

## THE SAPIR-WHORF HYPOTHESIS: HOW LANGUAGE INFLUENCES OUR WORLDVIEW

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### Abstract:

This article examines one of the key elements of the theoretical basis of linguistics, discusses questions about the hypothesis of linguistic relativity, provides information about the authors of this hypothesis, Edward Sapir and Benjamin Lee Whorf. The purpose of the article is to analyze the results of linguistic experiments and the influence exerted by the Sapir-Whorf hypothesis (SWH) on the development of linguistics.

**Keywords:** Hypothesis, language, mind, relativity, cognition, decoding, worldview.

### Introduction

Like most elements of the theoretical component of the sciences, the hypothesis of linguistic relativity has its own background. It dates back to the times of the famous German philosopher and linguist Wilhelm von Humboldt (1767–1835). It was he who first put forward the idea of the connection between language and thinking, which was clearly reflected in his famous quote: “The language of a people is its spirit, and the spirit of a people is its language, and it is difficult to imagine anything more identical”. Humboldt's ideas were later developed by the German linguist Leo Weisgerber (1899–1985). It is not for nothing that the direction of linguistics with which he worked was later called neo-Humboldtian.

Based on the teachings of Humboldt, he formulated a theory of the linguistic picture of the world. Weisgerber wrote: “The possibility of a native language lies in the fact that it contains in its concepts a certain picture of the world and transmits it to all members of the linguistic community.” Thus, the linguistic picture of the world is the result of the historical development of a certain ethnic group”.

A branch of the ideas of the figures discussed above became the so-called “ethnolinguistics,” whose historical homeland is the United States of America. One of the first representatives of this direction was Franz Boas. He suggested that “the theoretical study of languages is no less important than practical knowledge of them... linguistic research is an integral part of a deep study of the psychology of the peoples of the world”. Similar thoughts were further confirmed by the great American linguist Edward Sapir (1884–1939).

Edward Sapir was born on January 26, 1884 in Lauenburg (then part of Germany, now the city of Leborg in Poland) in the family of a synagogue cantor. When he was a child, the family moved to Liverpool and then (1894) to New York. In 1904 he graduated from Columbia University. From 1910 to 1925 he was head of the ethnographic department of the Canadian Geological Survey in Ottawa. From 1927 to 1931 he was a professor at the University of Chicago, and from 1931 he taught at Yale University. Member of the American Academy of Arts and Sciences (since 1930), president of the Linguistic Society of America (since 1933) and the American Anthropological



Association (1938).

He studied the languages and culture of the American Indians and in the course of these studies accumulated a large amount of valuable material on the languages of North and Central America. Based on this material, he came to the conclusion that language is the “symbolic key to behavior.” One of Sapir's students was the chemical technologist Benjamin Whorf. Following his teacher, Whorf turned to the study of Indian languages, in particular, he paid special attention to the Hopi Indian language, widespread in Arizona. All aspects of those languages and cultures that can be described as “civilized” that were known to Benjamin before, he decided to fit under one brush and combine into a general category called “Average European Standard”.

Whorf, Benjamin Lee (1897–1941) American linguist who gained fame for his theory of “linguistic relativity,” according to which a person’s picture of the world is largely determined by the system of the language he speaks. According to Whorf, the grammatical and semantic categories of language serve not only as tools for conveying the thoughts of the speaker, they also shape his ideas and control his mental activity.

Thus, people speaking different languages will have different ideas about the world, and if there are significant structural differences between their languages, they may have difficulty understanding certain topics when discussing some topics.

“We dismember nature in the direction suggested by our relatives tongue. We distinguish certain categories and types in the world of phenomena not because that they (these categories and types) are self-evident; on the contrary, the world appears to us as kaleidoscopic flow of impressions that must be organized by our consciousness, and this means mainly - the language system stored in our consciousness...”

#### *Material and experiments*

One of Whorf’s articles, which became a springboard for the future hypothesis, was precisely devoted to a comparison of expressions of the concepts of time in languages from the SAE category and in the language of the Hopi Indians. According to this article, the Hopi language does not have words for periods of time (i.e., no divisions into days of the week, times of day, hours, etc.), and the Hopi do not view time as a flow of discrete elements.

Another important conclusion of Whorf's, which came from another of his teachers, was related to the number of words in different languages denoting snow. Thus, the Eskimos have several different words in their vocabulary for different types of snow, while in English there is only one word “snow”. This example also formed the basis for a future hypothesis.

The French also distinguish on a subconscious level the nature of the movement of living things, creatures: the verb “marcher” (literally ‘to go’) is used when talking about movement as process, as an action, verb “aller” - when additional characteristics are known, eg direction.

