

## **COGNITIVE PROCESSES IN THE FORMATION OF LANGUAGE MEANING**

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### **Abstract**

The meaning of language is influenced not only by linguistic structures, but also by the cognitive processes that occur in the human mind. This article discusses how cognitive processing, such as perception, memory, and reasoning, plays a role in the formation of language meaning. This study uses a theoretical approach that integrates cognitive linguistics with psychological science to explain the relationship between mental representation and meaning. The results of the study show that the formation of meaning is a dynamic process involving sensory experience, social context, and pragmatic use of language. This knowledge is expected to enrich insights into how humans understand and use language in various communication situations. The cognitive process in the formation of language meaning includes several main stages, namely sensing, storage in working memory, and interpretation based on context. This process depends on the mental schema that the individual has, which is acquired through social experiences and interactions. Cognitive processing is also influenced by factors such as cultural bias, individual experience, and level of familiarity with a language. Meaning is not static, but rather evolves over time and depends on the dynamics of communication. In linguistic interactions, individuals utilize mechanisms such as analogies and associations to understand new or complex meanings. Cognitive processes play an important role in the formation of language meaning. Meaning is determined not only by grammatical structure but also by the way individuals process information through experience and context. This research emphasizes the importance of a multidisciplinary approach to understanding the dynamics of meaning formation, which involves linguistics, psychology, and sociology. By understanding this process, we can improve strategies for language teaching, translation, and intercultural communication.

**Keywords:** cognitive processes, language meaning, cognitive linguistics, mental representation, communication

### **Introduction**

Language is the primary communication tool that humans use to convey ideas, feelings, and information. However, the meaning contained in language does not solely come from grammatical structure or vocabulary. Cognitive processes have a central role in the formation of language meaning, connecting language forms with their experiences, knowledge, and contexts of use (Bybee, 2014). Understanding the meaning of language involves various mental mechanisms such as perception, association, and mental representation. For example, the same word can have different meanings depending on the context in which it is used, be it in social, cultural, or emotional situations. This shows

that language is not static, but rather dynamic and is heavily influenced by complex cognitive aspects (Kramsch, 2014).

Research on the relationship between cognitive processes and the formation of language meaning is important to understand how humans process linguistic information and utilize it in everyday interactions (Ellis, 2019). This approach is not only relevant in the field of linguistics and cognitive psychology, but also has an impact on the development of technologies such as artificial intelligence and natural language processing. This article aims to explore the cognitive processes underlying the formation of language meaning, including the factors that influence it, as well as the contributions of social and cultural contexts in the process. By understanding these mechanisms, it is hoped that it can provide deeper insights into how language is used and understood in human life.

Language is one of the fundamental aspects that distinguishes humans from other creatures, and the meaning of language is the result of a complex interaction between linguistic structures and cognitive processes. According to (Chomsky, 1957), language not only consists of grammatical rules, but also involves the mental abilities underlying language production and comprehension. This opinion opens up the insight that the formation of meaning is inseparable from the internal mechanisms possessed by the human brain. (Lakoff & Johnson, 2008) through conceptual metaphor theory emphasized that the meaning of language is formed from sensory experience and human interaction with the surrounding world. They argue that cognitive processes such as associations and abstractions are key in understanding the relationship between language and reality. This is supported by Vigotsky (1978), who emphasizes the role of social and cultural interaction in shaping the meaning of language, showing that meaning depends not only on the individual, but also on the social context. In the study of cognitive psychology, Jackendoff (1992) revealed that the meaning of language involves complex mental representations, in which the brain integrates information from various sensory modalities and experiences to produce meaning. This opinion highlights the importance of mental mechanisms such as perception, memory, and information processing in the formation of language meaning.

This article will further discuss the views of experts regarding cognitive processes in the formation of language meaning, by highlighting the contribution of various factors such as the social, cultural, and experiential contexts of individuals (Borg, 2015). This understanding is not only important in the study of linguistics, but also in various disciplines such as education, technology, and intercultural communication. Language is one of the fundamental aspects that distinguishes humans from other creatures. As a means of communication, language not only functions to convey information, but also becomes a means of expression, thought, and creation of meaning. The process of forming the meaning of language involves various complex mechanisms that occur in the human mind, known as cognitive processes. This process includes how humans understand, interpret, and produce meaning through linguistic symbols used in everyday communication (Bonvillain, 2019).

