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Literature and Linguistics Journal
ISSN 2958 - 5252 (Online)
Vol.2, Issue 2, pp 12– 19, 2023

The Relationship between Language and Thought: How Does Language Shape Human Perception of the World?

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Article History

Submitted: 9th May 2023
Accepted: 13th June 2023
Published: 17th June 2023

Abstract

Aim: The relationship between language and perception has been the subject of much research and debate in various fields, including linguistics, psychology, and philosophy. This paper aims to explore this relationship in-depth, focusing on how language shapes human perception of the world.

Methods: This study employed a systematic literature review methodology to analyze and synthesize existing research on the relationship between language and thought. The data source for this study was scholarly articles obtained from electronic databases and relevant academic journals. The literature search was conducted using academic databases such as Google Scholar, and PsycINFO. The search strategy involved a combination of keywords, Boolean operators, and inclusion/exclusion criteria to identify relevant articles.

Results: The relationship between language and thought is complex and multifaceted. Language serves as a medium through which human express, organize, and shape their thoughts, while thought processes, in turn, influence language production and comprehension. Understanding this relationship provides insights into the fundamental nature of human cognition and communication.

Conclusion: The specific categories and distinctions made in a language can influence how individuals perceive and interpret their environment.

Recommendation: This study recommends future researchers to conduct longitudinal studies to examine the developmental aspects of the relationship between language and thought. They can achieve this by following individuals over an extended period to observe how their language use and thought processes evolve over time, particularly in childhood and adolescence. This study also recommends utilization of advanced research methodologies and technologies to gain a deeper understanding of the language-thought relationship

Keywords: *Language, thoughts, relationship, perception.*

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Literature and Linguistics Journal
ISSN 2958 - 5252 (Online)
Vol.2, Issue 2, pp 12– 19, 2023

INTRODUCTION

The relationship between language and thought refers to the intricate connection and interdependence between these two cognitive processes. Language and thought are closely intertwined, and they mutually influence and shape each other (Haque, 2019). Language provides a means of expressing and communicating human thoughts. It allows humans to articulate and externalize their ideas, emotions, and perceptions. Through language, human can organize, structure, and manipulate thoughts, facilitating higher-level cognitive processes.

According to Thibodeau, Matlock and Flusberg (2019) language often employs metaphors to convey abstract ideas and experiences. Metaphors allow us to understand and reason about one concept or domain in terms of another. Metaphorical thinking influences our thought processes by shaping our understanding and interpretation of abstract concepts. As per Grote et al. (2021), bilingualism and multilingualism can enhance cognitive flexibility. The ability to switch between multiple languages involves cognitive control processes and can influence how individuals think, reason, and problem-solve. Bilingual individuals often exhibit enhanced executive functions and cognitive abilities compared to monolinguals.

As stated by Wang (2021), language is deeply embedded in culture, and cultural factors shape language and thought. Cultural values, norms, and practices influence the concepts and categories present in a language, thus shaping how individuals perceive and interpret the world. Similarly, the acquisition and development of language in childhood play a crucial role in shaping cognitive processes and thought. Language acquisition not only enables communication but also supports the development of memory, attention, and reasoning abilities.

As stated earlier, language is a fundamental aspect of human communication and interaction. It enables humans to express themselves, share ideas and emotions, and convey information to others. However, language is not just a means of communication; it also shapes how humans perceive and understand the world around. This relationship between language and perception has been the subject of much research and debate in various fields, including linguistics, psychology, and philosophy. This paper aims to explore this relationship in-depth, focusing on how language shapes human perception of the world.

