



OLENA SNYTKO

Taras Shevchenko National University of Kyiv, Ukraine
Taraso Ševčenkos Kijevo nacionalinis universitetas, Ukraina

VAIZDINYS MĄSTYMO KODAVIMO IR SUVOKIMO PROCESUOSE

Image in Thought Encoding and Explication Processes

SUMMARY

The paper explores the image as a form of psychic reflection of reality in thought encoding, objectivation, and perception processes. The image is an element of the universal object code, the basis of thinking, and the underlying structure of language units. Psycholinguistic experiments prove that the semantics of language units can be reduced to a sensory image. In its actual being, the image correlative of the language sign can be compressed to a minimum, which definitely does not exclude its decompression. Apart from individual images, in the linguistic consciousness of a language community, there exist the so-called stereotypical images, serving as social standards in the cognitive process and as summarizing the empirical knowledge of language users. In the production and perception of texts, social images ensure the predictable impact on a person's consciousness and emotions.

SANTRAUKA

Straipsnyje analizuojamas vaizdinys kaip tikrovės psichinio atspindžio forma, mąstymo kodavimo, objektyvacijos ir suvokimo procesuose. Vaizdinys – tai universalus objekto kodo elementas, mąstymo pagrindas ir pagrindinė kalbos vienetų struktūra. Psicholingvistiniai eksperimentai įrodo, kad kalbos vienetų semantika gali būti redukuota į jutiminių vaizdinį. Savo esme kalbos ženklo vaizdinys gali būti suspaustas iki minimumo, kas tikrai nepašalina jo dekompresijos galimybių. Be atskirų vaizdinių, žmonių bendruomenės kalbinėje sąmonėje yra ir vadinamųjų stereotipinių vaizdinių. Šie vaizdiniai – tai socialiniai pažinimo proceso standartai, padedantys kaupti kalbos vartotojų empirines žinias. Kai kuriamas ar suvokiamas tekstas, socialiniai vaizdiniai užtikrina numatomą poveikį žmogaus sąmonei ir emocijoms.

RAKTAŽODŽIAI: vaizdinys, kodas, kalbos ženklas, vidinė nominatyvaus vieneto forma.

KEY WORDS: image, code, language sign, inner form of a nominative unit.

INTRODUCTION

Methodology solutions in contemporary linguistics are inescapably linked to ways and modes of transcoding thought into natural language. Despite the real significance of the discussed point, there is no generally accepted definition of mental activity processes. (Chernavskaya, Chernavskiy, Karp, Nikitin 2011: 5). One of the best-founded theories of the “language” of mental processes was the concept of the universal object code, the cornerstone of which was the recognition of the key and decisive role of the sensory image in mental activity. N. Zhinkin’s experimental research based on the method of central speech hindrances produced a novel theory, capable of revealing the nature of thinking while relying on the sensory image phenomenon (Zhinkin 1964: 35). This theory further evolved in the works of linguists (Gorelov 1977, 2003; Sedov 2007; Popova, Sternin 2001, 2007; Snitko 1990, 2001; Rozenfeld 2008 et al.), neurophysiologists (Bekhtereva, Bundzen, Gogolitsyn 1977), as well as representatives of related sciences such as psychology and defectology (Abeleva 1974; Meshcheryakov 1974; Sirotkin 1977 et al.). The conclusion that real thinking does not come down to operations with symbols and verbal structures, but involves images of objects and actions, presently seems most obvious.

The image as the basic form of reality reflection is a result of complex neurophysiological processes. It underlies the process of human thinking. The sensory image is a syncretic category, the primary source of which is a visual sense, which “traces shape, color, light, spatial relations, proportions. Gustation, olfaction, audition, and somatosensation are involved in image creation, but the image cannot be reduced to one of them” (Arutyunova 1988: 121–122). Exploration of the neurophysiological nature of the image allows viewing it as a chain of activated neurons (Chernavskaya, Chernavskiy, Karp, Nikitin 2011: 6).