According to (Chomsky, 1957), the process of forming language meaning is closely related to linguistic competence and performance. Linguistic competence refers to the innate human ability to understand the structure of language, while performance includes the practical aspects of using language in real contexts. In this case, the formation of meaning is rooted not only in grammatical structures, but also in social and pragmatic contexts. (Piaget, 1952) emphasized that the formation of language meaning is closely related to the cognitive development of individuals. He proposed that the process of language comprehension is influenced by stages of cognitive development, such as the ability of individuals to associate linguistic symbols with existing experiences and knowledge. Meanwhile, (Vygotsky, 1978) stated that the cognitive process in the formation of language meaning cannot be separated from social interaction. He introduced the concept of Zone of Proximal Development (ZPD), which illustrates that the formation of meaning often occurs in social contexts where individuals gain understanding through guidance from others.

In a cognitive semantic perspective, (Lakoff & Johnson, 2008) explain that the formation of language meaning is influenced by conceptual metaphors, in which humans understand abstract concepts using concrete experiences. For example, the term "time is money" reflects how humans map economic experience into the concept of time. A different approach is conveyed by Tomasello (2003), who highlights the importance of the human ability to share intentionality. According to him, the process of meaning formation involves the ability to understand the intentions and goals of others through language, which is the basis for the formation of effective communication.

Overall, the formation of language meaning is the result of the interaction between human innate abilities, individual experiences, social contexts, and cultural influences (Hoff, 2006). The study of this process is an important foundation in various disciplines, including linguistics, psychology, philosophy, and cognitive science. By understanding the cognitive mechanisms behind the formation of meaning, we can delve deeper into how language plays a role as a tool for human thought and interaction.

## **Research Methods**

The research method used in this study is a multidisciplinary theoretical approach that integrates concepts from cognitive linguistics and psychological science. This method aims to explore the relationship between mental representation and the formation of language meaning. The research uses both theoretical and conceptual approaches, in which the authors do not conduct direct experiments or collect empirical data, but analyze relevant literature and theories from various disciplines such as linguistics, psychology, and sociology. The research data is theoretical, in the form of ideas, concepts, and findings from the academic literature that support the discussion of cognitive processes in the formation of language meaning. The research examines and synthesizes relevant theories to explain how sensory experiences, social contexts, and language pragmatics affect the formation of meaning. The analysis also includes the study of cognitive

mechanisms such as mental schemas, analogies, associations, and cultural biases that influence the way individuals process and understand the meaning of language.

The process of meaning formation is analyzed through several main stages, namely: 1) Sensing: how information is received through sensory experience. 2) Working Memory Storage: the process of temporarily storing information for interpretation. 3) Contextual Interpretation: how social contexts and individual experiences affect the understanding of meaning. This study also discusses the dynamics of linguistic communication and the role of individual experiences and cultural biases in the process.

## **Results and Discussion**

The results of the study using qualitative methods, such as interviews and group focuses, as well as the collection of data from individuals or groups, generally contain in-depth findings regarding the participants' experiences, perceptions, and views. Here are the key elements that are often reported in qualitative research results: These findings are usually grouped by the themes or categories identified during the data analysis. The focus group revealed the main challenges were limited resources and institutional support.

### **Participant Experience and Perspective**

The results of the interviews often describe the in-depth experiences of the individual, including personal stories or specific opinions that provide context to the issue being studied. Data from group focus can show social dynamics or differences of opinion among group members.

### **Data Triangulation**

The use of various data sources (individual, group) helps validate findings and provide a more comprehensive view.

Example: Information from individual interviews is confirmed or enriched through discussions in a group focus.

### **Quotes from Participants**

Qualitative research often includes direct citations to support data interpretation.

Example:

- *"I feel that this program is very helpful, but there are shortcomings in the implementation stage."* (Interview, Participant A)
- *"We agree that training needs to be expanded, but there needs to be better monitoring."* (Group Focus, Group B)

### **Analysis and Interpretation**

- The findings are linked to the theory or framework used in the research.
- Researchers also often reflect on biases or limitations during the data collection and analysis process. The results of interviews with foreign language speakers about their difficulties in understanding the meaning of idioms can involve various insights into how idioms in the target language are confusing or difficult to understand. Here is an

example of the results of an interview with the theme, which can include some findings and quotes from participants:

