesis of existing of the meaningful core of the polysemantic word, i.e. the lexical invariant. We proceed from the assumption that, no matter how many meanings are associated with a particular form, it is always the system meaning that is connected with it. It is identified as the meaning of this form at linguistic level, and it is the basis for making the actual meaning of the word at the speech level given the speech context on "one meaning – one form" principle. LI's have identifiable attributes (with differential among them) and being a sort of stereotypes within the frames of ordinary consciousness, are created by the members of a language community as a result of uniform division of reality.

## REFERENCES

- [1] Pesina S.A. The representation of words in the lexicon // International congress : sb. materials ; MOiH RF, In-t linguistics RAN, Tamborsk. State University, Russia Association of Cognitive Linguists. – Tambov: Publishing House TGU, 2010. – C. 121–123.
- [2] Pesina S.A. Word in the cognitive aspect : monograph. – M.: FLINT: Science, 2011.
- [3] Pesina S.A. From the invariant of an ambiguous word to the lexical prototype // Questions of cognitive linguistics. – Tambov: Publisher TGU, 2006. №2. – C.53-61.
- [4] Pesina S.A. Differentiation of speech and language in the light of the prototypical semantics // Tomsk State University Herald. – 2006. – № 291. – C. 177–182.
- [5] Pesina S.A. The invariant of an ambiguous word in the light of prototypical semantics // Orenburg State University Herald. Appendix "Humanities Studies". – 2005. – № 2. – C. 57–63.
- [6] Pesina S.A. Linguistic map of the world in a philosophical and linguistic understanding // News of RGPU in the name of A. I. Gertsena. General and humanities studies: scientific journal. – 2005. – № 5 (10). – C. 358–362.
- [7] Pesina S.A. The specificity of the philosophical and linguistic approach to the main problems of language // Adygeya State University Herald. Series «Regional Studies: philosophy, history, sociology, law, political

- science, cultural studies» – Maikop : AGU Publishing, 2011. – № 4. – С. 12–16.
- [8] Pesina S.A. Operation of words in the processes of thinking and communication // The cognitive study of language. – Tambov : publishing house TGU in the name of G.P. Derzhavina, 2011. – №8. – С. 79–81.
- [9] Pesina S.A. Polysemy in cognitive aspect: monograph – M-vo education and studies Russian Federation, Federal Agency of Education, GOU VPO «Russian State pedagogical university in the name of A. I. Gertsena», SPb., 2005.
- [10] Gusserl A. Ideas to pure Phenomenology philosophy : Moscow, Academic Project, 2009.
- [11] Osgood C. E. Lectures on language performance (Springer Series in Language and Communication. Vol. 7). – New York etc.: Springer-Verlag, 1980.
- [12] Levelt W. J. M. Speaking: From intention to articulation. Cambridge, M. A: The MIT Press, 1993 (1989).
- [13] Morton, J. Word Recognition. – Morton, J., J. C. Marshall (edc.) Psycholinguistics 2: Structure and process. Cambridge (Mass.): MIT Press.
- [14] Caramazza A. Grober E. Polysemy and the structure of the subjective lexicon // Semantics: theory and application. Ed. By C. Rahmen. Washington, 1976. – P. 181-206.

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