

An ERP study of syntactic anomaly processing in Mandarin sentences

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Abstract: The present study addresses (1) whether Chinese classifier-noun integration is syntactic or semantic in nature, and (2) whether the Anterior Negativity in brainwaves is a separable component indexing automatic morphosyntactic processing (Hagoort, 2003) or instead results from overlapping N400 and P600 components (Tanner, 2014). In Chinese, classifiers (e.g., a sheet of) must be used whenever any noun is quantified or specified and must be congruent with noun meaning. Thirty-three Mandarin speakers read 120 sets of sentences that manipulated classifier-noun congruency (There is a machine-like-classifier/sheet-like-classifier computer on the table) and classifier presence (a machine-like-classifier computer vs. *a computer). A larger N400 component in the incongruent condition suggests that classifier-noun integration is primarily semantic. In the classifier-absent condition, a P600 was observed during the first half of the experiment but that diminished during the second half and an apparent Anterior Negativity emerged, suggesting that readers changed their processing strategy over time.