The image does not exist irrespective of the object it reflects. Image creation is a complex process, which unfolds in time and is closely connected with the choice of object attributes, when some of the attributes become dominant, while others remain recessive. The image is central to apperceptive processes. Researchers believe that “with the system of representations of different modality, it is possible to trace not only phenomena perceived visually, but also relations between objects, stable, inner, regular connections between phenomena that are not directly perceivable visually” (Erakhtin 1986: 11–12).

IMAGE IN THINKING CODE

Scientists put forward a number of arguments to prove thinking processes are image-based (this idea was one of the central postulations in the psycho-

linguistic theory by A. Potebnia) (Potebnya 1993). Currently, works discussing “the language” of mental processes commonly promote the view that this “lan-

guage" deals with images, frames, the so-called inner words. According to N. Zhinkin, the hybrid character of the inner speech code is preconditioned by its mediating status between language and intelligence (Zhinkin 1964: 37–38). I. Gorelov claimed in the universal object code, there exists a special level formed by neurophysiological links between image elements and elements of the second signal system (Gorelov 1977: 170).

Summarizing the findings of contemporary researchers related to the "language and thought" issue, Yu. Karaulov stated that the image as a typical element of thinking code is a common category in all theories associated with the psycholinguistic studies of speech activity (Karaulov 1987: 205). At present, speech activity is considered as the unity of three entities: the language of brain (in its neurophysiological substrate), the language of thought (the so-called code of images and schemes), and the inner lexicon containing word engrams from the natural language vocabulary and forming a complex system of verbal networks (Kubryakova 1991: 94).

It is maintained that "the units of the universal object code can reveal themselves indirectly. Thus, if a person does not know the sense of some abstract notion, they try to help themselves by explaining it with descriptive gestures, hand movements. They are apparently trying to rely on the image unit of the universal object code" (Popova, Sternin 2001: 13). The relation between the image as an element of deep structures of consciousness and the language unit is examined by a new branch of linguistics,

the so-called linguistics of dreams (the branch of linguistics studying an altered state of consciousness). In this case, dream images are regarded as a kind of semiotic code "in relation to the language and in conformity with the elements of the picture of the world". G. Bersenev asserts that "the semiotic code of dreams" has something in common "with natural language, as the same cognitive mechanisms operate in them" (Bersenev 2011: 404–405), i.e. the "language" of images is seen as a thinking code.

Viewing mental processes as image-based allows interpreting the origin of words or other nominative units as a result of language objectivation of attributes that dominate in the individual image. The intention to give a name to a phenomenon is a key point due to which our mind while perceiving a new phenomenon places it within a personal system of experience, within the experiences already known to it (Uznadze 1966: 231–233). This placement is preconditioned, firstly, by which other phenomena the object of nomination is close to and, secondly, by which other phenomena it is contrasted with. Thus, a set of associations becomes a psychic image correlative of the nominative unit to be formed (for more details, see Snitko 1990: 24–26). The choice of suchlike attributes cannot be taken as absolutely random, as it is affected by the nominator's frame of mind.

Objectivation of attributes dominating in the image through language units (morphemes, lexemes), based on the rules of their combination, under the impact of ready-made patterns, is linked to the appearance of the inner form of nom-

inative units, which actually is the projection of associations chosen by the nominator on the means of language nomination. Discrete elements of representations traced in the inner form of nominative units are peculiarly fixed in the structure of image correlatives, performing the function of the common basis, on which, in cooperative activity of people, the further process of singling out, comparison, and generalization of attributes takes place, i.e. the process of forming concepts as criteria of mutual understanding.

In the actual being of a language sign, the representation designatum can be reduced to a minimum, which does not exclude the possibility of its explication. The development of psycholinguistic approaches to the semantics of a language sign results in interpreting the sensory image (“the genetically primary structure of the meaning”) as the deep structure of a language sign (Petrenko, Shmelev, Nistratov 1978: 26). Experimental research “proves reduction of the language of perception and verbal language to some image correlative” (Zailevskaya 1982: 50). As shown by V. Kolodkina’s findings (for the procedure and details of the experiment, see Kolodkina 1986: 96), the highest index of imagery (varying from 6.00 to 6.88 points), connected with the capability of a word to summon up mental images easily, is typical of words describing:

- 1) objects one may come across in nature (река (Eng. river), яблоко (Eng. apple), грязь (Eng. dirt);
- 2) objects created by man (книга (Eng. book), хлеб (Eng. bread), ножницы (Eng. scissors);

- 3) names of animals (кошка (Eng. cat), собака (Eng. dog), птица (Eng. bird);
- 4) some names of people (бабушка (Eng. old woman), врач (Eng. doctor), девушка (Eng. girl), друг (Eng. friend).