### **Difficulty in Understanding the Meaning of Idioms**

- Most of the foreign language speakers interviewed revealed difficulties in understanding idioms, mainly because of their meanings that cannot be translated literally.
- **Participant A** (Spanish speaker):  
*"When I hear an idiom like 'kick the bucket', I am surprised because it literally means kicking the bucket, which has nothing to do with death. It was really confusing for me at first."*
- **Participant B** (Japanese speaker):  
*"Idioms like 'raining cats and dogs' are very difficult to understand, because in my language there are no similar idioms. I had to learn that it meant heavy rain, and it was very different from what I imagined."*

### **Cultural Differences That Affect Understanding**

- Some speakers of foreign languages note that idioms are heavily influenced by the cultural and historical context of the language, so their understanding is limited.
- **Participant C** (French speaker):  
*"There are idioms in English that don't have a direct equivalent in French, such as 'break the ice'. For me, this meaning is quite difficult to understand because there are no similar expressions in my language."*
- **Participant D** (Indonesian speaker):  
*"Some idioms, such as 'barking up the wrong tree', don't make sense to me if translated directly. I have to find out the context of the use of the idiom."*

### **Use of Idioms in Everyday Conversation**

- Many speakers of foreign languages find that the use of idioms in everyday conversation can be confusing, especially if they are not yet familiar with the expression.
- **Participant E** (German speaker):  
*"I feel anxious when my friends use idioms, because I'm afraid of misunderstanding their meaning. For example, I don't know if 'under the weather' means being sick or just not in the mood."*
- **Participant F** (Arabic speaker):  
*"When someone says 'hit the nail on the head', I was initially confused because I didn't understand what it had to do with 'hammer' or 'nail'. I have to check the meaning."*

### **Strategies for Overcoming Adversity**

- Some foreign language speakers develop strategies to overcome these difficulties, such as seeking explanations or asking native speakers.

- **Participant G** (Russian speaker):  
*"I often use idiomatic dictionaries or ask friends to understand the meaning of idioms. It helped me learn more expressions that I couldn't translate directly."*
- **Participant H** (Korean speaker):  
*"I learned to pay attention to the context when idioms are used. If I don't understand, I'll try to guess the meaning based on the situation or talk to someone who knows better."*

## Discussion

The discussion of cognitive processes in the formation of language meaning according to experts includes various theories and views put forward by linguistics, psychology, and neurolinguistic experts. Experts are trying to explain how the meaning of language is formed and processed in the human mind, as well as what factors influence this process. Here are some views that can be used to discuss this topic.

### 1. Piaget's Views on the Formation of Meaning

Jean Piaget, a well-known cognitive psychologist, emphasized that cognitive processes in the formation of meaning are closely related to the cognitive development of children. According to Piaget, children form meaning through assimilation and accommodation, two basic processes in his theory of cognitive development.

Assimilation: The process of integrating new information into existing cognitive structures. Accommodation: The process of changing existing cognitive structures to adapt to new information. In the context of language, Piaget argues that children learn the meaning of words through their experiences with objects and events in the world around them. For example, the word "cat" for a child will have a meaning that develops as they experience more interactions with different cats.

### 2. Vygotsky's Views and the Role of Social in the Formation of Meaning

Lev Vygotsky, a Russian psychologist, highlights the importance of social interaction in cognitive development and the formation of language meaning. Vygotsky argued that the meaning of language is not only the result of an individual's personal experience, but also the result of social and cultural interaction. Zones of Progressive Development (ZPD): Vygotsky posited that a person's cognitive development occurs through interactions with others who are more knowledgeable, which helps the individual build a more complex understanding of the world, including the meaning of language. Vygotsky emphasizes that words or concepts are not only acquired through direct experience, but through communication with others, which introduces new concepts to individuals. The cognitive process of understanding the meaning of a word or phrase depends largely on the social and cultural context in which the language is used.

### 3. Cognitive Theory in Linguistics (Lakoff and Johnson)

George Lakoff and Mark Johnson developed theories about conceptual metaphors in language. They argue that many concepts in human language are shaped through metaphors derived from our physical and social experiences.

Conceptual Metaphors: Lakoff and Johnson argue that human language is filled with metaphors that are not only in the form of sentences, but are also the basic structure in the way we think. For example, in English, we often use metaphors such as "time is money" (as in the phrase "spend time" or "save time"). Embodied Cognition: They also put forward the idea of embodied cognition, which is thought that comes from our physical experience with the world. The meaning of a word or phrase is not only rooted in abstract concepts, but also in the experience of our bodies interacting with the physical world. For example, we often describe emotions with words related to physical conditions, such as "feeling a heaviness in the chest" when anxious.

