

# Interactive Neurocognitive Models of Language Processing

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**Abstract:** The article shows that lexico-semantic innovations in the Ukrainian language system of proper names which are characterized by a specific neurophysiological mechanism of formation require in-depth study. The relevance of the article lies in the fact that lexico-semantic word formation used to be mainly considered in the diachronic aspect, which led to little attention to ergonyms and pragmonyms as relevant classes of proper names. The article aims to analyze lexico-semantic innovations in the context of ergonyms and pragmonyms and determine their role in word formation in the system of naming-related tools in the modern Ukrainian language. Research methods include observations, analogies, analysis, synthesis, linguistic description, component analysis, structural-semantic analysis, statistical methods. The article proves that lexico-semantic word formation is the most active and productive way of replenishing the fund of ergonyms and pragmonyms in the Ukrainian language under the conditions of a transition economy. The main types of lexico-semantic word formation are derivational metaphor and derivational metonymy. They enable the formation of both simple and compound lexico-semantic innovations mostly represented by binary word combinations. Including all layers of vocabulary in the scope of such a type of word formation can bring unlimited prospects of its functioning in the future. The international value of the research implies clarifying the role of lexico-semantic word formation in the naming system of modern Ukrainian, describing important fragments of the lexical structure of the Ukrainian language, systematizing modern lexico-semantic naming models, and determining the ways of activating lexico-semantic substitution. For the first time in Ukrainian linguistics, the research analyzes peripheral classes of proper names in various ways, classifies ergonyms by thematic groups and motivational features underlying the naming unit and reveals the specifics of different semantic groups of Ukrainian pragmonyms.

**Keywords:** *lexico-semantic innovations; Ukrainian naming; ergonyms; pragmonyms; Ukrainian; derivational metaphor; derivational metonymy; binary word combinations.*

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## Introduction

Today, lexico-semantic innovations in the Ukrainian language system of proper names require in-depth study. Lexico-semantic word-formation contributes to the emergence of lexico-semantic innovations and is under constant review of linguists. The study of lexico-semantic word formation in the diachronic aspect shows that researchers pay little attention to ergonyms and pragmonyms as relevant classes of proper names. Given the lack of studies on this concept, one can think that the emergence of ergonyms and pragmonyms is a mere transfer of a naming unit from one denotation to another, which has nothing to do with lexico-semantic word-formation. It is also relevant to study neuro-linguistic mechanisms of such derivation to identify the origin of ergonyms and pragmonyms. Therefore, the study of lexico-semantic word formation as one of the important ways of naming today is of fundamental importance for the elaboration of the derivatology and naming theory.

There are no complex studies on lexico-semantic innovations in the field of ergonyms in Ukrainian linguistics. Some similar studies on other languages (Mikina, 1993) do not reveal the specifics of naming ergonyms in the Ukrainian language. The only monographic study on firmonyms as one of the types of naming units in Ukrainian linguistics is based on Western Ukrainian materials (Belei, 2000) and therefore, only partially intersects with the problems of the research. Pragmonyms need to be studied more in detail, too. There are only some studies on certain aspects of this class of proper names on the material of the English language (Sheremet, 2019; Onishchuk et al., 2020; Maksymchuk et al., 2018).

Given this fact, it is essential to achieve the following objectives: to systematize Ukrainian ergonyms and pragmonyms; to identify the characteristics of their formation; to analyze the ways of interlingual borrowing of appropriate names; to determine the paradigms of motivational features; to describe the naming-related nature of each category in the object under study; to outline neural mechanisms of word-formation motivation and emergence of new names. Once these objectives have been achieved, one will be able to clarify the specifics of some proper name and the degree of its expression in different classes of names, as well as the peculiarities of generic names' transition into proper names and vice versa.

The relevance of the research lies in little interest of Ukrainian linguists in naming processes in the system of ergonyms, pragmonyms, on the one hand, and constant development of lexico-semantic innovations in these classes of proper names, on the other hand. The study of lexico-

semantic innovations in the system of naming ergonyms and pragmonyms is one of the significant tasks of linguistics.

*The article aims* to analyze lexico-semantic innovations in the context of ergonyms and pragmonyms and determine their role in word formation in the system of naming tools in the modern Ukrainian language.

The *sources* of the research include “The State Register of Reporting (Statistical) Units of Ukraine” of Sumy Regional Department of Statistics; telephone directories of Kyiv, Lviv, Poltava, Sumy, Kharkiv; all-Ukrainian periodicals; price lists of certain well-known commercial and industrial companies in Sumy and Kharkiv; surveys of entrepreneurs in Sumy.

Research methods are the following: *universal scientific methods* – observations, analogies, analysis, synthesis; *special methods* – linguistic description, component analysis, structural-semantic analysis, statistical methods.

*The methodological basis of the research* is a doctrine about dialectical links between language and thinking; a social nature of language; a sign function of language; a linguistic sign as a unity of form and content.

## **Neurophysiological and neurolinguistic principles of word formation and word use**

Modern neuroscience is closely integrated with the humanities, so it is useful to identify spheres of using a neuro-approach to word formation problems.

In neuroscience, it has become traditional to study pathological neurocognitive processes since brain damage allows one to observe certain psychological processes in isolation from other processes (Semenza, & Mondini, 2006). Speech flow is normally difficult to access via neuropsychological research. In experimental clinical neuropsychology, however, there is a standardized set of methods to find empirical evidence of certain functional phenomena. Psycholinguistic processing of speech proves that observation, detection, and analysis of errors are long-term and time-consuming methods. Instead, neuropsychological and neurolinguistic methods of studying patients with aphasia provide substantial concentrated material in small, controlled groups, which makes it valuable for neurolinguistics of word formation.

