







SPEECH COMMUNICATION IN TERMS OF COGNITION

COMUNICACIÓN DEL HABLA EN TÉRMINOS DE COGNICIÓN

Svetlana A. Pesina^{1*}; Svetlana V. Kiseleva²; Svetlana V. Rudakova³; Svetlana A. Vinogradova⁴; Nella A. Trofimova⁵; Dmitry N. Novikov⁶

1. Nosov Magnitogorsk State Technical University, Magnitogorsk, Russia. spesina@bk.ru
2. Saint Petersburg State University of Economics, Russia. svkiseljeva@bk.ru
3. Nosov Magnitogorsk State Technical University, Magnitogorsk, Russia. rudakovamasu@mail.ru
4. Murmansk Arctic State University, Russia. svetvin@mail.ru
5. St. Petersburg State University, St. Petersburg, Russia. nelart@mail.ru
6. MGIMO-University, Moscow, Russia. dnnovikoff@mail.ru

*corresponding author: Svetlana A. Pesina, email: spesina@bk.ru

ABSTRACT

The paper presents various approaches to defining the essence of a sign in cognitive science and philosophy of language. It offers presentations of critical review of research publications on sign processes. Based on extensive theoretical work in a cognitive approach to communication process, the hypothesis that each speaker of a language acts exclusively within the framework of their cognitive area is supported in the article. Given the results, meaning as a fact of consciousness is closed in it and during the “translation” of meanings they are not transmitted: signs cannot be considered to be carriers of meanings in the sense that meanings making up a part of their material body are contained in them. The material components of signs stimulate the appearance of identical or similar meanings, actuating analogous conceptual spheres in communicating minds.

Keywords: language sign; communication; cognitive linguistics; biocognitive science; meaning; concept.

Revista de Investigaciones Universidad del Quindío,
34(S3), 82-89; 2022.

ISSN: 1794-631X e-ISSN: 2500-5782

Esta obra está bajo una licencia Creative Commons -Atribución-NoComercial-SinDerivadas 4.0 Internacional.



RESUMEN

El artículo presenta varios enfoques para definir la esencia de un signo en la ciencia cognitiva y la filosofía del lenguaje. Ofrece presentaciones de revisión crítica de publicaciones de investigación sobre procesos de signos. Basado en un extenso trabajo teórico en un enfoque cognitivo del proceso de comunicación, el artículo sustenta la hipótesis de que cada hablante de una lengua actúa exclusivamente en el marco de su área cognitiva. Dados los resultados, el sentido como hecho de la conciencia se encierra en él y durante la “traducción” de los sentidos no se transmiten: los signos no pueden ser considerados como portadores de sentidos en el sentido de que los sentidos forman parte de su cuerpo material están contenidos en ellos. Los componentes materiales de los signos estimulan la aparición de significados idénticos o similares, accionando esferas conceptuales análogas en las mentes comunicantes.

Palabras clave: lenguaje de señas; comunicación; lingüística cognitiva; ciencia biocognitiva; significado; concepto.

INTRODUCTION

Today it is impossible to talk about the cognitive nature of language and speech, about communication processes without taking their sign character into account. It is no coincidence that in Russian the lexemes *знание* (knowledge) and *сознание* (consciousness) have a common root with the words *знак* (sign), *значение* (meaning). The “person – sign” relationship has an anthropocentric nature, for signs per se do not exist, like objects, they are a “human” product designed to satisfy certain communicative needs and perform orienting functions (Luz et al., 2021).

In cognitive linguistics, like the philosophy of language, a person interacting with linguistic signs is treated as an author of events. In this regard, it should be noted that philosophy was the philosophy of “non-communicating consciousness” up to the “linguistic turn” (Savrievna, 2022).

The linguistic turn means an interpretation of reality that interprets it as a communicative reality that can only be cognized from the perspective of participation in communication. Without participating in a communication game (L. Wittgenstein), without being in the space of life-world (J. Habermas), it is impossible to find out their internal rules and norms, Colston (2021) pushed to accept a premise, being outlined but explicated in the theory of signs, that the formation and understanding of language could not be a product of the activity of one consciousness. At the same time, it was postulated that the space of language was the basic reality for a person.

