

Processing Effort and Aesthetic Response in Second-Language Metaphor Comprehension

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The neurocognitive model of literary reading (Jacobs 2011) predicts that foregrounding devices such as metaphors require increased processing effort while simultaneously eliciting stronger aesthetic responses. Empirical support for this claim has been derived primarily from native-speaker populations, leaving the cognitive processing of foregrounding in a second language (L2) relatively underexplored. This issue is increasingly relevant in multilingual contexts, where readers frequently engage with literary texts beyond their native language.

Pilot eye-tracking experiments (Plużyczka, Kakimova, Mendhakar 2024) conducted prior to the present study indicated that literary metaphors in an L2 are processed more slowly than non-metaphorical expressions and receive higher aesthetic evaluations. The pilot data further suggested a positive relationship between metaphor complexity and aesthetic appreciation, as well as a tendency for less comprehensible metaphors to be evaluated more positively. These findings motivated a larger-scale investigation into the cognitive mechanisms underlying aesthetic judgments during L2 metaphor processing.

To examine these mechanisms, a mixed-methods eye-tracking study was conducted with 60 B2-level English-as-a-foreign-language readers randomly assigned to experimental and control groups. Online measures (fixation count, dwell time, and revisit rate) were combined with offline comprehension tests and aesthetic evaluation tasks. Participants read excerpts from *The Golden Bowl* by Henry James, a text rich in metaphorical language.

The results confirmed slower processing of metaphorical expressions, reflected in increased fixation-related measures and rereading behaviour. Strong positive correlations emerged among aesthetic dimensions (beauty, creativity, surprise) and between these dimensions and eye-movement indicators: creativity correlated with dwell time, beauty with revisit count, and surprise with fixation count. In contrast, comprehension scores correlated negatively with aesthetic evaluations, indicating that less comprehensible metaphors tend to receive higher aesthetic ratings. These findings suggest that increased cognitive effort and interpretive openness during L2 processing may intensify aesthetic experience.

Retrospective think-aloud protocols revealed recurrent factors underlying aesthetic judgments, including positive connotations, phonoaesthetic qualities, imaginative engagement, frequency of use, perceived complexity, individual attitudes, and emotional resonance. The findings contribute to psycholinguistic models of figurative language processing by demonstrating that reduced processing fluency in an L2 does not diminish literary engagement but may enhance aesthetic response.

References:

Jacobs, A. (2011). Neurokognitive Poetik: Elemente eines Modells des literarischen Lesens. In R. Schrott & A. Jacobs (Eds.), *Gehirn und Gedicht: Wie wir unsere Wirklichkeiten konstruieren* (pp. 492–520). Carl Hanser Verlag.

Plużyczka, M., Kakimova, A., & Mendhakar, A. (2024). Processing and appreciation of literary metaphors in English as a foreign language: An eye-tracking study. *AILA Review*. <https://doi.org/10.1075/aila.23024.plu>