In an effort to reconcile “cognition–language–neuroscience”, some scholars have turned to affective neurolinguistics and introduced the notion of “the emotion word type” in opposition to neutral vocabulary. As noted by Wu & Zhang (2020), the difference between the two types of words has

been confirmed in numerous studies. The mismatch between them can help define and categorize emotional words and provides a new interface for affective neurolinguistics, affective neuroscience, and cognitive neuroscience. Word-formation is often accompanied by emotional nuances, so the neurophysiological basis of speech affect can be useful for elucidating connotative mechanisms.

The most common method of neurophysiological study of vocabulary, especially the inner lexicon, is the Vygotsky & Luria approach (1993). Of particular interest are definitions of referential meaning (reference) and significative meaning (sense) (Akhutina & Glozman, 1995). There are two types of word meaning disturbances in fluent aphasia: a primary defect of signification in semantic aphasia and a primary defect of reference in different subtypes of Wernicke's aphasia. Ergonyms and pragmonyms lack conceptual denotations and mainly have reference relations. Therefore, the study of words' reference mechanism can be useful to elucidate the neuropsychological nature of transonymization.

One needs to consider relevant data and related aspects, including morphological, to clarify neurophysiological aspects of word formation and usage. Some scholars consider word formation to be a field of morphology, i.e., automated reflexive generation of new words. It is possible to reveal morphological processing of words and sentences in language comprehension and language production by neuroimaging methods. There are separate models to deal with morphological issues: full-listing models, full-parsing or decompositional models, and hybrid (double route) models (Schiller et al., 2019).

Hybrid dual-route models, full-listing and full-parsing form the basis of neurolinguistic approaches to morphology. Markers are visual and auditory priming, violation, long-lag priming, picture-word interference (these facts can be neuroimaged). Schiller & Lieber (2020) claim that various neurolinguistic paradigms and methods (from electroencephalography to neuropsychology) can be applied to neuroscientific morphology soon.

Some researchers believe that neologisms and perseveration are the most typical and widespread neurolinguistic constructs found in the language deficit in the context of neurolinguistics. According to Pitts, Bhatnagar, Buckingham, Haccin-Bey, & Bhatnagar (2010), neologisms can occur in oral reading, while perseveration serves as a major factor in the genesis of a neologism. This means that neologization is the most reflexive and neurophysiologically simple process, as well as the reaction of language consciousness to a changing situation. Experimental neuroscience has shown that, in addition to perseveration, there are many neuromechanisms

in the genesis of neologisms, especially in spontaneous verbal output, or in the context of confrontation naming or repetition.

Ontko (2005) analyzes the neurolinguistic mechanisms in the genesis of neologisms via the visual perception of the text on the example of individual clinical facts. He points out a rather weak neural connection between graphemes and phonemes during the transformation of the former into the latter in reading. One can assume that such a connection should be much stronger and faster in terms of feedback in the genesis of neologisms in oral speech and the consideration of extraverbal (pragmatic) influences.

Neurophysiology and neurolinguistics strive to find out how conceptual knowledge of language (lexical, phonological, and grammatical) is presented in the form of diagnostically accessible neuroformations. A neurolinguistic study of the cognitive structure of the lexicon becomes useful not only in the clinical practice of neurocorrection of aphasia or other language-related disorders. Such knowledge enables linguists to build functional fields of language units or develop programmes for communicators and artificial intelligence (Bose & Buchanan, 2007). Today, neurophysiologists study language in several ways: traditional (statistics, eye-tracking technology) to innovative neurovisual (positron emission tomography). In the coming years, it will become possible to visualize quite separate and ordinary linguistic phenomena that do not contain any affect or pathology.

There are separate neuropsychological issues of language connotation in word formation, especially in the context of colloquial speech or slang. Hinojosa, Moreno, & Ferré (2019) indicate that standard neurocognitive models of language processing tend to eliminate the need to incorporate emotion processes, while theories of affective neuroscience mostly deal with issues of how people communicate their emotions and somehow neglect linguistic issues (Hinojosa et al., 2019). Modern neuroscience shows that emotion can be “represented in the brain as a set of semantic features in a distributed sensory, motor, language and affective network” (Hinojosa et al., 2019), which also applies to connotative shades. In the perspective of neurolinguistics, this is “in line with the proposals of interactive neurocognitive models of language processing, which assume the interplay between different representational levels during on-line language comprehension” (Hinojosa et al., 2019).

Metaphorical or metonymic transference is considered as the basis of lexical-semantic word formation even far beyond neurolinguistics. As noted by Lakoff & Johnson (1980), metaphor is a “fundamental mechanism of mind, one that allows us to use what we know about our physical and social

experience to provide understanding of countless other subjects”. Today, neurophysiology offers new models of understanding metaphor that exceed simple laterality. This is because the hypothesis of the right-hemispheric nature of metaphor has not been confirmed. Ortony (1993) once proposed a neural model of metaphor as a poetic-rhetorical phenomenon, i.e., with the formation of new neural connections. However, this does not solve the problem of everyday use of metaphors without the use of talent, insight, inspiration, and other changed states. Kircher, Leube, Erb, Grodd, & Rapp (2007) claim that the main feature of schizophrenic thought and language disturbance is the inability to understand the figurative meaning of proverbs and metaphors. This indicates the need for a metaphorical mechanism of integrity and adequacy of mental processes, which are always rational associations (Winner, & Gardner, 1977).

So far, neurophysiological studies of metaphors have yielded inconsistent results. Schmidt, Kranjec, Cardillo, & Chatterjee (2010) identify several key issues of metaphor neurophysiology that need to be addressed. They are the following: ways to advance understanding of the neuropsychology of metaphor that go beyond simple laterality; theoretical approaches to studying the neural basis of metaphor; the possibility of fundamental differences between different types of metaphors; the use of the latest methodological advances in functional visualization and analysis of lesions to improve research on brain behaviour; the ways of preserving existing observations into a plausible model for the neural basis of metaphor (Schmidt et al., 2010).