With abstract nouns, the index of imagery may sometimes vary extensively. Cf. nouns *одержимость* (Eng. obsession) – 2.94; *враждебность* (Eng. hostility) – 3.99, *удивление* (Eng. astonishment) – 4.90, *радость* (Eng. joy) – 5.65 (Kolodkina 1986: 96).

According to the results of the independent psycholinguistic experiment, conducted with the students of the Taras Shevchenko National University of Kyiv, despite the abstract semantics of the words, Russian native speakers relatively easily (with only few sporadic refusals to respond) concretized image correlatives that come with the perception of such Russian nouns as *одержимость*, *враждебность*, *удивление*, *радость*. The mental images described by the respondents included: *одержимость* – “blood-shot eyes, roulette, cards, shaky hands, aggressiveness”; “crazy eyes, rapid breathing, nervous excitement”, “a person desperately flouncing around a dark room”, “a person with crazy, unhealthy eyes, hot-tempered, doing inexplicable deeds”, “a woman believed to be a witch is being burnt at the stake by Inquisition”; *враждебность* – “two people standing opposite each other, tense postures, cold eyes, alienation”, “barbed, cold, steely look of the enemy”, *удивление* – “raised eyebrows, wide open eyes, a gaping mouth”, “a person (or group of people) in a state of mild shock”, “big eyes, an open mouth, and a moment’s silence”;

радость – “a smile, happy tears, hugs and kisses”, “a smile and a clap of hands”, “a smiling child”, “laughter, work is done, evening, going home, jokes, smiles, pies”, “a smile, daisies, clouds in the bright blue, a present, New Year”.

The results of the experiment prove that classifying names into concrete and abstract is not always supported by a high or low index of imagery.

The correlative image of the word is often a certain “picture”, a set of inter-related images. It is especially characteristic of people who like to visualize, who are imagining things. Cf. the results of the experiment on interpreting the semantics of derivatives. Definitions given by one of the respondents explicate such a complex correlative image: *неутверждение* (Eng. *reapproval*) – “comes from a bureaucratic turn of phrase; meaning the necessity “to go through seven circles of hell” to get the document that has already been officially agreed to accepted again; meanwhile, one has to “sweet-talk” those who have already signed the old version of the document into doing it again”; *проступь* (Eng.

tread) – “a word from the criminal jargon, related to such expressions as “*проступила смывтая подпись*” (Eng. *a washed off writing reappears*), “*проступил заметный след*” (Eng. *a removed trace reappears*); “basically the word means ‘self-revelation of some object, revelation of some hidden features’”.

Different ways of identifying image in the structure of the word meaning have been discussed in the work by M. Rozenfeld (Rozenfeld 2008).

The capability to decode images in the inner form of nominative units is retained even with patients suffering from pathological speech disorders. For instance, aphasia cases demonstrate literal comprehension of phraseological units, based on the decoding of their inner form: “... a holistic structure, not coming down to the meanings of its constituents, in the patient’s mind, is decomposed primarily into meanings of the constituents and decoded into an image system (Gorelov 1977: 170). The described facts allow regarding the image as the deep structure of nominative units.

IMAGE AS THE DEEP STRUCTURE OF THE LANGUAGE SIGN

Viewing the image as the deep structure of the language sign logically results from the development of the conception that mental processes are image-based. In contemporary cognitology, the image as an element of the universal object code, the thought code, is understood as the core of a concept. The sensory image encodes a concept, forming a unit of the universal object code. In the process of

thinking, a person operates with images “carrying” with them some rational knowledge (Popova, Sternin 2007: 40–41). This is the psycholinguistic aspect in the issue of concepts and concept sphere.

