Asking questions across European and Brazilian Portuguese varieties: information-seeking and counterexpectational yes-no questions

Verònica Crespo-Sendra, Marisa Cruz, Joelma Castelo & Sónia Frota

University of Lisbon

vcs.grep@gmail.com, marisasousacruz@gmail.com, joelmacastelo@gmail.com, sonia.frota@mail.telepac.pt

Recent research on yes-no question intonation in European and Brazilian Portuguese suggests that there is a high variety of nuclear patterns of yes-no questions not only between European and Brazilian varieties but also across European Portuguese varieties (Frota et al. 2015, Silva 2014, Cruz et al. 2014, among others). However, there is a lack of studies that include a detailed description and comparison of yes-no questions in different varieties of Portuguese. The first goal of the current study is to describe the intonation of yes-no questions in European and Brazilian Portuguese (EP and BP, respectively) by analyzing a wide range of utterances and regions covered within the project *Interactive Atlas of Prosody of Portuguese*. Considering the fact that interrogatives can have different pragmatic functions, we decided to analyze yes-no questions also from a pragmatic point of view, thus looking at neutral and focused yes-no questions. Studies have shown that speakers can signal the difference between neutral and focused questions intonationally, in various languages (Frota 2002, Savino & Grice 2007, Lee et al. 2008, Truckenbrodt 2009, Crespo-Sendra 2011). Some studies have found a gradient contrast between the two types of questions, while other studies indicate that the contrast is expressed categorically. Therefore, the aims of this paper are: a) to analyze and compare phonologically the nuclear configuration of neutral and focused yes-no questions across Portuguese varieties; and b) to investigate the strategies that EP and BP speakers use to distinguish between neutral and focalized yes/no questions.

The data analyzed in this study consisted of 10 neutral and 9 focused yes-no questions with different stress position in the nuclear word (final, penult and antepenult stress). Focused yes-no questions include both early and late focus targets. The materials were elicited by the presentation of written contexts (i.e. a reading task), and were pronounced twice by three female native speakers from 9 urban regions in Portugal (7 continental regions - Braga, Porto, Lisbon, Castelo Branco, Beja, Évora, Faro, and 2 in the islands of Madeira and Azores), and from 8 urban regions of Brazil, along the Atlantic coast (Paraíba, Sergipe, Bahia, in the North; Minas Gerais, São Paulo, Rio de Janeiro, Santa Catarina and Rio Grande do Sul in the Centre-South). Thus, a total of 540 neutral yes-no questions (10x3x2x9) and a total of 486 focused yes-no questions (9x3x2x9) for EP, and a total of 420 neutral yes-no questions (10x3x2x7) and a total of 378 focused yes-no questions (9x3x2x7) for BP were analyzed. Semi-spontaneous data obtained by means of a Discourse Completion Task were also analyzed and compared with the results of the reading task. Pitch measurements were performed and extracted using Praat software (Boersma & Weenink 2014) and annotated with the ToBI labelling system for Portuguese (Frota 2002, 2014).

Our results show that neutral yes-no questions for EP are divided in four groups (Fig. 1, top panels): the first group (1), Lisboa, is characterized by a falling nuclear pitch accent (H+L*), followed by a complex boundary tone (LH%); the second group (2), Braga, Porto, Beja and Faro, produce this type of questions with a all-rising contour – L* H% and L*+H H% (in Braga, the low tone can be preceded by a high pretonic syllable – (H+)L*); the third group (3), corresponding to Castelo Branco so far, presents a rising tone (L*+H) and a falling boundary (L%), and the last group (4), Évora and the islands, shows a all-falling nuclear configuration, i.e., a low tone that can be preceded by a high pretonic syllable ((H+)L*), followed by a low boundary (L%). As for the neutral questions of BP, the results demonstrate more homogeneity and contiguity across varieties than in EP: Brazilian varieties can be divided into two different groups (Fig. 1, bottom panels): the first one covers the 3 regions of the North and is characterized by a rising pattern (L* H% and L*+H H%); and the second one includes the 5 regions of the Center-South since they all present questions with the same basic melody (LHL). However, the H can be associated to the pitch accent or to the boundary tone depending on the region. Interestingly, truncation globally applies in BP varieties of group (2), whereas in EP varieties tune-text accommodation strategies are more common by means of vowel epenthesis, vowel split or vowel lengthening, confirming previous

