EUROPEAN CONFERENCE

Conference Proceedings

IX International Science Conference
«Research of young scientists: from idea generation to project implementation»

October 28-30, 2024

Lyon, France

PSYCHOLINGUISTIC FEATURES OF TROPES

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Abstract

This article explores the psycholinguistic mechanisms underlying the interpretation of tropes, focusing on their cognitive demands, neurological basis, and their role in language learning and communication. Tropic interpretation involves mental processes that require the brain to engage in abstract thinking, drawing on knowledge, memory, and context to derive meaning. These mechanisms differ from the linear processing of literal language and are more cognitively demanding.

Key words: Cognitive, metaphor, tropes, irony, memory.

Introduction.

Metaphors are one of the most studied tropes in psycholinguistics. Lakoff and Johnson's Conceptual Metaphor Theory posits that metaphors are not just linguistic expressions but cognitive tools that shape how we understand the world. For example, in the metaphor "time is money," two seemingly unrelated domains—time and money—are connected in a way that helps us understand time as a valuable, spendable resource. When someone says, "I'm wasting time," the brain must process the conceptual link between "wasting" (normally associated with resources like money or food) and "time," which is not a physical object. This requires cognitive effort to map one conceptual domain onto another, highlighting how abstract and conceptual thinking is vital in metaphor comprehension.[1] Research by Gibbs suggests that metaphor comprehension involves conceptual mapping, where the brain activates similar mental representations from different domains. Conceptual blending, as described by Fauconnier and Turner, is a cognitive operation that allows the integration of multiple mental spaces to produce new meanings. In similes, for instance, two different elements are explicitly compared using "like" or "as," but the brain must blend these distinct concepts into one mental image. Consider the simile, "Her smile was like the sun." Here, the brain must blend the concept of a smile (something human and emotional) with the image of the sun (an inanimate, celestial body) to produce an enriched, figurative meaning that conveys warmth or radiance. Irony presents a unique challenge as it involves saying the opposite of what is meant. Understanding irony involves recognizing the speaker's intent and resolving the discrepancy between literal and intended meanings, a process known as *cognitive dissonance*. If someone says, "Oh, great, more rain," while standing in a downpour, the literal interpretation ("great" meaning positive) conflicts with the context (rain, which might be undesirable). The

listener must reconcile these contradictory elements to understand that the speaker is being sarcastic or ironic. Psycholinguistic research suggests that irony processing involves theory of mind—the ability to infer the speaker's beliefs or intentions. This adds an extra cognitive layer to understanding tropes like irony, making them more complex than straightforward language processing.[2]

Tropic language engages different brain regions than literal language, reflecting its complexity and creative nature. Neurological studies using brain imaging techniques reveal how different parts of the brain are activated during the processing of figurative language.

Several studies have indicated that the right hemisphere of the brain plays a significant role in processing non-literal language, especially tropes like metaphors and irony. The right hemisphere is often associated with abstract thinking, creativity, and emotional processing, making it ideal for interpreting figurative language. This suggests that the right hemisphere is crucial for interpreting complex, non-literal meanings that require imagination and abstract thinking. Tropic language also activates regions in the frontal lobe, especially those involved in executive functions, such as decision-making and problem-solving. This is particularly true for tropes that involve ambiguity or contradiction, like irony and sarcasm. Research by Uchiyama demonstrated that when participants processed ironic statements, there was increased activation in the prefrontal cortex, which is responsible for resolving conflict and ambiguity. This indicates that the brain must work harder to resolve the dual meanings inherent in ironic expressions.

Tropes impose a greater cognitive load than literal language because they require additional mental steps to interpret meaning. The cognitive load involved in trope processing can be seen in both the increased working memory demand and the slower processing speed.

Working memory is the cognitive system responsible for temporarily holding and manipulating information. When processing tropes, the brain must juggle multiple meanings, requiring more working memory capacity. In the metaphor "The world is a stage," the listener must hold the literal meaning of "world" and "stage" in working memory while considering how they relate metaphorically. This dual processing places additional demands on working memory compared to a literal sentence like "The world is large."

Tropes also play a crucial role in language development, both in children and in second-language learners. Understanding figurative language requires more advanced cognitive skills, which develop over time and with increased exposure to linguistic and cultural contexts. Young children initially interpret language literally because their cognitive development is still focused on concrete thinking. As they grow older and develop abstract thinking skills, they become better at understanding figurative language.[3]

The psycholinguistic features of tropes highlight the intricate ways in which our brains process non-literal language. Tropes engage cognitive mechanisms such as conceptual mapping and blending, invoke greater cognitive load, and activate specific regions of the brain. They also play essential roles in language learning and social

communication. Understanding the psycholinguistic underpinnings of tropes offers insight into the complexities of language and cognition.

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