Language units are a means of access to the information database of a person, which in its deep structures does without the language and retains encoded information in images, schemes, abstract

models. The main information registered in universal object code signs is stored in deep cognitive layers of consciousness in the right hemisphere of the brain (Sedov 2007: 100–101).

Unlike the representation correlating with nominative units and reduced in the language consciousness to a minimum, the image, which is transposed by the inner form of expressively marked units, makes the usual content of the language sign, i.e. it is sure to arise in the consciousness of language speakers when they use an emotively evaluative unit (e.g., *пламя национальной*

розни (Eng. *a flame of national hatred*), *экологическая бездна* (Eng. *an ecological abyss*), *черный вихрь террора* (Eng. *a black whirlwind of terror*). This maximally reduced form allows expressing information on the speaker's attitude to the designatum while creating an impact on the listener.

Formation of such expressively marked units is connected with actualization of personal knowledge stored in the form of sensory representation – image stereotypes, which are not only used in mental processes, but also have certain meaning of their own.

STEREOTYPE IMAGES AS A FORM OF KNOWLEDGE STORAGE

The image is a social standard of good and bad, a dynamic phenomenon, accumulating all the associations relating to a certain historical stage of continuum development. The image content can change, being enriched with new connotations layering on the already existing ones. Thus, the Christian interpretation of Light and Darkness is layered on the Old Slavic ones, motivating the implications in the consciousness of language users now. “The life of the inner form is to be taken as development” (Shpet 1923: 118); this idea by G. Shpet is relevant for the inner forms of emotively evaluative units.

The community consciousness retains the so-called collective images that are transferred from generation to generation and are independent of an individual's being. These images as social standards accumulate empirical knowledge of a people. Cf. the image stereotype of

a bee as a social standard of industriousness; spatial images of time (*time passes, goes by, flows, flies*). Philosophers claim our collective consciousness, on the one hand, reflects all our beliefs and ideas we hold by tradition and, on the other hand, individual consciousness of a person operates with ideas and images based on the person's own experience (Moskovich 1998: 129–130).

Psycholinguistic experiments of different types reveal some typical features of image stereotypes correlating with verbal units.

The Apocalypse, symbolizing the end to all living things on Earth, is seen as an image of a global catastrophe, causing the loss not only of the humankind's past and present, but also the future, the descendants. Typical image representations of the Apocalypse in human consciousness are linked to actualizing the semantics of a respective word (the respon-

dents are master students of the Institute of Philology, Taras Shevchenko National University of Kyiv): “a catastrophe, collapsing buildings; an earthquake, cracks in the ground; the ground opens up and swallows everything; it’s dark, the sky is low and leaden; lots of blood red color around”; “it conjures up pictures of war, a raging fire, and thick smoke covering everything; the end of the world”; “I see space; an explosion occurs; everything disappears; an empty void”; “a huge gaping crater on scorched earth; there is nothing around; everything is grey, the sky is grey, no sun, people, vegetation; everything is dead, the world is dead” (for more details, see Snytko 2012).

It is notable that the representations given by the respondents are not only related to the archetypes of fire, darkness, death, the lower, etc., but are also culturally marked and similar to the images shown by John the Evangelist in the final book of the New Testament. Interestingly, the majority of respondents had never read the respective precedent text, although the interpretations and written descriptions closely follow the text of the Book of Revelations.

It is this way of viewing the image as the basic mental structure, which explains the mechanism of the impact the

so-called therapeutic and pathogenic texts have on a person and their psychoemotional sphere. The perception of therapeutic and pathogenic texts is connected with producing corresponding images by the recipient’s brain; the images influence the person’s body, causing stabilization or destabilization of mind and emotions. Therapeutic texts based on the phenomenon of therapeutic metaphors are messages that give information in terms belonging to various branches of human knowledge, i.e. in a symbolic form. If therapeutic texts (fairytales, fiction, journalistic texts, etc.) due to their image structure exert a positive influence on a person (cf. the phenomenon of a fairy tale therapy), pathogenic texts destruct, destabilize the mind and the emotional state of a person. E.g., the destructive impact of the pathogenic text “Конец света продлится две недели” (“*The Apocalypse Will Last for Two Weeks*”), published online (<https://info.sibnet.ru/article/339054/>) is created by actualization of Apocalypse image stereotypes, existing in a person’s mind. The features and content of these stereotypes have been demonstrated in the described psycholinguistic experiment exploring the image constituent of the core semantics of the word.

