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CULTURE AS AN ENVIRONMENT FOR LANGUAGE  
TYPOLOGY FORMATION

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ABSTRACT

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The chapter continues the discussion around the question of the essence of the hypothesis of linguistic relativity, which is also called the Sapir-Wharf hypothesis. An updated interpretation of it is presented from the standpoint of cognitive-discursive approach, which examines the processes of human cognition and perception of fragments of life and their reflection in language pictures of different ethnic groups-representatives of other types of writing (including hieroglyphic) to the right hemisphere (spatial-image) type of thinking. It is assumed that culture with its artifacts became a determining factor for the final stage of formation of the grammatical structure of languages, according to which most languages of the world are classified structurally by 4 types. The key position of Humboldt's theoretical concept that languages fix the peculiarities of the national worldview, which was interpreted differently by followers of the scholar, is given. The direction of new research in this area was called neo-Humboldtianism, which was developed by European scholars and American ethnolinguists. The focus is on the critique of the linguistic relativity hypothesis (Sapir-Wharf hypothesis), which was both constructive and destructive. The following conclusion is given: the cognitive-discursive vector in linguistics has forced scholars to return to the hypothesis of linguistic relativity, which is becoming even more popular than it was during the life of Wharf, B. Linguists continue to accumulate facts, especially experimental ones, to confirm it. And, despite the different attitude of scholars to it, still a promising aspect in neo-Wharfism, as well as in the theory of Wharf, B., himself, is taking into account the factor of the subject of knowledge of the surrounding world, who is a representative of a certain type of culture. It is culture that has become the environment for the formation of language typology, where at the current stage of its study, not only formal indicators should be taken into account, but also the plan of content as a fixer of the cognitive style of thinking of speakers of a specific language type.

KEYWORDS

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Sapir-Wharf hypothesis, structural typology of languages, neo-Humboldtianism, neo-Wharfism, cognitive-discursive linguistics, culture and its artifacts, types of thinking.

The practice of cross- and intercultural communication challenges researchers to return to the ideas of neo-Humboldtianism, i.e. direction in linguistics. Its representatives (Weisgerber, L. [1],

Ipsen, G. [2], Trier, J. [3], Boas, F. [4–6], Sepir, E. [7, 8], Wharf, B. [9]) tried to study the language in close connection with the culture of its bearers. The name of this direction was received due to the fact that for the first time the problem of "language and people" in a broad sense on a scientific basis was formulated by Humboldt, W. [10].

The discovery of intercultural differences and differences of the SAE languages (in Wharf's terminology) from the rest of the world, in particular from the unique languages of the American Indians, Australian aborigines led to the beginning of the XX century the emergence of the hypothesis of linguistic relativity, which suggested the interdependence of language, culture and thinking. The problem of differences between representatives of different cognitive types of cultures is still actively discussed in epistemology (Knyazeva, E. [11]), psychophysiology (Rothenberg, V. [12]), culturology (Lysenko, V., Rubets, M. [13]), etc. Recently, there has been a particularly heated debate over whether to look for differences between languages and cultures, or whether a trans-cultural approach is more promising, shifting the focus to finding those things that unite cultures and their languages. However, this is the problem of another study.

To study the relationship between language and culture, it is appropriate to return to the key points of the hypothesis of linguistic relativity. It is directly related to the reconstruction of the cognitive basis for comparing cultures and it was the result of the long work of scholars, the founders of European and American neo-Humboldtianism, and later neo-Whorphanism.

As it was already noted, the question of the relationship between cognitive mechanisms of human perception of the world and the actual language picture reaches the works of Humboldt, W. and his followers: European neo-Humboltians and American ethnolinguists. Humboldt, W. [10], studying the languages of the American Indians and comparing them with each other, noted that the "segmentation of the world" in different languages occurs differently: where one language uses one word, another one can use "descriptive means". According to the scholar, these differences indicate a difference in perception of the world by a people. Language is not just a way of expressing certain concepts, but a tool for mastering the world around us. "Man surrounds himself with the world of sounds in order to perceive and comprehend the world of things [...]".

In fact, neo-Humboldtianism is based on these theoretical positions and on the doctrine of the internal form of language, which, according to Humboldt, W., fixes the peculiarities of the national worldview: European and American [10].

### 2.1 EUROPEAN NEO-HUMBOLDTIANISM: WEISGERBER'S IDEAS AS DEVELOPMENT AND TRANSFORMATION OF HUMBOLDT'S IDEAS

European neo-Humboldtianism emerged in the 20<sup>th</sup> of XX century in Germany in order to revive Humboldtian traditions in linguistics (Weisgerber, L. [1], Ipsen, G. [2], Trier, J. [3], etc.).