A comprehensive study of ergonyms and pragmonyms formation should use neurolinguistic patterns. This primarily applies to the naturalness of metaphorical-metonymic verbal reflection of the world, motivation, spontaneous language activity (the act of a new nomination), neural connections and archaic mechanisms.

### **Lexico-semantic word formation and its role in the system of naming realia in a transition economy**

Lexico-semantic word formation is one of the main ways of replenishing naming-related tools of languages. It means a way in which a sound pattern of the forming word (motivator) while remaining unchanged, acquires a new meaning and becomes semantically derived (motivated). Lexico-semantic word formation is actively manifested in the system of naming proper names. The main mechanisms of lexico-semantic word formation in this sub-system of language are *onymization* (a transition of a common name into a proper name), *transonymization* (a transition of a proper

name from one class of names to another) and *onymotransonymization* (combined use of variants of such word formation based on the onymization + transonymization model). Each of these varieties is associated with semantic and grammatical changes in linguistic units. Preserving motivational connections between the basic word and the new semantic meaning allows one to relate lexico-semantic word formation in the system of naming proper names to synchronous phenomena.

Typical, regular, and consistent motivational and neural connections and archaic mechanisms in the language system make it possible to distinguish such types of lexico-semantic word formation as derivational metaphor and derivational metonymy. Metonymy is considered the most important source of naming in terms of both quantity and various motivations towards it. The regularity of metonymic substitutions allows one to distinguish the following types of transpositions in the analyzed material: by spatial contiguity; by temporal contiguity; by links between the company and its field of activity; by links between the company, the range of goods and services and their addressee; by kinship; by likings. Most lexico-semantic innovations within the studied groups of proper names are formed through metonymization. This fact can be explained by rather transparent motivational connections of the basic word and the newly formed name.

The analysis of factual information shows that binary lexico-semantic innovations are common in the system of proper names. They reflect the specifics of the object more accurately while indicating its various features. In a functional context, lexico-semantic innovations are similar to monosyllabic names since they name realia rather than describe them. Most binary names are formed in a lexico-syntactic way in combination with a lexico-semantic one. The mechanism of transferring compound names from one denotation to another is identical to the mechanism of transferring simple names based on metaphor or metonymy. According to structural-and-grammatical features, one can distinguish two types of compound names, namely, *attributive-substantive* and *substantive-substantive*. The first is more common (*Dilovi zustrichi* (Business Meetings) – a restaurant), *Staryi Likhtar* (Old Lantern – a café). It is possible due to adjectives' ability to merge with nouns into one semantic whole.

The modern Ukrainian language is characterized by an intensive process of borrowing foreign words. The degree of assimilation of borrowings by the recipient language allows one to distinguish two groups of naming units: 1) *full* substitutes (formed with graphics of the source language); 2) *partial* substitutes (formed with graphics of the Ukrainian language), including *hybrid* proper names. The actualization of proper names'

substitutes on the Ukrainian-speaking basis occurs with the help of derivational metaphor and derivational metonymy. A characteristic feature of the modern naming system of ergonyms and pragmonyms is the expansion of foreign language vocabulary. It can be explained by the openness of peripheral classes of proper nouns for extralinguistic and foreign linguistic influence.

A sharp increase in the number of companies of various forms of ownership and fields of activity has led to the division of ergonyms and pragmonyms in separate classes of proper names. The terms “ergonyms” and “pragmonym” are the most acceptable, given their ability to denote relevant objects. They are based on a clearly defined terminological model (term element + onym) and organically included in onomastic terminology. The term “*ergonym*” allows one to combine the following groups of words within a class: names of various companies; names of consumer companies; names of companies in the service sector; names of joint-stock companies. The term “pragmonym” represents numerous names of products of human activity, in particular names of various types of transport, food, household items, household chemicals.

### **Lexico-semantic innovations in the system of ergonyms**

The ergonym-related boom, as well as urgent needs to name relevant phenomena, has led to the expansion of the boundaries of lexico-semantic word formation, its active penetration into the system of ergonyms. The productivity of lexico-semantic word formation in the naming system of ergonyms is due to 1) its simple implementation; 2) brevity, informativeness, advertising potential.

Factual information is much focused on ergonyms’ *motivation*, which is an important feature of the analyzed naming units. This research distinguishes such terms as “*formative*” – “*derived*” and “*motivated*” – “*motivating*” (“*motivator*”) into morphological or lexico-semantic word-formation under the fields of activity. The terms “*motivated*” and “*motivating*” (“*motivator*”) reflect the essence of the studied phenomenon most accurately and allow one to include in morpheme-free derivation in word-formation analysis. Only a proper name that has a transparent semantic structure can be considered as motivated. It helps one reveal a motive of naming, that is a conceptual or associative block of linguistic and extralinguistic information, enshrined in individual or collective knowledge about the world, traditions, experience, which determines one or another choice of the feature underlying this naming unit.



Universal factors that form the basis for ergonyms' motivation include the ownership of a company, its location, and relations with other objects, as well as a field of its activity. Summarizing motivational features, one can single out three naming principles which should be considered as onomastic universals: anthroponymic, toponymic and appellative. The latter is a priority now since onomized appellatives retain their appellative semantics, determining the transparency of ergonyms' semantics and thus enhancing their informative function.