CONCLUSIONS

The image is a form of the subjective reflection of reality, a mental picture of consciousness appearing as a result of reflecting a fragment of the real world. This is a stabilized, minimized invariant representation of the object or situation,

which can be stored in a reduced form. The image is an element of the universal object code seen as the basis of thought and interpreted as a deep structure of language units. The image is retained in deep layers of consciousness and links

the thought code with the code of language units.

Individual and stereotype (social) representations are two of the image types. The individual image is the most important form of reflection of reality by the human consciousness created on the basis of a variety of forms of sensory representation, with visual sense underlying the image. The individual image presupposes recession or dominance of some features of the object or phenomenon. The community holds stereotype images trans-

ferred from generation to generation and independent of the individual's experience. These images serve as social standards cumulating empirical knowledge of a people through the prism of which the world is perceived. Stereotype (or social) images have significant axiological capacity. Use of social images in thought encoding and explication processes, as well as their actualization in the universal object code of the recipient perceiving the text ensure a predictable impact on the person's consciousness and emotions.

References

- Arutyunova N. D. 1988. Obraz (opyt kontseptualnogo analiza) [Image (experience of conceptual analysis)]. *Logicheskij analiz yazyka: Referentsiya i problemy tekstoobrazovaniya*. Moskva: Nauka: 117–129.
- Abeleva I. Yu. 1974. Psikhologiya zaikaniya u vzroslykh na raznykh fazakh protsessa rechevoy kommunikatsii [The psychology of stuttering in adults at different phases of the process of verbal communication]. *Voprosy psikhologii*. №4: 144–150.
- Beresnev G. I. 2011. Lingvistika snovideniy [Linguistics of dreams]. *Lingvofuturizm. Vzgljad yazyka v budushcheye*. Moskva: Gendrik: 403–413.
- Bekhtereva N. P., Bundzen P. V., Gogolitsyn Yu. L. 1977. Mozgovyye kody psikhicheskoy deyatelnosti [Brain codes of mental activity]. Moskva; Leningrad: Nauka.
- Chernavskaya O. D., Chernavskiy D. S., Karp V. P., Nikitin A. P. 2011. O roli ponyatiy "obraz" i "simvol" v modelirovanii protsessov myshleniya sredstvami neyrokompyutinga [The role of the concepts "image" and "symbol" in the modeling of thought processes by neurocomputing means]. *Izvestiya vuzov. Prikladnaya i nelineynaya dinamika*. T. 19. №6: 5–20.
- Gorelov I. N. 1977. Problema "glubinnnykh" i "poverkhnostnykh" struktur v svyazi s dannyimi psikholingvistiki i neyrofiziologii [The problem of "deep" and "surface" structures in connection with the data of psycholinguistics and neurophysiology]. *Izvestiya AN SSSR*. T. 36. №2: 165–176.
- Gorelov I. N. 2003. *Izbrannyye trudy po psikholingvistike* [Selected Works on Psycholinguistics]. Moskva: Labirint.
- Erakhtin A. V. 1986. Problema sootnosheniya kategoriy "myshleniye" i "soznaniye" v filosofii [The problem of the correlation of the categories "thinking" and "consciousness" in philosophy]. *Soznaniye i dialektika poznaniya*. Ivanovo: 9–37.
- Karaulov Yu. N. 1987. *Russkiy yazyk i yazykovaya lichnost* [Russian language and language personality]. Moskva: Nauka
- Kolodkina V. N. 1986. O spetsifike psikholingvisticheskoy traktovki parametrov konkretnosti, obraznosti i emotsionalnosti znacheniya sushchestvitelnykh [On the specifics of the psycholinguistic interpretation of the parameters of concreteness, imagery, and emotionality of the meaning of nouns]. *Psikholingvisticheskiye problemy semantiki i ponimaniya teksta*. Kalinin: Kalininskiy gos. un-t: 70–81.
- Kubryakova E. S. 1991. Osobennosti rechevoy deyatelnosti i problemy vnutrennego leksikona [Features of speech activity and problems of the internal vocabulary]. *Chelovecheskiy faktor v yazyke. Yazyk i porozhdeniye rechi*. Moskva: Nauka: 82–138.
- Meshcheryakov A. I. 1974. *Slepoglukhonemyye deti. Razvitiye psikhiki v protsesse formirovaniya povedeniya* [Deaf-mute children. The development