Weisgerber, L. [1], the founder of neo-Humboldtianism, is based Humboldt's ideas (mainly for solving ethnolinguistic problems), the theory of the symbolic nature of language, and Trier's theory

of semantic fields. The scholar was interested in Humboldt's statement that "language is the spiritual strength of the people". Developing Humboldt's ideas on the formation of worldview language, Weisgerber, L. in the work "Native language and the formation of the spirit", this was published in 1929, pointed to the motivational role of language in forming a single worldview. "Language allows a person to combine all the experience into a single worldview and makes him / her forget how before learning language, he / she (man) perceived the world around him" [1]. The scholar understood the worldview as "a treasure of knowledge, concepts and forms of thinking, beliefs and assessments reflected in the language of each community", as well as "an arena where intellectual processing takes place by man around the world" [1].

Weisgerber, L. also raised the question of the dependence of scientific knowledge and scientific thinking on the language worldview, the system of categories that exists in language [1].

Based on Humboldt's position that language reveals the spirit of the people, Weisgerber, L. calls language an imaginary intermediate world formed by the interaction of the world of things and the world of consciousness. Instead, the scholar is critical of Humboldt's assumption that the world of language correlates with the outside world. Language itself creates the world around it, Weisgerber, L. notes, is a picture of the world and at the same time the worldview of the people, and since each language is associated with a particular ethnic group, and the difference of languages is the difference of worldviews. Representatives of different ethnic groups see the world differently. The task of linguists is to dive into the worldview of language. "Different languages are for nations the organs of their original thinking and perception". For this reason, language should be studied as a cultural phenomenon, because it creates culture and captures the results of this work [1].

But if we understand culture as an environment where human life takes place and language functions (its writing, phonetics, grammar, etc.), then it seems to us that the above-mentioned views of Weisgerber, L. do not contradict the views of Humboldt, W. on the relationship of language with the world being. We find additional arguments in Weisgerber's reasoning that language acts as a force that creates history, because it spiritually stimulates the bearer of historical life, the people [1].

To study the cultural content of language and the worldview of its speakers, Weisgerber, L. borrowed from Trier, J. the method of the semantic field [3]. The essence of this technique is that the semantic field of one language (words that are combined on the basis of a common semantic feature, common theme) is superimposed on the corresponding field of another language and thus reveals their differences due to different segmentation of the world and its reflection results in each language [3].

In order to show that the world and its reflection in language are not identical, Weisgerber, L. turns to the picture of the stellar world. Stars are united in the constellations of the Bear, Scorpio, Gemini not on the basis of their true spatial location, but on the basis of "earthly vision" (one constellation includes stars that are at a greater distance than stars belonging to different constellations) [1].

At the same time, the scholar draws attention to the fact that the earth's vision is not static and varies with time in different nations. For example, the pictures of the stellar world of the

ancient Greeks, Germans and Chinese have their differences. The role of language, according to Weisgerber, L., is not only that it gives names to the objects of the mental world, but also that it is the means by which this mental world is created. There are as many worlds and as many world-views as there are languages. In view of this, Weisgerber, L. emphasizes that the sphere of meaning of words cannot be identified with the sphere of real things. The sphere of meaning belongs to the spiritual, mental world, through which human cognition is carried out [1].

The word dragon is the result of human ideas about the mythical creature. Dragons do not exist in the real world, they live only in the minds (reasoning, evaluation) of people. Such products of the human imagination are significant artifacts [14, 15].

The task of linguists is to study the methods and mechanisms of classification of objects and phenomena of the world, and most importantly, the relationships in which they are with each other. Weisgerber, L. tries to explore the worldview of the German language in the historical aspect. He shows that the language picture of the animal world in Middle High German was quite different than in modern German. There were no names for animals at all, but there were words to name four groups of animals: *Tier* "running animals", *Vogel* "flying animals", *Visch* "floating animals" and *Wurm* "crawling animals" [1]. The essence of the work of the neo-Humboldtian is to show the influence of language on thinking and the evolution of human consciousness.

Language determines the ways of development of human consciousness. It is a mediator between man and the real world, and without it the cognitive activity of man is impossible, the process of thinking cannot take place effectively.