#### *Discussion*

The linguistic relativity hypothesis has been the subject of much controversy since its emergence, being a stimulus for experiments, the emergence and development of hypotheses that examine the relationship between language and thinking.

Subsequently, the hypothesis was confirmed empirically. A study was conducted with a group of children from African American families and a group of children from European families. Both of them were English-speaking. The children were given the task of making geometric shapes, and remarkably, children from both groups completed the task successfully, although the African



American families were low-income, and the children from these families had little understanding of how to work with the blocks.

It is fair to say that the linguistic relativity hypothesis has had a tremendous impact on the scientific community. The hypothesis had both adherents and those who presented quite convincing arguments against it. One of the domestic scientists involved in research in this area was Vladimir Andreevich Zvegintsev. He provided a detailed analysis of the main provisions of the Sapir-Whorf hypothesis.

However, the advancement of this hypothesis contributed to the rapid development of linguistics, but in addition, it aroused interest among figures of philosophy and psychology. Opponents of the theory of linguistic relativity oppose

strong version of it. So, Steven Pinker calls the linguistic hypothesis determinism (by this he means the "strong" version of the hypothesis), "generally accepted absurdity." In his opinion, the assertion that thinking is determined by language "goes contrary to common sense."

Pinker first disputes the claim that language and thinking are identical, arguing their point of view by the fact that it is often with us it happens that we cannot put our thoughts into words. Moreover, he says that It is not possible to provide scientific evidence in favor of the Sapir-Whorf hypothesis possible. Moreover, opponents of the linguistic relativity hypothesis (for example, Max Black) believe that the structure of language does not impose any significant restrictions on the vocabulary of the language and its conceptual apparatus.

This is argued as follows: the vocabulary of a language is an open system that is replenished in connection with the emergence of new phenomena of reality, therefore, in this case, reality influences language, and not vice versa. Thus, opponents of the linguistic relativity hypothesis did not dispute the fact that language determines our thinking, but the fact that thinking and worldview is entirely determined by the language a person speaks.

Besides, critics of the hypothesis oppose the exaggeration of the cognitive function of language in damage to its communicative function. Numerous criticisms were confirmed experiments with color perception. For example, Berlin and Kay in Basic elements of color designation" prove that representatives of different ethnic groups speaking in different languages and, accordingly, having different color designations, perceive these colors are the same.

The main argument of supporters of the Sapir-Whorf hypothesis is that for different languages use designations for the same fragment of reality different words that are not related to each other. Traditionally, the linguistic hypothesis relativity is explained by the fact that different languages have different names for body parts.

For example, the semantic field "joy" in Russian contains 28 concepts, and in English – 39, therefore, in English this semantic field (and, accordingly, the view of the phenomenon of reality expressed these concepts) is more dissected than in the Russian language. Against, the semantic field "shame" in Russian consists of 15 concepts, while in English - out of 10 In addition, experiments with color confirm this hypothesis.

Recently, scientists have proven that language affects the perception of color. Paul Kay from The University of California has proven that color perception in adults and children occurs in different hemispheres of the brain: adults perceive color with the left hemisphere, in which processes associated with language activity also occur. Kay explains this by the influence of language: having mastered it, a person thinks about color, using the tools of language.



The main objects of the hypothesis are:

- Awareness of time
- Cognitive and mental potential
- Awareness of cause-and-effect relationships
- Perception of forms
- Perception of colors

The appropriateness of including the last object in this list is most often questioned, since this phenomenon is biologically programmed.

When asked why such images and characteristics are formed in a person, everyone will confidently answer: the central nervous system. Accordingly, language structures have a significant impact on the cognitive abilities of the brain. How can we trace this influence? This is what the relatively young discipline is aimed at, the prerequisite for which was precisely the hypothesis discussed in this text. This discipline is called neurolinguistics.

From the name it becomes obvious that neurolinguistics is, in a sense, the point of contact between two much more significant sciences - neurology and linguistics. Many scientists classify it as psycholinguistics. Neurolinguistics studies the brain mechanisms of speech activity and those changes in speech processes that occur when the brain is damaged.

First of all, the activities of neurolinguists are aimed at studying three zones of the left hemisphere of the cerebral cortex responsible for the functioning of speech:

- Broca's area - reactions to control oral speech occur in it;
- Wernicke's area - responsible for perception and understanding;
- occipital part - logical and grammatical memorization takes place there

### Conclusion

To overall linguistic relativity hypothesis has its pros and cons. The positive side of this hypothesis is the desire to understand the role of language in a person's worldview and understanding of the world. It's hard to disagree with the statement that language determines culture, therefore people speaking different languages, look at the world differently. But at the same time, the interactions between language and culture, reality goes in two directions. Reality shapes language in the same way as language shapes our perception of reality.

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