- of the psyche in the process of formation of behavior]. Moskva: Pedagogika.
- Moskovichi S. 1998. *Mashina. tvoryashchaya bogov* [The machine that creates the gods]. Moskva: Tsentr psikhologii i psikhoterapii.
- Petrenko V. F. Shmelev A. G., Nistratov A. A. 1978. Metod klassifikatsii kak eksperimentalnyy podkhod k semantike izobrazitel'nogo iskusstva [Classification method as an experimental approach to the semantics of fine art]. *Vestnik Moskovskogo universiteta*. №4: 25–37.
- Popova Z. D., Sternin I. A. 2001. *Ocherki po kognitivnoy lingvistike* [Essays on Cognitive Linguistics]. Voronezh: Istoki.
- Popova Z. D., Sternin I. A. 2007. *Kognitivnaya lingvistika* [Cognitive linguistics]. Moskva: AST: Vostok-Zapad.
- Potebnya A. A. 1993. *Mysl i yazyk* [Thought and language]. Kiev: Sinto. 1993.
- Rozenfeld M. Ya. 2008. *Pertseptivnyy obraz v strukture znacheniya slova* [Perceptual image in the structure of the word meaning]: avtoref. dis. ... kand. filol. nauk. Voronezh.
- Sedov K. F. 2007. *Neyropsikholingvistika* [Neuropsycholinguistics]. Moskva: Labirint.
- Sirotkin S. A. 1977. Chem luchshe myshleniyu vooruzhatsya – zhestom ili slovom? [Is it better to arm yourself with thinking – gesture or word?]. *Voprosy filosofii*. № 6: 91–101.
- Snitko E. S. 1992. Kulturologicheskiy analiz obrazov-indikatorov otsenochnykh smyslov [Culturological analysis of image indicators of evaluative meanings]. *Yazyk i kultura: materialy I mezhdunar. konfer.* Kiev: 61–62.
- Snitko E. S. 1990. *Vnutrennyaya forma nominativnykh edinits* [The internal form of nominative units]. Lvov: Svit.
- Snitko E. S. 2001. Obraz yak hlybynna struktura movnykh odynyts [Image as a deep structure of linguistic units]. *Movni i kontseptualni kartyny svitu*. №6. Kn. 2: 216–221.
- Snitko O. S. 2012. Obrazni stereotypy nehatyvnoi otsinky v konteksti problemy “etnos i mova” [Image stereotypes of negative evaluation in the context of the “ethnos and language” problem]. *Movni i kontseptualni kartyny svitu*. Vyp. 39: 314–321.
- Shpet G. 1927. *Vnutrennyaya forma slova: etyudy i variatsii na temu Gumboldta* [The inner word form: sketches and variations on Humboldt's theme]. Moskva: GAKhN.
- Uznadze D. N. 1966. *Psikhologicheskiye issledovaniya* [Psychological research]. Moskva: Nauka.
- Zhinkin N. I. 1964. O kodovykh perekhodakh vo vnutrenney rechi [About code transitions in inner speech]. *Voprosy yazykoznaniya*. №6: 26–38.
- Zalevskaya A. A. 1982. *Psikholingvisticheskiye problemy semantiki slova* [Psycholinguistic problems of the semantics of the word]. Kalinin: Izd-vo Kalininskogo gos. un-ta.