Language as a new universal of philosophical reflection of reality, as a new metaphor of being allowed analyst philosophers to move away from the philosophies of consciousness and interpret the world in a new way as a linguistic given. Linguistics began teaching anthropologists, sociologists and historians to how society functions (Pika et al., 2018).

In order to understand a sign, it is necessary to interpret it, that is, to replace the original sign with another sign (or other signs). The correct interpretation is attributable to the surrounding context, as well as the fact that the subject must have a sufficient amount of culturally related background knowledge, including both social and personal-individual experience. At the same time, the term

“sociocode” has been introduced. It is understood as every socially significant act of an individual, which is considered as a single implementation of a program created by predecessors and inherited by individuals in the learning process. So, behind the acts of communication there is a text as a result of previous acts of communication, and in general, sociality arises through the symbolic design of typified situations of collective action with a fixed number of participants and with an individual distribution of subprograms as a part of a holistic program of collective action (Pesina et al., 2021; Prihodko & Galaidin, 2018).

In our understanding, a sign is a heuristic cognitive-sensory state of an organism that arises from the interaction of the mental apparatus and the nervous system as a reaction to a signal received from the environment or as an internally motivated stimulus of its own organism at a certain point in time.

METHODS

Semiotic analysis involves the study of texts as sign systems, identifying the features of the lexical means through which communication takes place. The main research methods in the field of opposition of the “language-speech” dichotomy are such methods as linguistic observation, descriptive method, comparison as a universal linguistic instrument.

Modeling of speech mental and sign-based processes is carried out on the basis of introspection as an intuitive reproduction of scenarios of a sender and a recipient of the message. Semantic analysis is carried out on the basis of intuitive reproduction of scenarios of the speech mental activity of the intended communicants.

Hypothesis

Each speaker acts exclusively within the framework of their cognitive domain. In this case, the word as a sign-symbol is an act and a unit of consciousness and does not transcend it, that is, it does not go beyond the limits of consciousness. Hence, the function of language is to orient the orientated person in their cognitive area, not paying attention to the cognitive area of the orienting person, since it becomes obvious that no information is conveyed through language.

It should be pointed out at this juncture that “incorporation” of an organism into environment can be understood to have rather broad implications – as “incorporation” of an organism into the system of knowledge. Another argument for reproduction of information rather than its “transmission” is the fact that if information were transmitted, then the learning process could be reduced to automatic memorization of knowledge, which, in turn, would reduce the mental areas “responsible” for the use of language and speech production.

Information (in-formation) should be understood as the “incorporation” of an organism into environment, as a result of which it becomes informed (in-formed). Such information cannot be regarded as an ephemeral meaning or bits of information waiting for a living system to use them. Language does not convey information, and its functional role is to create a cooperative area of interaction between speakers by developing a common frame of reference.

However, not all scholars take into account such seemingly obvious facts. So, often the description of a sign as a fusion of the acoustic image of a word and the idea of a certain phenomenon is accompanied

by the following surreal picture: the signifier “envelops” the signified as the holder of all its properties.

RESULTS AND DISCUSSION

Despite the fact that many scholars, starting with F. de Saussure, wrote about the anthropocentric nature of sign language processes, nevertheless, in later works, the description of various schemes of communicative processes, according to the authors' assumptions, takes place as if without participation of human consciousness. Meanwhile, a verbal sign emerges, lives and dies in the silence of individual consciousness and outside the direct, material connection with the forms of words, not to mention the object that it replaces. Its lifetime is short – it flares at that brief moment when thoughts of the subject and the form of a chosen word intersect and merge in the focus of active consciousness (Kravchenko, 2022).

Unfortunately, in works on the study of speech mental processes, these theses do not always turn out to be key. Thus, Kravchenko (2022) monograph outlines the following key aspects of the functioning of sign system:

1. production of a message by the sender;
2. conveyance of a message over communication channels;
3. reception and decryption of a message in which the receiver participates;
4. the recipient's response to a received message.

