

RESEARCH ARTICLE

Theoretical Integration Of Cognitive-Semiotic Approach In Translation

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Abstract

This study researches the factor that in translation the integration of cognitive and semiotic approaches reflects the reality that translation is simultaneously a mental process and a sign-based communicative act. From a cognitive perspective, translators rely on attention, memory, inferencing, problem-solving, and decision-making to understand the source text and construct meaning. From a semiotic perspective, they interpret cultural signs, symbolic references, metaphors, irony, connotations, and culturally specific representations. It studies theoretical aspects of cognitive approach and semiotic approach on their own and shows that translation studies could be strengthened by combining both into one in cultural meaning-making, offering a wider explanation of how translators construct, negotiate, and recreate meaning across languages.

KEY WORDS

Semiotic, cognitive, cognition, integration, symbol, sign.

INTRODUCTION

The cognitive approach in translation is an undeniable component. Simple reading itself uses the cognitive approach. As noted by researchers, "the complete process, from input to output, covers many subprocesses and knowledge structures such as language comprehension, language production, memory attention, visual and auditory perception, and decision making [[2] De Groot, 1997, p.29]. Therefore, for the translator, passing information through cognition before coding it into a target language is important. All the components of the cognitive approach, thinking, perception, memory, and problem-solving, are activated not only during translation, but even before the translation process begins.

While translators try to interpret cultural signs, imagery, and symbolism, they deal with the semiotic approach. "A semiotic theory of translation makes it fully possible to conceptualize the translational aspect of culture, of society [[3] Marais,

2019, p.39]." These are all unseen mental activities that take place in the brain of the translator. Translators select and analyze the source text to evaluate its cultural fit, anticipate readers' responses, and compare emotional and social factors in their minds.

The conducted research investigates the cognitive approach and the semiotic approach in translation separately, and then unites these two approaches to investigate their integration. Translators need both semiotics and cognition to understand and convey deeper meanings, achieving accurate translation of irony, symbolism, metaphors, and other cultural signs. The aim of the research is to show that translation is not just replacing words, but also a meticulous process which involves meaning-making, mental processing, and sign systems, and that integration of cognitive and semiotic approaches in translating is important for modern translation studies. Since

the integration of cognitive and semiotic approaches in translation remains underexplored, this study addresses that gap by examining how their combination enhances meaning-making, especially in the translation of culturally loaded elements.

The literature review will show that research on translation from cognitive and semiotic perspectives appeared and has developed significantly over the past decades. De Groot's *Cognitive Study of Translation and Interpretation* [[2] De Groot, 1997, p.37] shows that translation involves a sequence of complex mental subprocesses such as comprehension, production, attention, memory, and decision-making. The research demonstrates that translation is not mechanical word substitution but a cognitively demanding activity requiring constant mental effort.

The way how cognitive mechanisms such as perception, memory, and problem-solving shape the translator's ability to decode, interpret, and reformulate meaning is highlighted by Babayeva [1], in *Modern Cognitive Approach to Learning Translation*. She argues that translators continuously rely on internal mental operations, reinforcing the view that translation is fundamentally cognitive in nature.

In contrast, Marais [3], in *A Biosemiotic Theory of Translation*, shifts the focus toward cultural and sign-based meaning-making. His work emphasizes that translation is a semiotic process embedded in cultural contexts, and meanings emerge through sign interpretation rather than cognition alone. Marais's approach [3] expands translation theory into the realm of symbols, cultural codes, and social meaning systems.

Together, these studies show that cognitive research explains how translators mentally process information, whereas semiotic theory explains how they interpret symbols, cultural meanings, and sign systems. However, the two perspectives are typically explored separately, and their integration remains underdeveloped—defining the research gap addressed in this study.

Traditional studies of translation have primarily focused on issues of quality, accuracy, and efficiency. In contrast, viewing translation as a cognitive activity is a relatively new development. As Shan and Hu [4] note, with the rise of cognitive science, Cognitive Translation Theory has gradually emerged, emphasizing translation as a mental process and examining it through the translator's psychological operations

and cognitive mechanisms. This perspective introduces new methodologies and research directions that continue to advance contemporary translation studies.

