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Parsing Compounds and Pseudocompounds at the Fovea

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Abstract

Is the visual word recognition system sensitive to compound (e.g., SNOWBALL) and pseudocompound (e.g., CARPET) constituents? To answer this question, we employed red-blue anaglyphs glasses to parse red-blue colored (pseudo)compounds at the fovea—by hypothesis split along the vertical meridian—and allowing for the independent processing of word segments in the visual word form area. Seventy-one participants performed a visual masked lexical decision task with 133 millisecond stimuli presentations. Compounds and pseudocompounds were either split at the (pseudo)morpheme boundary (legally-split) or within a (pseudo)morpheme (illegally-split). We found a statistically significant interaction effect between word type and legality. Planned comparisons revealed an advantage in accuracy for legally-split compounds and pseudocompounds over their respective illegal splits. Furthermore, legally-split compounds elicited more accurate responses than legally-split pseudocompounds. In line with previous findings supporting a purely morpho-orthographic prelexical process with faster presentation times, these findings suggest a temporally distinct mechanism during visual word recognition.