Recognizing or ignoring features of the object's name allows one to distinguish motivated and recessive ergonyms as two main categories of ergonyms as lexico-semantic innovations. Motivated ergonyms include those which directly or indirectly indicate the characteristics of a company, its location, links with people and various realia. Thus, they give any information about this object. As for a way of embodying its features, motivated ergonyms are divided into *really* motivated and *conditionally* motivated. Really motivated ergonyms directly indicate a real fact related to a company's field of activities and products, its location, a type of ownership. Conditionally motivated ergonyms are based on associative links which contain only a hint of its features. Such extralinguistic factors as advertising, prestige, fashion play a rather important role in the formation of conditionally motivated ergonyms. Recessive ergonyms do not contain information about a naming unit and are often *artificial* words formed by a mechanical combination of letters. They are characterized by a secret naming motive.

The classification of really motivated ergonyms takes into account the main motivational features and ways of their implementation. In this regard, conditionally motivated ergonyms are different in meaning, rich in content and difficult to classify since the main content of ergonyms includes different connotations. Interestingly, the same word can belong to different thematic groups. Conditionally motivated ergonyms seem to be more motivated by a company's field of activity or some aesthetic features. Therefore, they are classified only lexical meaning as the basis of a naming unit without considering motivational features.

According to lexical principles, really motivated ergonyms are divided into 3 groups: toponyms with an indication of the geographical location of the object (*Prykarpattia* – *bank* (Precarpathian – a bank)), anthroponyms with an indication of an owner (*U Halyny* (at Halyna's) – a café), appellatives with an indication of a field of activity (*Zhurnalyst* (journalist) – a limited liability company).

Conditionally motivated ergonyms are divided into two groups:

1) lexico-semantic innovations motivated by proper names; 2) lexico-semantic innovations motivated by appellatives.

1. Ergonyms can be formed by anthroponyms (*Ruslana* (Ruslana) – a shop), historical anthroponyms (*Askold* (Askold) – a shop), theonyms (*Aphrodita* (Aphrodite) – a restaurant), mythonyms (*Orfei* (Orpheus) – a cafe), cosmonyms and astronoms (*Vodolii* (Aquarius) – a commercial company), toponyms (*Barselona* (Barcelona) – a restaurant), demonyms (*Poltavchanka* (a female inhabitant of Poltava) – a shop). In total, the analysis covered 8 groups of lexico-semantic innovations motivated by proper names.

2. Ergonyms as lexico-semantic innovations can be formed by faunonyms (*Alibator* (Alligator) – a cafe), flornoms (*Konvaliia* (lily of the valley) – a cafe), personal characteristics (*Krasunia* (a beautiful woman) – a hairdressing salon), positions or titles (*Hetman* (a Cossack chief) – a shop), fields of activity (*Surmach* (trumpet player) – a commercial company), names of precious stones (*Sapfir* (sapphire) – a private company), names of cosmic phenomena (*Suziria* (constellation) – a shop), names of water phenomena (*Labuna* (lagoon) – a cafe), names of natural phenomena (*Viter* (wind) – a limited liability company), term names (*Kvadrat* (square) – a private company; *Hryvnia* (the national currency of Ukraine) – a shop), names with such adjective components as *new*, *old* (*Nova khvylia* (a new wave) – a shop; *Stare misto* (an old town) – a cafe), names of Ukrainian cultural phenomena (*Levada* (an orchard near a house) – a shop), positive names (*Zlakhoda* (harmony) – a shop), abstract names (*Ideia* (idea) – a company), set expressions (*Zoloty doshch* (money windfall) – an advertising agency). In total, the analysis covered 16 groups of lexico-semantic innovations motivated by appellatives.

A set of motivational features of ergonyms as lexico-semantic innovations is determined by the specifics of a naming unit and functions performed by a particular type of proper names. Modern ergonyms are characterized by a great number of lexico-semantic innovations motivated by spatial features of the named object. The actualization of microtoponyms and choronyms as forming principles of lexico-semantic innovations proves the development of such naming units (*Mykhailivskyi* – a restaurant in *Mykhailivska St*; *Obolon* (a historical locality in Kyiv) – a joint-stock company).

The derivational naming system of ergonyms pays much attention to owners since business structures are always owned by someone. This group of ergonyms as lexico-semantic innovations is represented by

anthroponyms, such as names, surnames, and their combinations (*Volodymyr* – a joint venture; *Tkachenko, Sonin i K* – a commercial company). The use of owners' surnames as ergonyms serves as the resuscitation of a forgotten pre-revolutionary naming model, while the transformation of owners' names in ergonyms is a fundamentally new naming model.

Today, the naming system of the Ukrainian language actively uses ergonyms as lexico-semantic innovations motivated by the specifics of the object's activity, its functional purpose. Such naming units are based on appellatives, which directly or indirectly indicate the characteristics of the named realia and are designed to perform informative and advertising functions (*Kompiutery* (computer) – a shop; *Komfort* (comfort) – a company; *Kapital* (Capital) – a bank). This model of ergonyms' motivation is quite decisive.

The growing number of ergonyms as lexico-semantic innovations, which arose because of transpositional actualization of aesthetically significant words, indicates an increase in the productivity of this type of motivation in the system of proper names. This group of lexico-semantic innovations is represented by anthroponyms (*Valensiia* (Valencia) – a hairdressing salon), theonyms (*Diana* (Diane) – a shop), mythotoponyms (*Skejiia* (Scythia) – a private company), floronyms (*Orkhideia* (orchid) – a commercial company), positive names (*Dobrochyn* (charity) – a company), aesthetically relevant names (*Kalvariia* (Calvary) – a limited liability company), romantic names (*Bihyi paroplav* (a white steamer) – a publishing house), folklorisms (*Char-ꞗillia* (an enchanted potion) – a cafe).