LITERATURE REVIEW

Boroditsky (2011) explored the impact of language on human cognition and perception. The author discusses the Sapir-Whorf hypothesis, which suggests that the structure and vocabulary of language can shape our thoughts and influence how human perceive and understand the world. The article discusses research on how language affects color perception, highlighting that languages with distinct color categories can influence how individuals perceive and differentiate colors. The author also delves into the effects of linguistic differences on spatial cognition and time perception. Different languages may employ different spatial frames of reference, such as using absolute terms (e.g., "left" and "right") or relative terms (e.g., "north" and "south"), which can impact how individuals navigate and perceive space. Moreover, linguistic differences in how

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ISSN 2958 - 5252 (Online)
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time is expressed, such as future tense markers or verb conjugations, can shape individuals' understanding and subjective experience of time. The article emphasizes that language is not just a means of communication but also a cognitive tool that shapes how we conceptualize and understand our surroundings. Overall, Boroditsky's article provides a comprehensive overview of the impact of language on human cognition and perception, highlighting the intricate relationship between language, thought, and human understanding of the world.

The study conducted by Dolscheid, Shayan, Majid, and Casasanto (2013) aimed to investigate whether linguistic differences affect the perception of pitch thickness, which refers to the subjective experience of how dense or spread out musical sounds are. The study employed a psychophysical approach, using a series of experiments to examine participants' perception of pitch thickness. They recruited participants from different language backgrounds, specifically English and Mandarin speakers, as these languages differ in the way they label and categorize pitch. The findings of the study revealed that linguistic differences influenced participants' perception of pitch thickness. English speakers, whose language uses more specific pitch labels (e.g., "high" and "low"), were more sensitive to small differences in pitch and tended to perceive pitch intervals as thinner. On the other hand, Mandarin speakers, whose language uses more general pitch labels (e.g., "up" and "down"), showed a broader perceptual range and perceived pitch intervals as thicker. Based on these findings, the researchers concluded that language plays a role in shaping the perception of musical pitch. The way in which pitch is linguistically categorized and labeled can influence individuals' subjective experience of pitch thickness.

Regier and Kay (2009) explored the relationship between language and color perception, specifically addressing the hypothesis proposed by Benjamin Lee Whorf regarding the influence of language on thought and perception. The authors reviewed and analyzed a wide range of cross-cultural studies that investigate color categorization across different languages. They examine evidence from various linguistic communities and argue that while Whorf's original hypothesis that language determines thought and perception may be too strong, there is indeed a significant influence of language on color perception. Regier et al. argue that color categorization is shaped by both universal and language-specific factors. They discuss the existence of universal color categories, such as "red" and "green," which are commonly recognized across cultures. However, they also highlight that the boundaries and categorizations within these universal categories can be influenced by the specific color terms present in a language. The authors propose a compromise between linguistic relativity and universalism, suggesting that language influences color perception but does not entirely determine it. They argue that language provides a framework and set of categories that individuals use to perceive and classify colors, but there are also cognitive and perceptual processes that contribute to color perception beyond language. The article concludes that language indeed plays a significant role in shaping color perception, with linguistic factors influencing how individuals perceive and categorize colors. However, the authors acknowledge that additional cognitive and perceptual factors are involved in color perception, indicating a complex interplay between language and cognition.

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Gennari and Fisher (2017) investigated how language influences event conceptualization and the mental representation of events. The study employed an eye-tracking methodology to examine the eye movements of participants while they viewed visual scenes depicting different types of events. The participants included English speakers and Spanish speakers, as these languages differ in their grammatical structures and verb aspect systems. The findings of the study revealed cross-language differences in event processing. English speakers, who have a strong distinction between perfective and imperfective verb aspects, exhibited a bias towards processing events as complete and bounded. On the other hand, Spanish speakers, who have a less rigid distinction between verb aspects, showed a bias towards processing events as ongoing and continuous. The eye-tracking data provided evidence that participants' linguistic backgrounds influenced their patterns of attention and eye movements during event perception. The differences observed in event conceptualization between the two language groups support the idea that language shapes how individuals mentally represent and conceptualize events.

Another study conducted by Yamauchi and Markman (2013) examined the influence of language on color categorization and the bidirectional relationship between language and perception. The researchers investigated whether the color categories present in one's native language can interfere with the perception and categorization of colors in a different language. They conducted experiments involving Japanese-English bilingual participants and manipulated the linguistic context in which colors were presented. The findings of the study revealed bidirectional interference between language and color categorization. When participants categorized colors in their native language, their color categorization performance was influenced by the linguistic categories in their native language. Similarly, when participants categorized colors in a second language, their performance was influenced by the linguistic categories of that second language. This study provides insights into how language influences color perception and categorization, emphasizing the interplay between linguistic categories and perceptual processes.

