Rhythmic convergence during conversational interactions: preliminary evidence in Spanish-speaking dyads

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In some theoretical frameworks, an increase of similarity in speech patterns, known as phonetic convergence, occurs automatically between speakers during conversations (e.g. Louwerse et al., 2012). The present work focuses on the interaction between speech rhythm and phonetic convergence in an interactive task. Specifically, given that repetitions of a speech stimulus can reduce the time and neural activation needed for its processing, and that multiple repetitions significantly enhance memory and learning (Falk et al., 2014), we propose that the use of regular rhythmic structures during conversations produces more convergence between speakers with respect to irregular rhythmic structures. We created a set of stimuli consisting of seven groups of 16 nine- or eight-syllable Spanish sentences each. Each group had a particular rhythmic structure, obtained through the arrangement of different types of words (oxytones, paroxytones, proparoxytones and unstressed words) in feet of different length. Rhythmic structures were composed as follows (unstressed syllables are represented by a lowercase x and stressed syllables by an uppercase X): regular structures (xxXxxXxxX, XxxXxxXxx, XxXxXxXx), irregular structures (xxXxXxxXx, XxXXxxxXx, XxXXxxXx, XxxxXxxXx). We tested four dyads of Spanish native speakers separately in a reading - repetition task, with different combinations of the rhythmic structures. A rhythmic distance score, proposed by Späth et al. (2016), served to determine the degree of convergence between the interlocutors' rhythms. Results indicate a greater amount of convergence between regular structures with respect to irregular ones, when feet nuclei are left aligned. Detail will be given on the response patterns observed in the other conditions, and implications for current models of phonetic convergence in speech will be discussed.

References

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