Besides, ergonyms which contain digits or letters are quite common (*Spilna sprava-99* (common business-99) – a shop; *Kompiutery – C* (computers – C) – a limited liability company). The actualization of ergonyms such as “*Sirius*”, “*Sirius-2*” (shops) is due to the ban on using homonymous names within one administrative division.

The system of ergonyms also involves lexico-semantic innovations motivated by several features: *Kharkiv-kontrakt* (*Kharkiv-contract*) – an advertising agency (spatial coordinates of the object + an indication of a field of its activity); *Lvynski Kruchenyky* (*pork or beef rolls with various stuffing made in Lviv*) – a cafe (spatial coordinates of the object + an indication of a type of its products). The strengthening position of complex-motivated ergonyms can be explained by the tendency of languages towards maximum motivation of denotation.

The analyzed phenomena also include lexico-semantic innovations with a recessive naming motive, which do not provide any information about the named object. Such names, formed by a mechanical combination of letters and parts of words, are the result of a tendency towards illusory freedom in naming. They implement naming motives incomprehensible to the public (*Geal* – a company; *Kana* – a commercial company).

Each group of ergonyms has certain naming features. Thus, the names of banking institutions are not characterized by ownership-based motivation. This is due to the attempt to clearly define the specifics of a financial institution and its location to provide customers with important information, as well as the fact that objects of a reference area are not privately owned. One should pay particular attention to structural models of names of banking institutions with the very component “*bank*” (*Misto (city)-bank, Poltava-bank*).

The semantics of presonyms is characterized by certain intensification of intellectualization (*Alternatyva (alternative), Diapazon (range)*), originality (*Kobza* (Ukrainian musical instrument similar to a guitar); *Lybid* (the legendary sister of the founders of Kyiv)) and extensive use of foreign terminological elements of publishing in complex and compound names (*Kolibri (hummingbird)-print; Oranta (Orans)*). It ensures their informativeness even if there are other elements with recessive motivation.

These models of ergonyms as lexico-semantic innovations contrast with Soviet colourless names. In the context of a transition economy, the process of naming ergonyms is characterized by the emergence of fundamentally derivational patterns (an owner’s name, horonyms, conditional names (anthroponyms), recessive names) and the resuscitation of pre-revolutionary models of ergonyms forgotten in Soviet times (an owner’s surname, names with Co, foreign toponyms).

### **Lexico-semantic innovations in the system of pragmonyms**

The recognition of pragmonyms as certain similar factors has caused a great deal of discussion within linguistics whether to relate them to proper names or appellatives (Bragina, 1986; Komarova, 1979; Leichik, 1992). Pragmonyms refer to proper names in terms of their individualization of goods and rights to possession of these goods, graphic features (capitalization, quotation marks), types of lexical meaning (links with a single concept), onomasiological features (naming situations identical to proper names).

This research combines trademarks and the very pragmonyms into a class of pragmonyms based on their similarity in object correlation (individualizing a series of similar products), fields of activity (trade), the commonality of addressees (a potential buyer), naming types (belonging to artificial naming units), instructions (both trademarks and pragmonyms are formed and put into use by the same people, that is a team of developers and manufacturers of a particular product).

Lexico-semantic word-formation of pragmonyms is based on derivational metaphor (*Mulatka (Mullatta) – candies; Favoryt (favourite) – a vodka brand*) and derivational metonymy (*Eneida (Aeneid) – a vodka brand; Kuialnyk (a mud bath health resort) – a bottled water brand*).

The analysis of factual information allows one to identify two categories of pragmonyms as lexico-semantic innovations: motivated and recessive names. The criterion for identifying them and corresponding types of ergonyms is the presence or absence of information about the features of the named object. The nature of motivation makes it possible to distinguish between really motivated and conditionally motivated pragmonyms. In contrast to really motivated names, recessive ones do not contain information about the features of the naming process. Their emergence is mainly due to external factors and subjective motives of the naming process incomprehensible to the public.

The nature of motivators allows one to identify three groups of really motivated pragmonyms: toponyms with an indication of the geographical location of a production plant (*Lviv – a balm brand*), anthroponyms with an indication of belonging (*Shustov (a surname) – a vodka brand*) and appellatives with an indication of the named object's features (*Zapashna (aromatic) – a coffee brand*).

Conditionally motivated pragmonyms include two classes of names: 1) lexico-semantic innovations of some known origin; 2) lexico-semantic innovations of some appellative origin. The analysis of modern pragmonyms of known origins shows that they are formed based on anthroponyms (*Viktoriia – a cookie brand*), historical anthroponyms (*Kniazhna Olga (Princess Olga) – a vodka brand*), literary and folk anthroponyms (*Kit Bazyl'io (Basilio Cat) – a candy brand*), mythonyms or theonyms (*Artemida (Artemis) – a vodka brand; Ikar (Icarus) – a cognac brand*), cosmonyms and astrononyms (*Stozhary (Pleiades) – a candy brand*), toponyms (*Ararat – a cognac brand*).

Appellative pragmonyms are motivated by faunonyms (*Levenia (lion cub) – a candy brand*), florononyms (*Nezabudka (forget-me-not) – a candy brand*),

stylistically marked names (*Khaz̑iainshka (homemaker) – a cookie brand*), positions or titles (*Hubernator (governor) – a beer brand*), cosmic phenomena (*Parad planet (an alignment of planets) – a wine brand*), natural phenomena (*Vechir (evening) – a candy brand*), colourful Ukrainian names (*Vodobrai (Waterfall) – a vodka brand*), romantic names (*Zacharovana nich (an enchanted night) – a candy brand*), humorous names (*Try tovaryshba (three comrades) – a vodka brand*), exoticisms (*Rumba – a candy brand*), abstract concepts (*Fortuna (fortune) – a coffee brand*), names with fantastic motives (*Rusalka (mermaid) – a candy brand*), names with the word “golden” (*Zolone z̑erno (golden grain) – a coffee brand*), substitutes (*Berg – a beer brand*).