Majid et al. (2019) studied the effect of olfactory language and abstraction across cultures. The researchers investigated whether there are cross-cultural differences in olfactory language and the level of abstraction used when describing smells. They conducted experiments involving speakers of five different languages: Dutch, Malay, Maniq, Semai, and Jahai. The participants were presented with a set of odors and were asked to describe them using their respective languages. The findings of the study revealed significant cross-cultural variation in olfactory language and the level of abstraction used. Some languages, such as Dutch and Malay, showed a preference for more abstract and high-level descriptions of smells, emphasizing general characteristics and associations. In contrast, other languages, such as the indigenous languages Maniq, Semai, and Jahai, employed more concrete and low-level descriptions, focusing on specific sensory qualities and contextual information. In conclusion, Majid et al. provide empirical evidence for cross-cultural differences in olfactory language and the level of abstraction used when describing smells. It emphasizes the role of language and culture in shaping olfactory perception and highlights the need for a culturally sensitive approach to understanding the diversity of olfactory experiences.

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Han and Lehman (2016) investigated the relationship between language and spatial perception, specifically focusing on the vertical and horizontal spatial metaphor. The researchers explored whether the language individuals speak, which differs in terms of how they express vertical and horizontal spatial concepts, influences their perception and representation of space. They conducted a series of experiments involving English and Mandarin speakers, as these languages differ in their use of vertical and horizontal spatial terms. The findings of the study revealed that the linguistic differences between English and Mandarin have an impact on individuals' spatial perception and mental representation. English speakers, who commonly use vertical spatial terms (e.g., "up" and "down"), tend to have a stronger vertical bias in their spatial judgments. On the other hand, Mandarin speakers, who use both vertical and horizontal spatial terms (e.g., "shang" for "up" and "qian" for "front"), exhibit a stronger horizontal bias in their spatial judgments. The researchers conclude that language influences spatial perception by shaping individuals' attentional focus and mental representation of space. The linguistic system and the metaphors embedded within a language can impact how individuals conceptualize and mentally organize spatial information.

Another study by Davidoff, Fonteneau, and Goldstein (2016) explored the relationship between color naming and color perception. The article focused on the role of language in color perception, highlighting the influence of color naming systems on our ability to discriminate and categorize different hues. The authors present evidence from cross-cultural studies that demonstrate how language can shape color perception by affecting the salience of certain color categories. This study emphasize that color categorization is not solely determined by universal physiological mechanisms but is also influenced by cultural and linguistic factors. Different languages have distinct color naming systems, with some languages having more or fewer color terms than others. This variation in color vocabulary impacts individuals' color perception and their ability to discriminate between different hues. The authors concluded that language plays a significant role in shaping our experience and understanding of color. The article emphasizes the importance of considering language and cultural influences when studying color perception and highlights the dynamic interaction between language, cognition, and color experience.

The study conducted by Chen, Peng, and Xing (2016) investigated the influence of language on preattentive perception, which refers to the early and automatic processing of sensory information before conscious awareness. The researchers investigated whether the language individuals speak affects their perception of basic visual features such as color and shape. They conducted a series of experiments involving participants who spoke either English or Chinese, as these languages differ in terms of how they categorize and label colors and shapes. The findings of the study revealed that language indeed shapes preattentive perception. English speakers, who have distinct color terms for different hues, demonstrated faster and more accurate identification of colors compared to Chinese speakers. Chinese speakers, on the other hand, showed greater sensitivity and discrimination ability for shape-related features. The study highlights the bidirectional relationship between language and perception, demonstrating that language not only reflects our perceptual experiences but also plays a role in shaping them. The findings support the idea of

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ISSN 2958 - 5252 (Online)
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linguistic relativity, suggesting that the language spoken influences how we perceive and categorize the world around us.