In this case, “impulses <...> going through the communication channel become real carriers of information and form a message only if the recipient is in a state of readiness to reflect and interpret that part of the internal state of the source embodied in the transmitted set of impulses” (Pesina et al., 2021).

What the “state of readiness” of the recipient means is not agreed, but judging from the context, a sign appears to be more “alive” than the very interpreter, for the sign “has its own impulses” which are “formed” and “transmitted”. The recipient has no choice but to accept the “state of readiness” and carry out the “reflection and interpretation” of information formed somewhere outside and transported specially for them.

Hence, a reasonable conclusion is, “... the sign acquires its meaning from the extra-linguistic world” (Kravchenko, (2020). The fact that the formation and interpretation of a sign like the language itself is a phenomenon that belongs to human consciousness remains completely neglected. This model of functioning of a sign suggests its fully fledged self-sufficiency and autonomy from the carrier: the message simply “flows” along the “communication channel” laid by the very sign.

According to the ill-conceived thesis on the dialectical unity of the content and form of a sign, material form often acts as a kind of container of meaning, material means of transporting it from point A to point B. Cf., “meaning is a set of data (information) correlating with these objects and phenomena of extra-linguistic reality, which is transmitted through the sound shell of the word” (Luz et al., 2021).

The works by classical linguists often present a linguistic sign as a self-sufficient entity: the material linguistic shell is a sound shell insofar as it is filled with semantic content; without it, it is no longer a phenomenon of language.

And at present, researchers of speech processes explain the lack of understanding between the participants in communication not by the peculiarities of perceiving consciousness, but by some mysterious “semiotic noise” that prevents mutual understanding. Linguists also suggest a certain noise immunity of information (“noise stability” of a code and a channel, as they say in communication theory); noise immunity is provided by redundancy of information coding. Information redundancy is a common thing, insurance against misunderstanding of the conveyed information in the process of communication (Gensini, 2020).

It is known that the users’ knowledge of the language is rather extraneous than minimal and maximally generalized. The language is replete with examples of the use of a whole series of synonyms to express the same concept, and although we are of the opinion that there are no absolute synonyms, many of the known pairs are interchangeable within a fairly wide range (for example: Venus, Morning Star; automobile, car; triangle, three-sided flat geometric figure; demon, evil spirit, etc.).

The terms “semiotic noise”, “information channel”, etc., if they are not used metaphorically, they undoubtedly require to be explained. Their obvious features, such as autonomy from a person, spontaneity, are open to scrutiny. It is important to clarify what is the nature of such channels, their physical or chemical parameters.

Criticizing such views, Collins and Jisum (2019) comments on the use, for example, of such a term as “information channel”: there is no “transmitted information” in communication since communication occurs whenever there is a coordination of behavior in the area of structural conjugation.

According to the metaphor of communication channel, communication is something generated at a certain point. Then it is propagated through communication channel and goes to the receiver at its other end. This metaphor is fundamentally wrong, because it presupposes the existence of a unity, not defined structurally. However, it is clear that “even in everyday life, the situation with communication is different: everyone says what he/she says, or hears what he/she hears, in accordance with one’s own structural determination”.

In the process of vocal communication, we transmit only sound waves, and the acoustic image merges with the concept only in the consciousness of a person. Foreign cognitivists write about this, “I can ascribe any predicate to any object if and only if any other individual who could enter into a dialogue with me would also ascribe the same predicate to the same object (Kravchenko, 2022).

Often, the description of a sign as a fusion of the acoustic image of a word and an idea of a certain phenomenon is accompanied by the following description: the signifier “envelops” the signified as the holder of its features.

Some authors went even further in the field of studying the text, attributing to the text properties that they borrowed from its creator and user – a person. At the same time, text is often understood as any two-sided linguistic formation that has meaning and has the properties of spontaneity, consistency and synergy, functioning as a self-developing and self-organizing system; moreover, self-movement of the text as an energetic being – its inner life – leads through a flickering play of meanings to a point-like energy pulsation of its essence, which is realized in the aggregate as the text meaning.