Considering characteristics of motivation, one can single out six subgroups of pragmonyms within the first class and fifteen within the second one.

The specifics of the named object (a series of goods) determines a set of motivational features of pragmonyms. A characteristic feature of the pragmonym naming system is a significant number of lexico-semantic innovations motivated by spatial coordinates of a production plant: *Koz̑atskyi Val (a natural monument) – a vodka brand; Slavutysh (a town in Kyiv Oblast) – a beer brand*. “Geographically” motivated pragmonyms are mostly formed with the help of toponyms, hydronyms and oronyms. Active use of local realia in terms of pragmonyms’ functions proves the expansion of the formative basis of this naming model.

The pragmonymic individualization of series of similar goods leads to the lack of lexico-semantic innovations motivated by reference to the owner. One can compensate for the lack of such motivation with intensive use of historical anthroponyms and names of literary heroes, characters of fairy tales in the function of pragmonyms as lexico-semantic innovations: *Kit-Baiun (a character from Russian folk tales) – a candy brand; Kniaz̑ Sviatoslav (Prince Sviatoslav) – a vodka brand*. The increase in the number of such names indicates further development of this naming model in the naming system of pragmonyms.

There is a large group of pragmonyms as lexico-semantic innovations, whose motivation is based on the selection of characteristic features of products. They are represented by appellatives which directly or indirectly indicate the characteristics of the named object: *Vesilne (bridal) – a wine brand; Okovyta (from Latin “aqua vita”) – a vodka brand; Pervak Shaleny (strong homebrew) – a vodka brand*.

The analysis of factual information indicates the priority use of pragmonyms, motivated by certain aesthetics-related lexemes. This model of motivation is represented by the following names: *Veselyi monakh* (a merry monk) – a beer brand; *Vesniana lastivka* (a spring swallow) – a candy brand; *Zabadkova* (mysterious) – a candy brand; *Kazkove siaivo* (some fabulous light) – a candy brand; *Marbarytka* (daisy) – a candy brand. The emergence of such a great number of pragmonyms is associated with aesthetic attitudes. Thus, one can assume this class of proper names performs a hypertrophied advertising function.

Also, there is a separate category pragmonyms motivated by two or three features of different thematic and semantic groups: *AVK Advokat krem-kokos* (a chocolate brand) – a company name (AVK) + a brand name (Advokat – lawyer) + an indication of taste (frosting-coconut); *Veselka Vyshnia* (a candy brand) – a brand name (Veselka – rainbow) + an indication of taste (Vyshnia – cherry); *Obolon Oksamytove* (a beer brand) – a company name (Obolon) + an indication of a product's features (Oksamytove – velvety).

Modern pragmonyms are monolexic and bilexic names by structure. Bilexic lexico-semantic innovations are represented by the following models: adjective + noun (*Dniprovi zori* (Dnieper stars) – a candy brand); noun + adjective (*Kalvados ukraïnskyi* (Ukrainian Calvados) – a drink brand); adjective + preposition + noun (*Ukraiïnskyi z makom* (Ukrainian with poppy seeds) – a cracker brand); noun + noun (*Taiemnytsia Kheronesosa* (the secret of Chersonesos) – a wine brand). Compound pragmonyms, expressing two elementary concepts, are united into one by the commonality of denoted realia.

The modern naming sub-system of poreonyms is characterized by substitutes that serve as a means of linguization of foreign realia, in particular automobile and household appliances. Active use of poreonyms (substitutes) is due to the optional translation of the name in the recipient language. This naming sub-system tends towards the aestheticization of technical names. It lies in replacing digital designations of models with verbal signs. The determining factor which underlies the choice of motivational features of poreonyms (substitutes) is an indirect characteristic of the object: *Dodge Viper* – a high-speed car; *Frogeye* (frogling) – a small French female car. The expansion of economic cooperation with other countries, as well as an insufficient development level of relevant industries in Ukraine, has caused the penetration and active functioning of substitutes.

The lexico-semantic innovations motivated by the peculiarities of some realia predominate in the naming system of phytonyms: *Zolote lito* (*golden Summer*) – a lily; *Fioletovyi bokal* (*a purple glass*) – a tulip. The specifics of naming situations in this subsystem of proper names determines the maximum and minimum manifestation of subjective and addressable motives of the naming process, respectively.

## Conclusions

*The theoretical value of the research* lies in expanding and consolidating knowledge about the role of lexical-semantic word formation in the system of modern naming methods, supplementing certain provisions of the word-formation theory and the naming process and proving the existence of universals in the field of onyms. For their part, language universals prove the existence of specific neurophysiological mechanisms manifested in typical aspects of language reflection. In general, the research helps to describe the structure of the modern Ukrainian onym space and the systemic links between its levels in more detail.

*The practical value of the research* is determined by the fact that its materials can be implemented in lecture courses on lexicology and word formation, scientific seminars, and specialized courses. Besides, they can be useful to those who write dissertations and compile dictionaries of lexico-semantic innovations of a transition economy.

*The scientific value of the research* implies clarifying the role of lexico-semantic word formation in the naming system of the modern Ukrainian language, describing important fragments of the lexical structure of the Ukrainian language, systematizing modern lexico-semantic naming models, and determining the ways of activating lexico-semantic substitution. For the first time in Ukrainian linguistics, the research analyzes peripheral classes of proper names in various ways, classifies ergonyms by thematic groups and motivational features underlying the naming unit and reveals the specifics of different semantic groups of Ukrainian pragmonyms.

