



GLOBAL JOURNAL OF HUMAN-SOCIAL SCIENCE: G
LINGUISTICS & EDUCATION

Volume 25 Issue 5 Version 1.0 Year 2025

Type: Double Blind Peer Reviewed International Research Journal

Publisher: Global Journals

Online ISSN: 2249-460X & Print ISSN: 0975-587X

Attributes of Being as the Generative Basis and Object of Reflection in the Neuro-Linguistic System of the Substance of the Brain

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GJHSS-G Classification: *FOR Code: 170299*



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Attributes of Being as the Generative Basis and Object of Reflection in the Neuro-Linguistic System of the Substance of the Brain

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Аннотация - В статье рассматриваются вопросы о роли атрибутов бытия как основы формирования и идентификации всеобщих, внутренних, неотъемлемых универсальных свойств реальных – материи, пространственно-временного континуума, движения в субстанции мозга.

Ключевые слова: атрибут бытия, пространственно-временной континуум, силлогизм, фрейм, дежавю, жемевю, прескевю, сюрреализм, кубизм.

Abstract- The article discusses the role of attributes of being as the basis for the formation and identification of universal, internal, integral universal properties of realities – matter, space-time continuum, movement in the substance of the brain.

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I. INTRODUCTION

Attributes (attributio – I give, endow) are a universal, internal, integral, universal property of a substance characteristic of all natural phenomena. The concept of "substance" (from Latin) is used to denote the supposed primordial community of all that exists. substantia is what underlies it), which is a synonym-a doublet of the word matter.

For a full-fledged scientific identification of the concept of attribution (attribute, endow) of being as universal, internal, integral, universal properties of natural phenomena, it is necessary to consider the problem within the framework of neuro-linguistics, focusing on the issue of the line of contact and demarcation of natural and socio-cultural phenomena in the substance of the brain. Based on the fact that all research and procedures in the framework of other natural sciences, for example, the elimination of brain pathologies in medicine, are mainly carried out using invasive methods (from Novolatinsk invasivus; from invado — "I go inside") procedures related to penetration through natural external barriers (skin, mucous membranes), and research in the humanities involves the use of non-invasive methods. This approach to brain research is justified in the sense that

visual perception of brain structures and direct observation of complex processes occurring in this unique substance (the formation of new structures in the substance of the brain, the appearance and disappearance of impulses, the energy supply to the brain, etc.) make it possible to capture the overall picture, but do not allow us to draw deeply reasoned conclusions about interconnectedness and the interdependence of phenomenal processes in the binary structure of the brain. Taking into account the specifics of the identification of this philosophical problem within the framework of neuro-linguistics, we will rely on data from natural and socio-humanitarian sciences and try to bring all judgments within the framework of the philosophy of language to a common denominator.

II. LITERATURE REVIEW

In the study of the attributes of being, it is necessary to consider all problems at the level of philosophical identification. In this discourse, it is advisable to rely on the doctrine of Noem and noesis by E. Husserl. [Husserl 2005.]. The concept of noema (Greek: νόημα — "thought"; adj. "noematic" (the Latin term cogitatum is also used as an equivalent) is interpreted as a mental representation of an object, the objective content of thought, an intentional correlate of noesis, the representation of an object in consciousness that is associated with specific concepts. According to the outstanding philosopher, noesis consists of two components - the component of sensation (hyletische Daten) and the component of sense formation (sinngiebende Daten). Noesis is revealed in the composition of experience by means of phenomenological reduction. Consequently, the material substrates of the brain, the perceptual neurons and the neurons providing mental representation, play an important role in the formation of noesis.

Ideation (eidetic intuition, categorical contemplation, contemplation of essence)— one of the central concepts of E. Husserl's phenomenology, meaning the contemplation of essence (one can assume that ideation is identical to the process of cognition). The emergence of ideation in the sphere of consciousness is associated with the functioning of peculiar neurobiological mechanisms, in particular, the ventral pathway, which connects the optical center of

the frontal cortex with the zone of semantic analysis of speech located in the temporal and occipital parts of the cortex (neocortex). In psychology, the term ideation is also interpreted. ideation), where this definition denotes the ability (process) of generating abstract or concrete mental representations, as well as the ability (process) of arbitrarily operating these mental constructs of consciousness.