Such examples are not uncommon in linguistic literature, “According to the objectivist approach in

hermeneutics, the text should have a meaning, regardless of the act of interpretation (Sardone et al., 2019). “Of the changes that a thought formed and expressed with the help of language undergoes, the fact that, having been expressed outside, it ceases to be the property of its creator, but becomes a common property, begins *to live an independent life*. This circumstance raises the possibility of capitalization of human thought and its history” (Clopper et al., 2018).

It should seem to go back and quote W. Humboldt who wrote that language process cannot be compared with a simple transfer of material. In the process of communication, the listener, just like the speaker, must recreate it by means of their inner strength, and everything that they perceive is reduced only to a stimulus that causes identical phenomena (Prihodko & Galaidin, 2018).

The outstanding philosopher and linguist correctly pointed out that “... signs are the same links in the chain of sensory experience of people and in the internal mechanism of the formation of concepts; when they are named, the same chord of a spiritual instrument is touched, as a result of which corresponding, but not the same, concepts make each person respond” (Pika et al., 2018). And, “In a single process of linguistic comprehension of the world, language plays the part of a tuning fork, affecting ideas and concepts in the linguistic consciousness of participants in communication, due to which the corresponding but not identical meanings “flash” in the minds” (Luz et al., 2021).

By revealing something, we only “excite” similar thoughts in a person. In the process of communication, the speaker takes convincing, hoping that their words are perceived by all listeners in the same way. However, in real life, each recipient of a specific message tries to combine it with the context of their own subjective reality.

Conspicuous is the fact that in the works cited above descriptions with the use of metaphors are often used, while obeying the routine of everyday consciousness and the corresponding social stereotypes that have become “scientific”, the authors no longer notice how they transcend the scope of ontology and touch the realm of inappropriate but convenient and familiar explanations.

Considerations on a linguistic sign as a container of information and on communication as a process of its conveyance are literally refuted in the works by Kravchenko, (2020) who speaks of the opposition of the addresser and the addressee, thereby distinguishing between the “linguistics of the speaker” and the “linguistics of the listener” and coding and de-coding processes.

The scholar recognizes that the linguistic reality that opens up to the researcher who stands in the position of the speaker is in many ways unlike the reality that opens up to the listener. For example, “for the speaker there is no problem of homonymy – he/she notices it only if he/she is able to mentally put himself /herself in the place of the listener, take into account the difficulties of decoding and to some extent reduce them” . The confusion of two points of view (the addresser and the addressee), he calls “illegal compromise”. The form of the sign is not a container of content that exists only in the mind of a person.

Phenomenology also rejects the penetration of one consciousness into another: no transcendental consciousness has direct contact with any other; each of them is completely “closed” per se. The transcendental ego is structured in exactly the same way as the Leibniz monads. In Monadology G. Leibniz writes, “Monads do not have windows at all through which something could enter there or go out from there” (Pesina et al., 2021).

Modern phenomenologists also write about the same, “I cannot, as they say, “read other people’s thoughts”. I cannot penetrate “inside” someone else’s consciousness, I cannot feel with the help of the sensory organs of the Other, I cannot think with the help of his/her mind, I cannot directly use his/her memory, his/her imagination. What the Other feels and thinks about, I can only know indirectly. I can judge what is happening “inside” the consciousness of the Other only when all that’s happening has any “external” manifestations”(Gensini, 2020).

A sign, considered as it is without a person signifying it, does not contain any internal energy, it cannot organize itself structurally. Words “without a person who signifies them” presuppose that the material forms of words and the texts that consist of them are dead, like the paper on which they are put, and their meanings do not “emerge” in the texts due to some of their properties and “flowing energies” and then somehow penetrate into the consciousness of the linguistic personality, and “are created by man”. They arise in the consciousness of a linguistic personality in the process of creating signs and decoding them. The understanding of a sign is not dictated by the sign itself and does not follow from it as a consequence that derives from a cause. Cognition is a sphere isolated in itself, and each of us lives our inner life as a kind of ghostly Robinson Crusoe. Meaning is not generated by signs, but is only expressed by them and conveyed in culture from one subject to another.