The naming process means the creation (or borrowing) of a word or substitute in all those cases when there is no such concept, or it does not sufficiently implement the verbal-nominal function of the neo-naming process.

Every language and its lexical sub-systems, such as ergonomic, nomina personalia, pragmonymic, toponymic, technical and others, have their special naming systems. Ergonyms and pragmonyms are open and constantly changing parts of the lexical structure of proper names from



various fields of activity and products of activity. Given their growing number in a transition economy, they naturally acquire the status of superstratum, which is an upper layer of proper names in Ukrainian onomastics. The ergonymic and pragmonymic boom has significantly strengthened the position of lexical-semantic derivation.

Today, lexico-semantic word formation is a full-fledged and most active way of replenishing the lexical structure of the language. Its main mechanisms are derivational metaphor and derivational metonymy. They enable the formation of both simple and compound lexico-semantic innovations, which are mostly represented by binary word combinations.

A notable feature of ergonymic and pragmonymic naming systems is the widespread use of substitutes. The degree of assimilation of borrowings by the recipient language allows one to distinguish and *partial* substitutes, including *hybrid* proper names. The actualization of proper names' substitutes on the Ukrainian-speaking basis occurs with the help of derivational metaphor and derivational metonymy. A characteristic feature of the modern naming system of ergonyms and pragmonyms is the expansion of foreign language vocabulary. It can be explained by the openness of peripheral classes of proper nouns for extralinguistic and foreign linguistic influence.

The increased importance of lexico-semantic word formation in the neo-naming system of the modern Ukrainian language can be proved by the following facts: 1) the transfer of lexico-semantic word-formation from word-formation periphery to anteposition, which is due to the simple formation of new naming units: naming units become sound complexes available in the language, changed and adapted accordingly; 2) lexico-semantic word-formation has become universal, which is manifested in its penetration and active functioning in such sub-systems as the names of banks, publishing houses, companies, where its position used to be quite weak (*banks: Osbadnyi bank (a savings bank) – Dendi (a dandy) Bank; publishing houses: Naukova Dumka (a scientific thought) – Bohdan (a Ukrainian name); shops: Moloko (milk) – Bili Berehy (white shores); companies: Sumskyi likerohorilchanyi zavod (a spirits producer in Sumy) – Horobyna (an ash berry)*).

The main mechanisms of lexico-semantic word formation in this sub-system of language are *onymization* (a transition of a common name into a proper name), *transonymization* (a transition of a proper name from one class of names to another) and *onymotransonymization* (combined use of variants of such word formation based on the onymization +

transonymization model). Onymotransonymization helps to form lexico-semantic innovations in terms of composites and word combinations.

It must be noted that the ever-increasing neo-naming needs have intensified derivational principles of lexico-semantic word formation in numerous groups of words, including common vocabulary, terminology, proper names, until recently passive in Ukrainian word formation: *Prokholoda* (coolness – a fund), *Pylypchuk i kompaniia* (Pylypchuk and Company – a limited liability company), *Reitynh* (rating – a limited liability company), *Algol* (a manufacturing company).

The naming system of ergonyms and pragmonyms as lexico-semantic innovations is characterized both by intellectualization and democratization. They are manifested in the widespread neo-naming of specialized terms, abstract names, informal names, commonly used and colloquial names, dialectisms: *Agjo* (a bank), *Baks* (a buck – a limited liability company).

Ergonyms and pragmonyms as lexico-semantic innovations are not the results of artificial “fabrication” but the deep selection of language material, which depends on the inner world of the name’s author due to cultural, historical, social, and psychological qualities.

Modern lexico-semantic innovations in the system of ergonyms and pragmonyms serve as aestheticized and expressive names that contrast sharply with vague and ideologically marked names of the Soviet period. They meet the requirements of aesthetics, melodiousness, brevity and are easy to remember and reproduce.

The neo-naming system of proper names is characterized by certain changes in naming units based on European standards. These standards imply the active use of anthroponyms (names and surnames of owners and founders of business structures), theonyms and mythonyms, positive names, colourful national names, names with digits and letters.

The range of motivational features of ergonyms (lexico-semantic innovations) depends on the specifics of the named object and the functions a particular type of proper names is designed to perform. Modern ergonyms are characterized by a great number of lexico-semantic innovations motivated by spatial features of the named object. The actualization of microtoponyms and choronyms as forming principles of lexico-semantic innovations proves the development of such naming units (*Mykhailivskyi* – a restaurant in *Mykhailivska St*; *Obolon* (a historical locality in Kyiv) – a joint-stock company).

The derivational naming system of ergonyms pays much attention to owner-related motivation since business structures are always owned by someone, in contrast to a series of similar products. This group of ergonyms as lexico-semantic innovations is represented by anthroponyms, such as names, surnames, and their combinations (*Volodymyr* – a joint venture; *Tkachenko, Sonin i K* – a commercial company). The use of owners' surnames as ergonyms serves as the resuscitation of a forgotten pre-revolutionary naming model, while the transformation of owners' names in ergonyms is a fundamentally new naming model.

Today, the naming system of the Ukrainian language actively uses ergonyms as lexico-semantic innovations motivated by the specifics of the object's activity, its functional purpose. Such naming units are based on appellatives, which directly or indirectly indicate the characteristics of the named object and are designed to perform informative and advertising functions (*Kompiutery* (computer) – a shop; *Komfort* (comfort) – a company; *Kapital* (Capital) – a bank). This model of ergonyms' motivation is quite decisive.

The growing number of ergonyms as lexico-semantic innovations motivated by some aesthetic features indicates an increase in the productivity of such motivation in the system of proper names. This group of lexico-semantic innovations is represented by positive names (*Dobrochyn* (charity) – a company), aesthetically relevant names (*Kalvariia* (Calvary) – a limited liability company), romantic names (*Bilyi paroplav* (a white steamer) – a publishing house), folklorisms (*Char-zillia* (an enchanted potion) – a cafe).