Wittgenstein's views significantly influenced the analytical philosophy of the XX century: natural language began to be considered as a medium of conceptual and logical representation of the world, existing between the subject and object of traditional theory of knowledge. The question of the influence of language on thinking and perception throughout the XX century has been the subject of lively discussions among linguists, philosophers, representatives of cognitive sciences and others. Two main directions were formed: relativists (supporters of linguistic relativity) and universalists (supporters of the idea of independence of cognition, thinking, perception from the structure of language).

In this part of the study, we are interested in the theory of linguistic relativity developed by the representatives of American neo-Humboldtianism.

### 2.2 AMERICAN NEO-HUMBOLDTIANISM AND THE THEORY OF LINGUISTIC RELATIVITY

The founder of American neo-Humboldtianism, which is most often associated with the theory of linguistic relativity, is considered to be Franz Boas, who studied the languages of the indigenous people of North America, Eskimos and Indians. Boas, F. was one of the first to draw attention to the need to find new methods for studying the languages of American Indians, because the comparative-historical method is not suitable for finding their speech states [4]. The scholar wrote that the psychological foundations and morphological development of Native American languages

are so unusual that their study would be a real discovery for linguists working in the Indo-European or Semitic languages [5].

Defending the equality of all languages of the world, Boas, F. developed in ethnology effective methods for this and in particular for the study of specific communication of representatives of exotic linguistic cultures.

Boas's ideas were developed by his student Edward Sapir, who was convinced that races, languages and cultures do not exist in isolation, because their areas of distribution intersect [7]. Like Boas, F., he argues that there are no races of higher and lower, and therefore languages: more perfect or less grammatically developed.

Sapir, E. emphasizes the need for cooperation of linguists with culturologists, psychologists, and sociologists. He pays special importance to anthropology and cultural history, believing that it is through language that culture can be studied, because the system of cultural stereotypes of each civilization is organized by language, which reflects a certain stage.

"Worlds inhabited by different societies are different worlds, not one and the same world with different labels. We see, hear and generally perceive the world around us in this way, and not otherwise, due to the fact that our choice for its interpretation is determined by the linguistic tendencies of our society" [7]. This quote echoes the ideas of Humboldt, W., set out in the work "On the diversity of the structure of human languages and its impact on the spiritual development of mankind" [10].

As for the connection of language with culture, Sapir, E. denies the correlation between the formal aspect of language (phonological and grammatical structures) and culture. In his opinion, only vocabulary, i.e. the content of language, is connected with culture. The scholar believed that the history of language and the history of culture are developing in parallel. Therefore, the culture of peoples can be studied on the basis of the study of cultural vocabulary. Similar attempts were made by Swadesh, M., the American scholar [16], who even developed a lexicostatistical method for studying the prehistoric contacts of the Eskimo tribes and the North American Indians.

However, without phonological and morphological reconstruction it would hardly be possible to reconstruct Indo-European proto-language. Therefore, the issue of semantic reconstruction of only cultural vocabulary remains one of the most controversial to this day in linguocomparative studies.

Sapir's ideas were developed by Benjamin Lee Wharf, the American scientist [9]. He studied and researched the language of the Hopi Native Americans.

Comparing the categories of time, space, substance in European languages, combined in the Standard Average European, and in the Hopi language, the scholar draws a revolutionary conclusion, the essence of which is that the speakers of time, space and material artifacts due to the language structure and that there are close logical connections between language structures and norms of culture and behaviour.

Wharf, B. in the article "The attitude of norms of behaviour and thinking to language" denies the universal laws of thinking [17]. The scholar writes that thinking depends on a particular language, even its grammar. The facts of language for speakers are part of their experience, and therefore

these facts are not subject to critical reflection. If one, following natural logic, thinks about reason and the laws of thought, he / she usually follows purely grammatical facts which are present in his / her own language and which form part of his / her naive experience. But they are by no means mandatory for all languages and are in no way a common ground of thinking.

Wharf, B. gives arguments that confirm his assumptions, in particular that in the languages of the North American Indians there are not many categories of traditional logic. And, as a consequence, the following conclusion is to be given: everything is relative in the language world. We segment the world as our native language suggests, and we are aware of this principle of relativity. The essence of this principle is that such physical phenomena make it possible to create a general worldview only by similarities or at least by the correlation of language systems.

Wharf's hypothesis in linguistics was called **the hypothesis of linguistic (lingual) relativity**. Since the idea of this hypothesis was laid down by Sepir, E., it is also called **the Sepir-Wharf hypothesis**. At present, the Sepir-Wharf hypothesis is attributed to the assumption of scholars that the thinking and culture of the people are determined by language. However, neither Sepir, E. nor Wharf, B. literally gave such a definition. However, in his works, Wharf, B. argues that there is a connection between cultural norms and language models, but there are no correlations or direct equivalents [17].