Essences, according to E. Husserl, are divided into substantive essences (general essences of things, states of affairs, etc.) and meanings (essences of words and expressions, which are a special case of essence). From the point of view of cognitive linguistics" the essence of the concept of "red" is considered as a permanent pattern of adequate perception of a given type of color in a given specific situation. Such general concepts exist in the mind of a native speaker outside of time and space.

It can be assumed that noetic intentions play an important role in the formation and restructuring of the neural network of the cortex, in the transformation of genetically determined neural impulses of the subcortical sphere, providing perception, into signatures of linguistic signs as a means of transitive communication between the natural biological and mental information codification system in an integrated speech-thought-language process.

Ideation of the universal in language is expressed using nouns with abstract meanings expressing a general idea (for example, whiteness, boldness, etc.). Similar concepts are reflected in general value detectors, which are directly related to private value detectors. Individual ideation is expressed by adjectives denoting a specific quality of objects or phenomena (for example, the green color of leaves).

Concrete things arise and disappear, but their basic foundation – matter (substance) – is uncreated and indestructible, it is not conditioned by anything other than itself.

The philosophical identification of the concept of matter presupposes the identification of certain common attributive properties in all material objects, which include:

- Consistency (orderliness, structural certainty);
- Activity (movement, change, development);
- Self-organization;
- The spacetime form of being;
- Reflection;
- Informative content.

Movement, like any changes and interactions in nature and society, is a procedural phenomenon encompassing all types of changes and interactions, a form of existence of matter.

Space as an attribute of being has many forms, including metric space, phase space, vector space,

functional space, topological space, linguistic space, information space, outer space, etc.

Time as an attribute of existence has its own units of measurement: second, minute, hour, day, week, month, year, century, millennium, era, period, epoch, etc. Of the listed units, only day and year are concepts that express the relationship of words with specific attributes of nature. A day is a period of time equal to 24 hours, the length of day and night. A year is a period of time equal to the period of the Earth's revolution around the Sun – 12 calendar months. The remaining tokens have an additional meaning that is identified in a specific context. This additional, often metaphorical meaning is clearly evident in the word "epoch."

Time has a strictly defined direction: from what has already happened (the past) to what is happening at the moment (the present) and further to what supposedly can or should happen later (to the future). These concepts are related, and many of them are used not only in scientific usage, but also in everyday communication.

In everyday life, space is perceived as the receptacle of all conceivable (and assumed) material objects, events, and actions.

The genetically determined information processing system at the level of biomolecular coding in the subcortical area is not subject to changes under the influence of the mental structures of the speech-thought-language system in the cerebral cortex. This is confirmed by the fact that in the natural human genetic program (genomic map) located in the subcortical nuclear zone of the brain, purely human acquired abilities are not fixed. It is important to mention here the idea of linguist and neurologist Eric Heinz Lenneberg [Lenneberg, E., 1967], who was a proponent of the concept of innateness, that "contact with other people acts only as a trigger that triggers the innate mechanism."

The difficulty of studying both the adequate and linguocognitive characteristics of the category of time in a language is related to its specific properties: time has a temporal character, it is known in comparison with other events. In semantics, the category of time is comprehended through the category of space, since all temporal changes in objective reality are more clearly perceived in space. For example, to adequately express the temporal identification of time in the sentence "After graduation, he went abroad", it is necessary to clearly present some presuppositions related to the situation described in this sentence after graduation (schools, business trips, internships, etc.).

Deep discrepancies are found in the nature of the connection between language and thinking in the process of cognition. Some scientists tend to directly identify language and thinking (for example, the concept of F. E. Schleiermacher [Schleiermacher, Friedrich

Daniel Ernst, 1808.], others have an excessive tendency to ignore the role of language (behaviorism, neo-Holdianism, neopositivism, linguistic formalism, descriptivism).

From the point of view of the famous scientist T. Givón, linguistic phenomena should correspond to the peculiarities of human memory and mental operations [Talmy Givón, 1979.]

The deep (subcortical) substance of the brain in the neocortex establishes a two-dimensional system of sign formation and coordinates the functioning mechanisms of neural substrates of linguistic signs, which identically reflect logical schemes, linguistic codes that are formed in the collective consciousness of the linguistic community.

