Harmony in sight or how vowel harmony modulates visual word recognition in Turkish

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*Abstract*

Vowel harmony, a phonological phenomenon in which the vowels in a word keep some features (e.g., frontness vs. backness) in several families of languages (e.g., Turkic and Finno-Ugric languages), serves as an effective segmenting cue in continuous speech and when reading compound words. The present study examined whether vowel harmony also plays a role in visual word recognition. We chose Turkish, a language with four front vowels and four back vowels in which approximately 75% of words are harmonious—containing either front or back vowels. If vowel harmony contributes to the formation of coherent phonological codes, harmonious words will reach a stable orthographic-phonological state more rapidly than disharmonious words. To test this hypothesis, in Experiment 1, we selected two types of monomorphemic Turkish words: harmonious (containing only front vowels or back vowels) and disharmonious (containing front and back vowels). Results showed faster lexical decisions for harmonious than disharmonious words, whereas vowel harmony did not affect the response to the pseudowords. In Experiment 2, where all words were harmonious, we found a minimal advantage for disharmonious than harmonious pseudowords. These findings suggest that vowel harmony helps the formation of stable phonological codes in Turkish words, but it does not play a key role in pseudoword rejection.