According to Wharf, B., differences in linguistic conceptualization inevitably reflect differences in the perception of time, space, matter, colours and other categories with which we are accustomed to describe reality. In this regard, Wharf, B. speaks of the scientific worldview, which "was formed in the form in which we see it through our language: [...]. But it is more correct to say so: Newtonian concepts of space, time and matter are determined by culture and language. It is from these two sources that Isaac Newton took them" [17].

### 2.3 TRADITIONAL CRITICISM OF THE SAPIR-WHARF HYPOTHESIS AND A NEO-WHARFIAN COGNITIVE APPROACH TO ITS INTERPRETATION

Immediately after its publication, the hypothesis provoked sharp criticism in scientific circles: it was the subject of a special discussion. Analysing the preconditions for the emergence of the hypothesis [18], opponents pointed out that if people perceived the world differently, they would not understand each other. Wharf, B. failed to convince opponents of the correctness of the formulated hypothesis.

But the modern views of scholars regarding the content of the Sapir-Wharf hypothesis have actualized its strengths [19, 20]. According to Lektorsky, V., the modern constructive evaluation of the hypothesis is that it should emphasize the study of the subject of knowledge that constructs the world, and this construction can be constructed in different ways [21].

Distinguishing between "modern" and "archaic" types of thinking, and therefore different perception of the world, differences between languages, according to Merkulov, I., should be associ-

ated with the evolution of cognitive types of thinking and ways of processing cognitive information both in separate individuals and in entire groups [22].

A new approach to the interpretation of the Sepir-Wharf hypothesis of linguistic / language relativity, which takes into account modern cognitive theories of thinking, the modern understanding of "language" and is supported by a large empirical data material, is presented in the work of Humpertz, J. and Levinson, S. "Rethinking Linguistic Relativity" [23].

The ideas of the authors represent the so-called Neo-Wharfian paradigm. The interdisciplinary experimental studies of its supporters, which combine linguistics and psychology, are very meaningful in terms of reflecting the human perception of the world and its direct connection with the linguistic worldview. Research conducted in Levinson's laboratory showed the dependence of human ideas about movement and time on spatial metaphors that nominate these concepts in different languages [19].

The problem of linguistic relativity in a new, cognitive, aspect continues to be discussed. Meanwhile, in order to explain the basic principles underlying the differences between the types of thinking of speakers of different languages, scholars distinguish different grounds for making typology of cultures.

Depending on general features, geographical, national-ethnic, historical, economic types of cultures are distinguished. Depending on the methodology, all cultures will be divided into the following types with their varieties:

- 1) psychological type includes "Western" and "Eastern" types of cultures;
- 2) according to the type of thinking in terms of cognitive evolution [24], the following types are distinguished: "modern" / "archaic" or logical, i.e. pro-logical type [25]; mythological [26] / magical type.

The dichotomy between SAE-speaking cultures is based on the opposition of the nature of writing: alphabetic / hieroglyphic types (Ivanov, V. [27–29]).

Recently, scholars began to develop a typology of cultures based on the cognitive style of thinking and contrasted the left-hemisphere (symbolic) type with the right-hemisphere, i.e. spatial-image type (Kobzev, A. [30, 31]).

A thorough study of existing typologies provides grounds for such generalizations. Archaic thinking, which was a feature of primitive populations, according to Lévy-Bruhl, L., is characterized by their ability to equate images with reality, to search for mystical reasons for certain events, the applied nature of knowledge about the surrounding world, operating with perceptual representations, syncretism, indistinguishable between the natural and the supernatural [25].

Merkulov, I., the representative of the evolutionary-epistemological approach, correlated the archaic type of thinking that dominated before the appearance and development of human language with a spatially similar (right-hemisphere) type of thinking, which is mostly characterized by a holistic strategy for processing cognitive information. Accordingly, modern cultures are characterized to a greater extent by logical-verbal (left-hemisphere) thinking that operates with symbolic representations [22].

The strategy of the right hemisphere is holistic, the channels of perception are not separated from each other, the person as its carrier is able to perform analytical operations and separate the object from the background, the shape of the object from its size, colour, etc. East Asian peoples are prone to this type of perception. The left hemisphere, on the contrary, is characterized by a clearer analytical strategy, the clarity of distinguishing a figure from the background [32].

