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Influence of Paragraph-Level Rhythmic Regularity on Comprehension of Spanish Expository Texts: A Proposed Approach

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Introduction: Regular linguistic rhythmic structures promote a sense of 'harmony' (Couper-Kuhlen, 1993). For example, an utterance with one unstressed syllable between each stressed syllable represents a desired rhythmic state (as in '*Ellos toman vino*' [they drink wine]; stressed syllables are underlined). Moreover, the ability to recognize and anticipate temporal patterns is crucial for efficient cognitive and perceptual processing (Brown et al., 2015). For example, constant alternation of linguistic stimuli can streamline processing, enhancing memory and learning (Falk et al., 2014), while temporal regularities accelerate reading and improve memory capacity (Fanuel et al., 2018). However, existing research has primarily focused on the impact of linguistic regularity at the word or sentence level, leaving questions regarding regularity across entire paragraphs or texts unexplored. **Methodology:** An expository text in Spanish (~400 words) was created in two versions: low regularity and high regularity. Regularity was determined based on the standard deviation of the intervals between stressed syllables (*SDI*). Both text versions originated from the same base, with words subsequently rearranged and swapped to minimize SDI. A survey comprising twelve questions aimed at assessing surface-level text comprehension was employed. One hundred and thirty university students (n=130), with an average age of 20.4 years (103 females and 27 males), were instructed to read one of the two texts silently only once and then promptly complete the questionnaire. **Results:** The scores of the lower-regularity version of the text tended to be higher, indicating a counterintuitive effect where the degree of regularity appears to hinder rather than facilitate text comprehension. However, the differences were not statistically significant (Lower-regularity scores: 17.49 /

Higher-regularity scores: 17.01; W ≈ 297,200, p ≈ 0.359). **Conclusion:** One possible explanation for our results is that there is indeed no influence of the degree of paragraph-level rhythmic regularity on the surface-level comprehension of texts in Spanish speakers. However, there are several aspects of the design and instruments that require review: (1) The utilization of the SDI as an index of regularity. (2) The method for establishing the various levels of regularity. (3) The relation between the length and difficulty of the text and the quantity and type of questions used.

Key words: stimulus regularity; text comprehension; speech rhythm; memory load.

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