When covering this issue, it is necessary to focus on the differences between logical and grammatical categories, including the following features:

1. There are more grammatical categories (case, number, person, etc.) than logical ones (concept, judgment, conclusion, etc.); Следует отметить, что Ж.Лакофф и М. Джонсон дали новую трактовку понятия «истинной рациональности», которая очень существенна для понимания разницы между понятиями «язык» и «мышление». [Lakoff, J., Jonson, M., 1999]

Дж. Лакофф одним из первых обратил внимание на необходимость использования концептуальных положений нейрофизиологии и нейролингвистики, проводил исследования в данном направлении [Lakoff, J., 1987]

Lakoff was one of the first to draw attention to the need to use the conceptual provisions of neurophysiology and neuro-linguistics, and conducted research in this direction [Lakoff, J., 1987]

Peculiar cognitive units reflecting the properties of language and thinking are syllogisms, alogisms, paralogisms and paradoxes.

Syllogism (Greek: συλ-λογισμός "summing up, counting, concluding" from συλ- (συν-) "together" + λογισμός "counting, counting; reasoning, reflection")-this is a deductive reasoning in which a new categorical statement is derived from two categorical statements. In the broadest sense, a syllogism is a deductive reasoning, and in the narrowest sense, it is a special case of a two—premise deductive reasoning.

Varieties of figures that differ in the nature of premises and conclusions are called syllogism modes. In total, from the point of view of all possible combinations of premises and conclusions, there are 64 modes in each figure. There are $4 * 64 = 256$ modes in four figures. Of the six modes in each figure of all possible modes of the syllogism, only 24 modes are correct. The traditionally accepted names of the correct modes of the first two figures are: Barbara, Celarent, Darii, Ferioque prioris; Cesare, Camestres,

Festino, Baroko, sekundae; Tertia Darapti, Disamis, Datisi, Felapton, Bokardo, Ferison habet; Quarta insuper addit Bramantip, Camenes, Dimaris, Fesapo, Fresison.

The term frame, first used by American artificial intelligence specialist Marvin Minsky, has been widely used in cognitive linguistics. From the point of view of neuro-linguistics, a frame can be characterized as a neural structure that reflects a holistic picture of being, and the neural substrate of a slot is a neural detector that reflects specific semantic components of the frame representation.

Zh. Lakoff introduces the term "gestalt," which, from the point of view of cognitive linguistics, refers to thoughts, perceptions, emotions, cognitive processes, motor activity, and language organized using the same structures. From the point of view of neuro-linguistics, all these concepts are related to the neural structure, i.e. the material substrates of the brain that set in motion all the multiplex mechanisms of cognition (consciousness, thinking and language).

A frame as a linguistic unit allows you to closely link procedural and declarative (attributive) knowledge about an object, i.e. combine the informational, functional and behavioral components of the object into a single whole. In IT, such unity is ensured through the use of specification elements, including restr_by (<boolean expression>) – restriction on the slot values to be set; by_default <default value> – default value of the slot when creating an instance frame; without <slot name> {,<slot name>} - enumeration of slots which are missing in the instance frame; <slot name> = empty – undefined slot value; if_added <procedure name> – the name of the daemon procedure that runs when creating the instance frame; if_deleted <procedure name> - the name of the daemon procedure that runs when deleting the instance frame; if_changed <the name of the procedure that runs when changing the values of the instance frame slots. [Marvin Minsky, 1974.]

A blend occupies a peculiar place in the cognitive process. This is a way of word formation in English, but this method is also used in other languages: aromfume aroma+perfume - perfume fragrance, holilendar - holiday+calendar - holiday calendar, brase - brain+base brain base, oxbridge - Oxford-Cambridge.

In the subcortical layers of the brain, which coordinate the processes of processing verbal information, encoding and decoding are carried out on the basis of a kind of cryptogram that allows recognizing the content of information only on the basis of establishing compliance not with a cognitive, but with a communicative scheme of a behavioral act. It should be noted that in the subcortical area, where human qualities (language, intelligence, human relationships) They do not manifest themselves, but the instinct of communication is crucial in codifying information.

Therefore, at this level, the specific properties of language are not essential, and the universal signs of acts of communication are crucial.

In modern linguoculturology, much attention is paid to the study of the concept of "concept". As a cognitive unit of language, the concept is closely related to semantic structures of various levels of complexity, which are concentrated in the slots and terminals of the lexical system of the language. The multilayered nature of a linguistic concept is manifested in the presence of several qualitatively different components (layers, dimensions, components, levels, etc.) in its structure.

The central component of the linguocultural concept structure is the associative model of the concept. The nominative density of the concept within the framework of this approach is the main characteristic of the core of the concept, i.e. the totality of the associations included in the concept. At the same time, it is noted that the periphery is characterized by metaphorical diffusivity.