analyses (cf. Frota et al. 2015 for a review). Finally, preliminary results about focused yes-no questions (Fig. 2) indicate that EP speakers change the nuclear configuration in almost all the four groups, by using a different pitch accent and/or boundary tone (Faro and Azores are the exception). By contrast, in BP focused questions are produced with the same neutral pattern. Our next step is to investigate whether phonetic differences may cue the two pragmatic meanings when the distinction is not conveyed by contrastive tonal patterns.
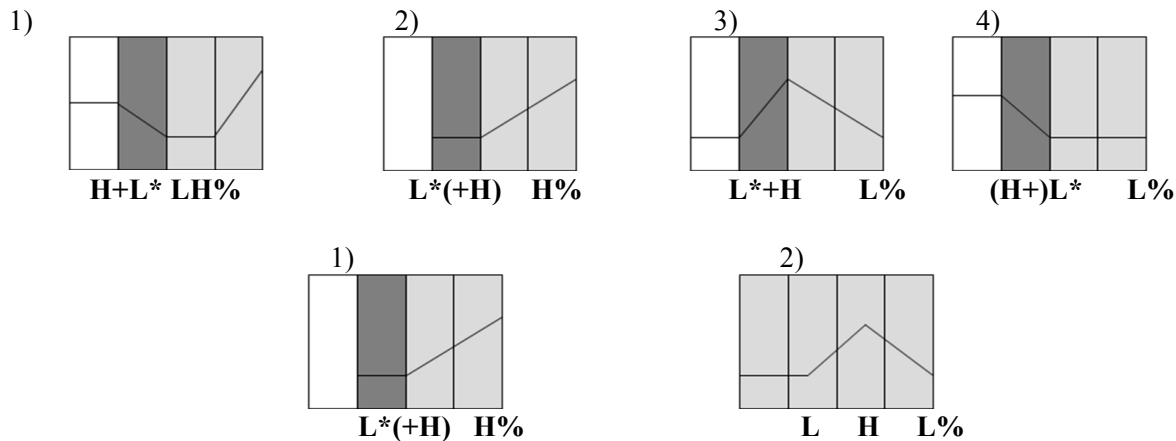
1)   2)   3)   4)

H+L* LH%   **L*(+H)   H%**   **L*+H   L%**   **(H+)L*   L%**

1)   2)

L*(+H)   H%   **L   H   L%**

Figure 1. Schematic diagrams of the neutral yes-no questions intonation. Top panels show the groups of European Portuguese, and bottom panel the Brazilian Portuguese.
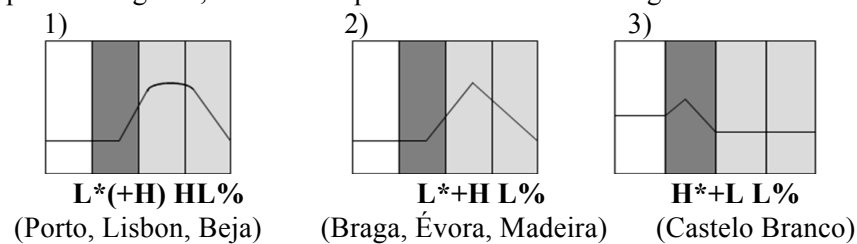
1)   2)   3)

L*(+H) HL%   **L*+H L%**   **H*+L L%**
(Porto, Lisbon, Beja)   (Braga, Évora, Madeira)   (Castelo Branco)

Figure 2. Schematic diagrams of the focused yes-no questions intonation in European Portuguese.

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