The mechanism, called “consensual” or “congenial”, is objectively due to the fact that, “strictly speaking [in the course of communication – S. P.], no thought is communicated. The very listener creates information, reducing uncertainty through interactions in their own cognitive area (Luz et al., 2021). The speaker believes that “as if his/her listener is identical to him/her, which means that the cognitive area of the latter is identical to his/her own cognitive area (which never happens), and is sincerely surprised when this or that “misunderstanding” arises.” It seems that if meaning as a cognitive internal form could be transmitted, perhaps science would be infallible.

CONCLUSION

So, the speaker literally has no physical capabilities to convey by language means the content associated with them, that is, the meaning that they combine in their consciousness with a given form. Important for this approach is the position that meanings of words do not arise, but are created by an individual in the process of communication – the main function of language used as the most important means of adapting an individual to the reality in which they exist. This also applies to those situations when what was said actualizes the corresponding clichés in the addressee since at this moment the consciousness is actively working, using the necessary mechanisms and resources.

Signs are an allusion to information available or suspected of being available to the communicant, hints urging other persons to draw some conclusions that provide understanding. The process of coming to such conclusions is called interpretation. At the same time, meaning as a unity of images of form and content is created in the consciousness of the speaker, and then the listener. This unity is formed by the speaker in accordance with the intention of an utterance.

Since the content is ideal and does not transcend consciousness, the intended meaning does not enter the objective world in the form of finished knowledge “attached” to a material form. The form is perceived by the listener and is connected in their minds, like in the sender of the message, with an invariant of its content. Then, on this basis, the listener outputs an actual meaning in accordance with the speech context built by the sender of the message.

REFERENCES

- Clopper, C. G., Turnbull, R., Cangemi, F., Clayards, M., Niebuhr, O., Schuppler, B., & Zellers, M. (2018). Exploring variation in phonetic reduction: Linguistic, social, and cognitive factors. *Rethinking reduction*, 25-72.
- Collins, L., & Jisum, C. (2019). The role of linguistics studies on the political debate. *Linguistics and Culture Review*, 3(1), 48-59.
- Colston, H. L. (2021). Cognitive Linguistics and Figurative Language. In *The Routledge Handbook of Cognitive Linguistics* (pp. 408-420). Routledge.
- Gensini, S. (2020). Aspects of the ongoing debate on animal communication.(Zoo) semiotics and cognitive ethology. In *The Extended Theory of Cognitive Creativity* (pp. 199-216). Springer, Cham.
- Kravchenko, A. (2022). Review of Koshelev (2020): On the Genesis of Thought and Language: The Emergence of Concepts and Propositions. The Nature and Structure of Human Category. On the Impact of Culture on Thought and Language. *Cognitive Linguistic Studies*, 9(1), 158-164.
- Kravchenko, A. V. (2020). Linguistic semiosis and human cognition. *Constructivist Foundations*, 15(3), 285-287.
- Luz, S., Haider, F., de la Fuente, S., Fromm, D., & MacWhinney, B. (2021). Detecting cognitive decline using speech only: The ADReSSo Challenge. *arXiv preprint arXiv:2104.09356*.
- Pesina, S. A., Antropova, L. I., Yusupova, L. G., Zalavina, T. Y., Pustovoitova, O. V., & Terenteva, N. G. (2021). Research of communication as a sign process at the semantic and biocognitive levels. Review of judicial practice. *Universidad y sociedad*, 13(6), 83-88.
- Pika, S., Wilkinson, R., Kendrick, K. H., & Vernes, S. C. (2018). Taking turns: bridging the gap between human and animal communication. *Proceedings of the Royal Society B*, 285(1880), 20180598.
- Prihodko, G., & Galaidin, A. (2018). Prospects of cognitive and ecological linguistics. *Scientific Journal of Polonia University*, 29(4), 121-127.
- Sardone, R., Battista, P., Panza, F., Lozupone, M., Griseta, C., Castellana, F., ... & Quaranta, N. (2019). The age-related central auditory processing disorder: silent impairment of the cognitive ear. *Frontiers in neuroscience*, 619.
- Savrievna, Z. N. (2022). The Concept of Discourse as A Cognitive Phenomenon of Translation. *Eurasian Research Bulletin*, 7, 207-211.