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Individual Differences in Irony Processing in Hindi-English Bilingual Reading

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Abstract

Bilingual readers show substantial variability in how non-literal language is processed, yet irony is often examined in terms of uniform processing costs. The present study investigated how individual differences shape irony–literal reading behavior in Hindi-English bilinguals using eye-tracking. Fifty-four participants read short texts containing ironic criticism or literal counterparts in either Hindi (L1) or English (L2) and completed measures of cognitive ability, language experience, and meta-representational skills. Aggregate analyses revealed no reliable reading-time differences between ironic and literal sentences. Primary analyses focused on within-participant irony-literal difference scores. Correlational and Bayesian regression analyses showed that the magnitude and timing of irony-literal divergence were systematically related to working memory, language-use patterns, proficiency, and Theory of Mind, with predictors across languages of testing. These findings indicate that irony-related reading differences are not categorical but emerge from structured individual variability, highlighting the value of individual-difference approaches for studying pragmatic processing in bilingual reading.