Kobzev, A. directly connects right-hemisphericity with hieroglyphics of culture, contrasting it with left-hemisphericity associated with alphabeticity. He explains these two historically formed types of culture by different ways of sapientation and highlights features that are permanently typical for both types: from the ability / inability to reproduce single consonant sounds and their combinations to the emotional and sound integral accompaniment of rituals (for example, a burial ritual: from the desire to maximum preservation of the dead body up to mummification (in hieroglyphic agricultural cultures) and burning of the dead body (in alphabetic cultures of nomadic pagan tribes) to broader worldviews about the transcendence of being in alphabetic Christian cultures [30, 31].

Merkulov, I. analyses the work of Ivanov, V. "Odd and Even", in which the scholar cites the results of research on the brains of Japanese people who suffered from various brain lesions: the Japanese in general use both hieroglyphics, conceptual writing, and a compound alphabet that records the sound of words, but does not represent their meaning. When the left hemisphere is affected, compound writing suffers in Japanese people [22].

Describing the functions of the right and left hemispheres of the brain, Ivanov, V. [28, 29] singles out among these in the right hemisphere the control of body movements, i.e. gross and fine motor skills. Moving on to the cultural analysis of gestural communicative practices of primitive tribes, the author directly connects the presence of sign language and even gestural thinking (which he also compares with the hieroglyphic principle of encoding meanings) with the dominance of the right-hemisphere cognitive style among representatives of ancient cultures.

## CONCLUSIONS

Summing up the discussion of the raised problem of the connection of language with the type of culture, it should be noted that neo-Humboldtianism became the fundamental basis for the initiation of the ethnolinguistic approach in linguistics.

In European linguistics, the representative of Neo-Humboldtism, Weissgerber, L., assumed at one time that the perception and categorization of the surrounding reality in each nation is specific and reflects its linguistic worldview. A person is a representative of a certain linguistic community to which he / she adapts and integrates.

A person's linguistic personality is formed by his own language, changes in which are caused by cultural evolution (changes in cultural heritage).



Neo-Humboldtianism of Western Europe, which specialized in the search for connections between the languages and cultures of European peoples, influenced the formation and development of the ethnolinguistic views of American scholars. The origins of American Neo-Humboldtism go back to the works of Boas, F., the anthropologist and ethnologist. A distinctive feature of Boas' concept was cultural pluralism (as opposed to cultural evolutionism), which explained the development of nations and their cultures from the standpoint of view of borrowing cultural elements from other nations. Using the example of the social organization of the Indian tribes of North America, he singles out matrilineal and patrilineal forms of cultures, which, coming into contact, form new forms.

Sapir, E., the American linguist and anthropologist, as well as a follower of Boas, F., believed that "the system of cultural stereotypes of any civilization is organized with the help of the language that expresses this civilization". Reality is constructed under the influence of "language habits of one or another social group". His ideas about the relationship between language and culture found their continuation in the hypothesis of Sapir-Whorf. Later it was nominated as the theory of linguistic / language relativity.

Whorf, B. was the author of the hypothesis itself. He also assumed that language affects various types of human activity not so much in special cases of its use, but in general laws and in the evaluation of certain phenomena by language.

The key proposition of the hypothesis that each language reflects reality differently, taking into account its characteristic way of interpretation (membering fragments of the world, organizing its results into concepts and distributing meanings), was once severely criticized.

The cognitive-discursive vector in linguistics forced scholars to return again to the hypothesis of linguistic relativity, which is becoming even more popular than it was during Whorf's lifetime. Linguists continue to accumulate facts, primarily experimental, to confirm it. Currently, the search for methods that would prove all the basic propositions of the hypothesis is underway. And, despite the different attitude of scholars towards it, a promising aspect in Whorf's theory, as in all neo-Humboldtianism, is the consideration of the human factor as a subject of knowledge of the world and a carrier of a specific type of language and a representative of his / her culture.

Based on these principles, scholars explain the differences between the types of thinking of speakers of different languages, which are the basis of the typology of cultures and, accordingly, structural types of languages.

Modern scholars attribute the so-called "logical" cultures to the "left-hemisphere" analytical cognitive type of thinking with alphabetic writing. The East Asian type is mostly characterized by a right-hemisphere cognitive style with a spatially similar type of thinking and hieroglyphic writing.

Of course, these assumptions are not categorical and require the study of specific types of human activity within each ethnoculture, as well as the individual characteristics of speakers of a specific language, which cause unique combinations of characteristics of cognitive thinking styles.

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