THE PROSODY OF YES/NO QUESTIONS IN RIO DE JANEIRO: COMPARATIVE ANALYSIS OF SPONTANEOUS SPEECH AND READING

Thematic panel: 4. Estudos fonéticos; (a) Estudos prosódicos

The work analyzes the prosody of yes/no questions, also known as absolute interrogatives, comparing two samples of speech from Rio de Janeiro: one of spontaneous speech and one of reading. We aimed to establish phonological patterns for the yes/no questions in this variety of Portuguese, observing differences between the spontaneous speech and reading; and also to compare the results with the ones obtained by previous works about the prosody of Portuguese and other Romanic languages. In this way, we intend to collaborate with the description of the intonational grammar of Brazilian Portuguese.

The main aspect that differentiates this work from the previous ones which also address this theme is the systematic comparison between the two speaking styles (spontaneous/reading) and the method here employed. The *corpus* consists of (i) recordings of a "characters game" and (ii) the reading of the dialogues between the participants of the game by the same individuals, days later. The idea of a game was designed in order to induce speakers to produce a great amount of interrogative sentences and keep a good level of spontaneity. The sentences that compose the two parts of the *corpus*, therefore, contain the same propositional content, so that any prosodic difference between them is probably due to the difference between spontaneous speech and reading.

Acoustic analysis and perception tests were based on the *Melodic Analysis of Speech* (MAS) method, from Cantero & Font-Rotchés (2009). The method is divided in two phases: the first one is the acoustic phase, in which the data is prepared, analysed and classified using relative values in percentages to measure the melodic variations in the statements. First, we divided the statements in syllables and measured the fundamental frequency (F0) of the centre of the vowel of each syllable, in absolute values – Hertz (Hz). Following the MAS protocol, when there was an increasing or a decreasing of more than 10% of the F0 inside the same syllable, the difference was considered as relevant, and there was two F0 spots measured in the syllable. After measuring F0 in Hz, the standardization of values was done by building a graphic that shows the tonal distance, in percentages, between a vowel and the following one,

starting from the arbitrary number 100. Once that the perception of intonation occurs in a proportional way, this standardization procedure is a key point in the method. The utilization of relative values is what allows the comparison of data from different speakers, independently of their sex, age or average voice frequency; and it also allows the comparison between statements of different durations. After the acoustic analysis, each statement was classified in four types, according to their final inflexion (FI): rising-falling (circumflex); rising; high nucleus; or falling FI, which is, the latter, considered to be a non-interrogative pattern.

The second phase of the method is the perceptive one, in which the results obtained in the acoustic analysis are validated and the phonological status of the melodic patterns is confirmed by perception tests. The judges/listeners, native speakers of the studied linguistic variety, listened to resynthesised copies of the statements, manipulated using the software *Praat* to eliminate micromelodic variations. Then, they classified the sentences as interrogative, emphatic, suspense or neutral.

It was observed that, in both speech styles, interrogatives confirm the general trend of a circumflex pattern for questions in Rio de Janeiro, as described in the literature, although, in the reading style, they show more micromelodic oscillations along the contour. Also, in spontaneous speech there was a higher prevalence of the rising-falling final inflexion pattern, with fewer occurrences of alternative patterns. Furthermore, in reading data, the average increasing in the nuclear accent was higher than in spontaneous speech, revealing a more salient melodic rising for reading; and the falling pattern, typical of assertions or Qu-questions, is a little more recurrent in spontaneous speech. We also observed that the occurrence of non-interrogative patterns is often related to the expression of attitudes or to very specific pragmatic-discursive situations.