METHODOLOGY

This study employed a systematic literature review methodology to analyze and synthesize existing research on the relationship between language and thought. The data source for this study was scholarly articles obtained from electronic databases and relevant academic journals. The literature search was conducted using established academic databases such as Google Scholar, and PsycINFO. The search strategy involved a combination of keywords, Boolean operators, and inclusion/exclusion criteria to identify relevant articles. The initial search included a broad range of studies to capture a comprehensive overview of the topic. The inclusion criteria for article selection was as follows: (1) published within the last 15 years to ensure currency, (2) written in English to facilitate analysis and interpretation, (3) peer-reviewed journal articles to ensure rigor and quality, and (4) directly related to the topic of how language shape human perception of the world. Articles that did not meet these criteria were excluded. Key findings from the selected articles was summarized and discussed. The findings were presented in a coherent and structured manner to address the research objective.

FINDINGS

The review of literature showed that the hypothesis of linguistic relativity, often referred to as the Sapir-Whorf hypothesis, influences and even determines the way individuals think and perceive the world. According to this view, the structure, vocabulary, and concepts present in a language shape the cognitive processes and the worldview of its speakers. Also, it was found that language plays a crucial role in how human conceptualize and categorize the world around. It provides the framework for organizing and labeling experiences, objects, events, and abstract concepts. The specific categories and distinctions made in a language can influence how individuals perceive and interpret their environment.

Another major finding was that language often employs metaphors to convey abstract ideas and experiences. Metaphors allow humans to understand and reason about one concept or domain in terms of another. Metaphorical thinking influences human thought processes by shaping their understanding and interpretation of abstract concepts. Similarly, language was found to influence perception by directing attention to specific aspects of the environment or by providing cognitive frameworks for interpreting sensory input. For example, different languages may have varying color categorization systems, leading speakers of those languages to perceive and discriminate colors differently. Similarly, it was found that acquisition and development of language in childhood play a crucial role in shaping cognitive processes and thought. Language acquisition not only enables communication but also supports the development of memory, attention, and reasoning abilities.

Overall, the relationship between language and thought is complex and multifaceted. Language serves as a medium through which human express, organize, and shape their thoughts, while

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thought processes, in turn, influence language production and comprehension. Understanding this relationship provides insights into the fundamental nature of human cognition and communication.

CONCLUSION

These studies contribute to the understanding of how language shapes various aspects of perception, including categorization, memory, color perception, spatial cognition, attention, and even olfactory perception. By examining these interactions, researchers continue to uncover the intricate ways in which language influences and shapes our perception of the world. The studies have shown that language influences and even determines the way individuals think and perceive the world. The structure, vocabulary, and concepts present in a language shape the cognitive processes and the worldview of its speakers. Language can influence perception by directing attention to specific aspects of the environment or by providing cognitive frameworks for interpreting sensory input. For example, different languages may have varying color categorization systems, leading speakers of those languages to perceive and discriminate colors differently. Language plays a crucial role in how humans conceptualize and categorize the world around. It provides the framework for organizing and labeling our experiences, objects, events, and abstract concepts. The specific categories and distinctions made in a language can influence how individuals perceive and interpret their environment.

RECOMMENDATIONS

This study recommends future researchers to conduct longitudinal studies to examine the developmental aspects of the relationship between language and thought. They can achieve this by following individuals over an extended period to observe how their language use and thought processes evolve over time, particularly in childhood and adolescence. This study also recommends utilization of advanced research methodologies and technologies to gain a deeper understanding of the language-thought relationship. For example, they can consider using eye-tracking techniques, virtual reality, or computational models to investigate real-time perception and cognitive processes influenced by language. Finally, this study encourages interdisciplinary collaborations between researchers in linguistics, psychology, cognitive science, anthropology, neuroscience, and related fields. Collaborative efforts will provide a holistic understanding of the language-thought relationship and facilitate the integration of diverse perspectives and methodologies.

Funding Sources

The author received no financial support for the research, authorship, and publication of this article.

Conflict of Interest

The author declares no conflict of interest.

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ISSN 2958 - 5252 (Online)
Vol.2, Issue 2, pp 12– 19, 2023

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