Interestingly, ergonyms which contain digits or letters are quite common (*Spilna sprava-99* (common business-99) – a shop. The actualization of ergonyms such as “*Sirius*”, “*Sirius-2*” (shops) is due to the ban on using homonymous names within one administrative division.

The naming system of ergonyms also involves lexico-semantic innovations motivated by several features: *Kharkiv-kontrakt* (*Kharkiv-contract*) – an advertising agency (spatial coordinates of the object + an indication of a field of its activity); *Lvivski Kruchenyky* (*pork or beef rolls with various stuffing made in Lviv*) – a café (spatial coordinates of the object + an indication of a type of its products). The strengthening position of complex-motivated ergonyms can be explained by the tendency of languages towards maximum motivation of denotation.

One can observe the growing number of lexico-semantic innovations with recessive motivation. They do not contain information about the features of the named object. They are often *artificial* words formed by a

mechanical combination of letters (mostly initials) and parts of words, which is the result of a tendency towards freedom in naming. They implement naming motives incomprehensible to the public.

Each group of ergonyms is characterized by certain naming features. Indeed, the names of banking institutions are not characterized by ownership-based motivation. This is due to the attempt to clearly define the specifics of a financial institution and its location to provide customers with important information, as well as the fact that objects of a reference area are not privately owned.

The naming of presonyms is characterized by certain intensification of intellectualization (*Alternatyva* (alternative), *Diapazon* (range), originality (*Kobza* (Ukrainian musical instrument similar to a guitar) and extensive use of foreign terminological elements of publishing in complex and compound presonyms (*Kolibri* (hummingbird)-*print*). It ensures their informativeness even if there are other elements with recessive motivation.

The specifics of the named object (a series of goods) determines a set of motivational features of pragmonyms as lexico-semantic innovations. A notable feature of the pragmonymic naming system is a significant number of lexico-semantic innovations motivated by spatial coordinates of the production plant: *Kozatskyi Val* (a natural monument) – a vodka brand; *Slavutych* (a town in Kyiv Oblast) – a beer brand. “Geographically” motivated pragmonyms are mostly formed with the help of toponyms, hydronyms and oronyms. Active use of local realia in terms of pragmonyms’ functions proves the expansion of the formative basis of this naming model.

The pragmonymic individualization of similar goods causes the lack of lexico-semantic innovations motivated by reference to the owner. One can compensate for the lack of such motivation with intensive use of historical anthroponyms and names of literary characters in the function of pragmonyms as lexico-semantic innovations: *Kit-Baiun* (a character from Russian folk tales) – a candy brand; *Kniaz Sviatoslav* (Prince Sviatoslav) – a vodka brand. The increase in the number of such names indicates further development of this naming model in the naming system of pragmonyms.

Also, there is a large group of pragmonyms as lexico-semantic innovations motivated by the features of products. Such names are represented by appellatives which directly or indirectly indicate the characteristics of the named object: *Vesilne* (bridal) – a wine brand; *Okovyta* (from Latin “*aqua vita*”) – a vodka brand.

The analysis of factual information highlights the priority use of pragmonyms motivated by certain aesthetical features. This motivational

model is represented by romantic names (*Kazkove siaivo (some fabulous light) – a candy brand*), humour-related names (*Veselyi monakh (a merry monk) – a beer brand*). The emergence of a great number of such pragmonyms is associated with aesthetic attitudes. Thus, one can assume this class of proper names performs a hypertrophied advertising function.

Besides, there is a separate category of pragmonyms motivated by two or three features of different thematic and semantic groups: *AVK Advokat krem-kokos (a chocolate brand) – a company name (AVK) + a brand name (Advokat – lawyer) + an indication of taste (frosting-coconut)*; *Veselka Vyshnia (a candy brand) – a brand name (Veselka – rainbow) + an indication of taste (Vyshnia – cherry)*; *Obolon Oksamytove (a beer brand) – a company name (Obolon) + an indication of a product's features (Oksamytove – velvety)*.

The modern naming sub-system of poreonyms is characterized by substitutes serving as a means of linguization of foreign realia, in particular automobile and household appliances. Active use of poreonyms (substitutes) is due to the optional translation of the name in the recipient language. The determining factor which underlies the choice of motivational features of poreonyms (substitutes) is an indirect characteristic of the object: *Dodge Viper – a high-speed car*, *Frogeye (frogling) – a small French female car*. The expansion of economic cooperation with other countries, as well as an insufficient development level of relevant industries in Ukraine, has caused the penetration and active functioning of substitutes.

Those lexico-semantic innovations motivated by the peculiarities of some realia predominate in the naming system of phytonyms: *Zolote lito (golden Summer) – a lily*; *Fioletovyi bokal (a purple glass) – a tulip*. The specifics of naming situations in this sub-system of proper names determines the maximum and minimum manifestation of subjective and addressable motives of the naming process, respectively.

The presence of common or similar characteristics of lexico-semantic innovations in the analyzed neo-naming sub-systems (ergonyms and pragmonyms) is caused by close and inseparable links between extralinguistic realia, that is fields of human activity and products of their activities being named. Products cannot exist without fields of activity, which enables such analogies to reflect the naming experience in the system of lexico-semantic innovations, which is natural. The facts of similarity are also significant and essential characteristics that should not be ignored.

Thus, lexico-semantic word formation is the most active and productive way of replenishing the fund of ergonyms and pragmonyms in

the Ukrainian language under the conditions of a transition economy. Including all layers of vocabulary in the scope of such a type of word formation can bring unlimited prospects of its functioning in the future.

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