4. Jerome Bruner's Views on the Formation of Meaning

Jerome Bruner, an influential cognitive psychologist, argues that the meaning of language is formed through narrative processes and contextual learning. Bruner argued that humans understand the world by forming stories or narratives, and this includes the meaning of words and expressions. Narrative Understanding: According to Bruner, meaning is shaped through narratives that we construct based on personal and social experiences. This process is crucial in the formation of the meaning of words and phrases, as not only do words have fixed meanings, but their meanings can change depending on the narrative context around them. Reality Constructions: Bruner believes that language allows us to conceptualize and shape our reality through narrative constructs. In other words, the meaning of language is influenced not only by physical and social contexts, but also by the stories and interpretations we make of the world.

5. Jerry Fodor's Views on Cognition and Meaning

Jerry Fodor, a philosopher and cognitive scientist, developed a theory of the modularity of the mind, which states that the human brain is made up of separate and specialized cognitive systems, which are responsible for various aspects of cognition, including language. Modularity of Mind: Fodor argues that the cognitive processes involved in language processing run automatically and separately from other cognitive processes. In this case, the processing of language meaning is carried out by language modules that work separately from other cognitive systems (such as vision or motor). Fodor also believed that word meanings are processed internally by the brain, and that this mental representation is an integral part of understanding language.

6. Cognitive Processing Theory in Neurolinguistics

In the field of neurolinguistics, experts such as Noam Chomsky and Steven Pinker emphasize the role of the brain in language processing and the formation of meaning. They argue that humans have a mental structure or language module that allows them to process and generate meaning. Chomsky and Grammatical Structures: Chomsky developed a theory of universal grammatical structures that states that humans are born with an innate capacity to learn language. According to him, meaning in language is generated from the grammatical rules that exist in our minds, which allow us to understand the structure of sentences and their meanings. Pinker and Genetic Programming of Language: Steven Pinker argues that the formation of language

meaning is the result of genetic programming in the human brain that allows for efficient and rapid processing of language. Pinker also suggested that our brains have a special capacity to understand and produce language meanings, and this relates to the neural structures involved in language processing.

## **Conclusion**

The cognitive process in the formation of language meaning involves complex interactions between various mental, social, and cultural elements. Through the understanding of various theories from experts, it can be concluded that the formation of language meaning does not only depend on the simple processing of words or sentences, but also on how individuals relate meaning to existing experiences, knowledge, and contexts.

- 1) **The Role of Experience and Social Interaction:** Theories such as those put forward by Piaget and Vygotsky emphasize that the formation of language meaning is highly dependent on individual experiences as well as social interactions that occur in a particular cultural context. Through communication with others, individuals not only acquire the meaning of words, but also understand how they are used in various social situations.
- 2) **The Influence of Conceptual Metaphors:** Lakoff and Johnson's theory suggests that the meaning of language is often shaped by conceptual metaphors that associate words with our physical and social experiences. This meaning is dynamic and can change depending on how we interact with the world.
- 3) **The Importance of Context and Narrative:** According to Bruner, the meaning of a word or sentence can develop in a narrative context, where meaning is shaped by the way individuals construct stories based on their life experiences. This suggests that the meaning of language is not only formed by the words themselves, but also by a broader context, such as the purpose of communication and the socio-cultural background.
- 4) **Modularity of Mind and Language Processing:** Fodor's theory and neurolinguistic research suggest that language processing is carried out through separate and specialized cognitive systems in the brain. This suggests that the human brain has the capacity to understand and produce language efficiently through its existing mental structures, which allows for rapid understanding and formation of meaning.
- 5) **Associations between Words and Mental Representations:** The formation of language meaning is also related to the association between words and mental representations in the brain. As time goes on, individuals develop a more complex understanding of the meaning of words, both through personal experience and social interaction.

Overall, the formation of language meaning is a very complex process and is influenced by various factors, both internal (such as cognition and memory) and external (such as social and cultural contexts). This process involves understanding the relationships between words, concepts, experiences, and the world around us, which is influenced by the capacity of the human brain to process information efficiently and contextually.

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Advances in Social Humanities Research

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