The immanent properties and essential parameters of language are rooted in the biopsychosocial nature of man. The biophysiological material substrate of language, the neural network, causes an exponential increase in the range of coverage of the noetic field of language. Each lexeme in the language system functions as a cultural carrier and undergoes exponential growth. In mathematics, this concept means an increase in magnitude, when the rate of growth is proportional to the value of the magnitude itself. It obeys the exponential law, which is indicated by the formula $y = ex$ and reflects continuous growth with a coefficient. In this function, "e" is the Euler number, which is a constant (~ 2.72). In other words, the growth of any quantity is directly proportional to its value. Exponential growth is contrasted with slower (over a sufficiently long period of time) linear or power-law relationships. For example, a bank deposit increases by a certain amount of interest every year. If you put 1,000 euros in the bank at 10% per annum, then in a year the deposit will be 1,100 euros. And next year, 10% will be accrued based on the amount of 1,100 euros. That is, the contribution will grow stronger, and so the amount of increase will increase from year to year.

The attributive properties of matter usually include:

- Consistency (orderliness, structural certainty);
- Activity (movement, change, development);
- Self-organization;
- The spacetime form of being;
- Reflection;
- Informative content.

Charles Scott Sherrington (English Charles Scott Sherrington; November 27, 1857, London — March 4, 1952, Eastbourne) was a British scientist in the

field of physiology and neurobiology who was awarded the Nobel Prize in Physiology or Medicine in 1932 (jointly with Edgar Adrian) "for discoveries concerning the functions of neurons."

In the process of visual perception, deviations from the norm are observed, which are called optical illusion. This phenomenon is associated with the discrepancy between the reality of the representation of a visible phenomenon or object due to the structural features of our visual apparatus. The eyes sometimes do not adequately perceive the light coming from the object, as a result of which erroneous information comes to the brain. In such cases, the brain does not always respond correctly to signals coming from the eyes. [Perelman Ya.I., 2012.]

Among the deviations from the identical perception of the realities of life are *deja vu*, *gemevu* and *preskavu*. *Deja vu*, or *déjà vu*, is a mental state in which a person feels that he has already been in a similar situation or in a similar place, but cannot connect this "memory" with a specific moment from the past. [Kovacs, N.; Auer, T.; Balas, I.; Karadi, K.; Zambo, K.; Schwarcz, A. et al.. — 2009.]

Jamevue, or *jamais vu* (fr. *jamais vu* [ʒa.mɛ.vy] — "never seen") is a state that suddenly comes upon the feeling that a well-known place or person seems completely unknown or unusual, as if seen for the first time. It seems that knowledge about them has instantly and completely disappeared from memory. [Judy Skatssoon. Is it really you or *jamais vu*? July 19, 2006].

I describe the mental state of a person when a familiar word is spinning "on the tip of the tongue" — there is a feeling that the forgotten word will be found right now and that it is very easy to remember, but nevertheless it is not remembered. [Abrams L., 2008].

The illusion effect is used in the visual arts to create unusual moments of visual perception. For example, the painting by the founder of surrealism, artist Salvador Dalí "Persistence of Memory" (fr. *La persistance de la mémoire*), created in 1931, is widely known in popular culture, sometimes called "Soft Clocks" or "Melting Clocks". The softness of hanging and flowing clocks is an image expressing a departure from the linear understanding of time. [Helen Gardner, 1991].

Space as an attribute of existence has received a peculiar embodiment in cubism (French *cubisme*, from cube — cube) as a modernist trend in fine art. This trend in Western European art is associated with the concepts of modernism. His followers depicted the objective world using simple geometric shapes. This form of representation of the realities of life involves the fragmentation of shapes into geometric elements, a combination of straight broken lines and a violation of perspective. Pablo Picasso's painting "The Maidens of Avignon" (1907) became a kind of pictorial manifesto of Cubism. The painting harmoniously combines two

favorite colors of the great master - blue and pink. Monochromatic radiations containing light of the same color are perceived as one shade.

The so-called combined camera angles are considered an important step towards Cubism. The historian of science Arthur Miller argues that Picasso's attempts to combine images of an object from different points of view in a two-dimensional space were influenced by the ideas of mathematicians Esprit Jouffre and Henri Poincaré on the visualization of the fourth dimension. [Green C. 1987.]

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