

## THE FORMATION OF COGNITIVE LINGUISTICS AS A SCIENCE

<https://doi.org/10.5281/zenodo.15392742>

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### Annotation

This article traces the formation and evolution of cognitive linguistics as a scientific discipline, emerging in the second half of the 20th century (1960s-1980s), shaped by pivotal influences such as Noam Chomsky's transformational-generative grammar, the rise of cognitive sciences, and the groundbreaking hypotheses of Sapir and Whorf on language-thought connections. It highlights the development of key theoretical frameworks, including the Conceptual Metaphor Theory by George Lakoff and Mark Johnson, which posits language as a fundamental aspect of human thinking, and Frame Semantics by Charles Fillmore, which explores how language organizes conceptual information. The article examines the central research area of the relationship between language and thinking, contrasting the linguistic relativity theory (Sapir-Whorf hypothesis) with the universalistic approach (Chomsky's universal grammar) and emphasizing their interactive dynamics. Additional focus is placed on the interplay between language and consciousness, supported by advancements in neurolinguistics and psycholinguistics, including studies of brain-language relationships, language learning, and disorders like aphasia. The article concludes by underscoring the potential of cognitive linguistics to contribute to future scientific advancements in artificial intelligence, education, and speech therapy, reflecting its interdisciplinary significance.

### Keywords

Cognitive linguistics, transformational-generative grammar, Sapir-Whorf hypothesis, Conceptual Metaphor Theory, Frame Semantics, language and thinking, neurolinguistics, psycholinguistics, universal grammar, language learning, aphasia, artificial intelligence, education, speech therapy, cognitive processes.

### Introduction

Cognitive linguistics was formed in the second half of the 20th century, specifically between the 1960s and 1980s. Its development was influenced by the following factors:

Chomsky's transformational-generative grammar

- Noam Chomsky revolutionized linguistics, putting forward the theory of universal grammar. According to him, people have an innate ability to learn language.

### **Development of cognitive sciences**

- In the 20th century, much attention was paid to the study of human thinking and cognitive processes in the sciences of psychology, artificial intelligence, neurobiology, and philosophy. This gave impetus to the development of cognitive linguistics.

### **Studying the connection between language and thinking**

- The hypotheses of Sapir and Whorf suggested that language has an impact on human thinking, which later became one of the important research areas of cognitive linguistics.

### **Research on metaphor and conceptual thinking**

- The Conceptual Metaphor Theory, put forward by George Lakoff and Mark Johnson, emphasized that language is not only a means of expression, but also a fundamental part of thinking.

### **The relationship between language and thinking**

The relationship between language and thinking is one of the main research areas of cognitive linguistics. There are two main approaches in this area:

Theory of linguistic relativity (Sapir-Whorf hypothesis)

- According to this theory, a person's thinking is shaped by his language.
- For example, the different concepts of color in different languages lead to a person's different perception of colors.

Universalistic approach (Chomsky and modern cognitive approaches)

- Chomsky's theory of universal grammar emphasizes that human thinking does not depend on language, but that all languages have common syntactic structures.

- Modern cognitive research shows that there is a complex interactive relationship between language and thinking.

Language and thinking are interconnected and are determined by the following aspects:

- Language shapes cognitive processes - a person perceives the environment through his language.

- Thinking affects language - language plays an important role in creating new concepts and ideas.
- Conceptual thinking and metaphors - people understand abstract concepts based on their own experiences (for example, the metaphor “life is like a road”).

### **Main research areas**

There are several important concepts in cognitive linguistics. The most important of these areas are listed below:

#### a) Conceptual metaphor theory (George Lakoff, Mark Johnson)

According to this theory, human thinking has a metaphorical basis. That is, we understand abstract concepts based on concrete experiences.

*Examples:*

- Time is money → I wasted my time
- Love is a journey → Our relationship is on the road

This theory shows that human thinking and language are interconnected, and metaphors play a key role in understanding abstract concepts.

#### b) Frame semantics (Fillmore, Lakoff)

This theory explains the relationship between language and thinking through the ways in which information is organized. People use frames to understand any concept.

*Example:*

When we hear the word “restaurant”, we automatically imagine the following information:

- Menu
- Waiter
- Ordering
- Payment

This theory shows that language is deeply connected to concepts and cognitive processes.

#### c) The relationship between language and consciousness (Neurolinguistics and Psycholinguistics)

One of the important research areas of cognitive linguistics is the study of the relationship between language and consciousness. This field is closely related to neurobiology and psycholinguistics.

**Main research areas:**

**Brain and language** – how language is processed is studied using technologies such as fMRI and EEG.

**Language learning processes** – how a person learns language and how it is stored in memory.

**Aphasia and neurolinguistic disorders** – loss or impairment of speech ability after brain damage.

### Summary

Cognitive linguistics is a modern scientific area that studies the relationship between human thinking and language, and it deals with the following important concepts:

- Conceptual metaphor theory – human thinking has a metaphorical basis.
- Frame theory – studies how concepts are formed through language.
- The relationship between language and consciousness – is studied through neurolinguistics and psycholinguistics approaches.

These areas of research may lead to important scientific results in the future in areas such as artificial intelligence, education, and speech therapy.

### Cognitive Psychology: Key Concepts and Areas

Cognitive psychology is the branch of psychology that studies the processes of human thought, perception, memory, attention, and problem-solving. This discipline studies how the human mind works to understand and develop language.

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