When attention moves from the translated text to the translator's mental activity, it becomes clear that each stage of the translation process involves complex cognitive operations. Before translating, the translator must comprehend and evaluate the source text, deciding whether it is appropriate, manageable, and relevant for the target readership. These initial judgments are shaped by multiple cognitive and personal factors, including the translator's professional background, cultural orientation, age, experience, expectations, and individual perception.

During the act of translation itself, translators constantly make decisions, solve problems, and select among competing linguistic and conceptual alternatives. Cognitive effort varies across tasks, and experienced translators often rely on richer mental representations and faster retrieval processes. For example, when translating figurative expressions such as proverbs, inexperienced translators may provide literal translation, or explain them whereas experienced translators are more likely to use an equivalent proverb in the target language. For instance, instead of translating "A fool and his money are soon parted" word-for-word, an experienced translator may choose a culturally relevant equivalent that preserves both meaning and communicative effect. In addition, a research study shows that "concrete words are translated more quickly (and more accurately) than abstract words, and high-frequency words are translated more quickly (and more accurately) than low-frequency words" [[2] De Groot, 1997, p.37] where they see as a solution a cognitive ability and a representation of the translator. Such examples provide the ground on how memory retrieval and cognitive flexibility play a central role in achieving a more effective translation.

Understanding translation as a cognitive activity therefore not only broadens the theoretical foundations of translation studies but also positions the translator's mind as the central space where meaning is interpreted, negotiated, and creatively reconstructed.

The most complex and richest source of cultural and social reality is language, any language that is used to communicate has diverse sign systems. Thus, language can be noted as a universal semiotic system which carries with it various cultural

signs embedded in communication over time. Therefore, as research states, in translation what happens is that “a translator deciphers the encoded message and negotiates meaning in the target language [[5] Shapoval et al., 2023, p. 378].

Precisely, semiotics in general terms is defined as “signs, and study of signs [6]”. It has been studied in translation in recent few decades and represent how a translator transfers from a source language its culture and peculiar images by looking at them as signs and perceptualizing while analyzing and transforming them into a target one. Because language itself functions as a system of cultural signs, the translator must interpret these signs before they can be meaningfully transferred into the target language.

To evaluate how semiotic awareness works in translation, few examples could be considered in the research. In an English text, a character eating “a bacon sandwich” may be rendered by some translators in an Asian context as “a morning sandwich” or “a traditional breakfast sandwich” because bacon carries cultural/religious semiotic meaning. Naturally, some translators in the West might change the concept of white color in the context, which has opposing meanings when looked at through semiotic lens, as in one culture white represents mourning, while in another purity or a wedding.

Understanding translation through a semiotic lens shows why translators must interpret, transform, and recreate signs rather than merely transfer words, making semiotic awareness important for culturally meaningful translation.

This study aims at the factor that in translation the integration of cognitive and semiotic approaches reflects the reality that translation is simultaneously a mental process and a sign-based communicative act. Cognitive translation research explains how translators perceive, store, retrieve, and process information, while semiotics explains what they process — signs, symbols, cultural codes, and socially embedded meanings.

From a cognitive perspective, translators rely on attention, memory, inferencing, problem-solving, and decision-making to understand the source text and construct meaning. From a semiotic perspective, they interpret cultural signs, symbolic references, metaphors, irony, connotations, and culturally specific representations. When combined, these two perspectives provide a more complete view of translation: the

translator not only processes linguistic input, but also interprets the socio-cultural sign systems embedded in it.

Practically, in a real translation both approaches operate together. Before making any lexical or structural decision, the translator first cognitively identifies and evaluates the semiotic content of the message — for instance, whether a phrase functions as a metaphor, a cultural reference, a symbolic color, or a gesture with culturally specific meaning. Only after mentally categorizing the sign can the translator search their memory, compare cultural frameworks, and select an appropriate equivalent or strategy in the target language.

In conclusion, the cognitive–semiotic integration shows that translation is not a simple linguistic conversion, but a dual process in which the mind interprets signs and signs shape mental processes. This perspective strengthens translation studies by connecting mental operations with cultural meaning-making, offering a wider explanation of how translators construct, negotiate, and recreate meaning across languages. This research addressed the theoretical part of the study, and practical observations in future research may further support the theory with examples of cognitive-semiotic integration in the translation process.

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