Influence of rhythmic regularity on accommodation processes during conversations

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Within the changes exhibited by interlocutors during a conversation, *phonetic convergence* represents an increase in similarity in speech patterns that enables mutual adaptation. In some theoretical frameworks, this process occurs in an involuntary and immediate manner during interactions rather than intentionally (e.g. Louwerse et al., 2012). The present work focuses on the interplay between *speech rhythm* and phonetic convergence in an interactive task. Specifically, given that a repeated speech stimulus requires both less processing time and lower neural activation across repetitions, 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*.

To test our hypothesis, we created a set of stimuli consisting of four groups of 16 nine-syllable Spanish sentences each. Each group has a particular rhythmic structure, obtained through the arrangement of different types of words (oxytones, paroxytones, proparoxytones and unstressed words) in *accentual feet* (Cantero, 2002) or *accentual groups* (also referred to as phonetic groups; Hualde & Nadeu, 2014) with different configurations. Rhythmic structures were composed as follows (unstressed syllables are represented by a lowercase *x* and stressed syllables by an uppercase *X* and in uppercase within the sentences):

1. Regular feet: Xxx-Xxx-Xxx (e.g. MA-rio te VIO sin la MÁ-qui-na) [Mario saw you without the machine].

2. Regular group: xXx-xXx-xXx (e.g. la CA-sa se VEN-de por PAR-tes) [the house is sold by parts].

3. Irregular feet: Xx-Xxxx-Xxx (e.g. SOL me CUEN-ta de su SÁ-ba-do) [Sol tells me about her Saturday].

4. Irregular group: Xx-xxxX-xXx (e.g. MA-rio se nos que-DÓ sin NO-via) [Mario ended up without a girlfriend].

All sentences are comprised of six words and three feet or groups, and exhibit a similar syntactic structure (subject + verb + complement). Only high-frequency words were used and synalephas and other kinds of resyllabification within the sentences were avoided.

For conducting the study, we use a reading - repetition task, in which each participant has to read a sentence and the other one has to immediately repeat it (participants alternate between reading and repeating the sentences). A *rhythmic distance score*, proposed by Späth et al. (2016), is then used to determine the degree of convergence between the interlocutors' rhythms.

A pilot study with four dyads of Spanish native speakers showed a greater amount of convergence between regular structures with respect to irregular ones, when feet nuclei were left aligned. Additionally, an overall tendency was observed for the regular utterances to present more similar metrical timing patterns between interlocutors than the irregular ones, rather than a gradual augmentation of the resemblance between regular utterances' rhythms over the course of the task. The results of the application of the task to twelve Spanish-speaking dyads will be presented (4 female-female, 4 male-male and 4 female-male) and the implications for current models of phonetic convergence in speech will be discussed.

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BOOK OF ABSTRACTS

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