

Intonational patterns of interrogative sentences of Brazilian Portuguese

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This work aims to investigate intonational patterns of different types of interrogative sentences of the paulista variety¹ of Brazilian Portuguese (henceforth, BP), in order to observe prosodic differences and similarities among them, based on the Autosegmental Metrical (AM) approach within the intonational phonology framework (Pierrehumbert 1980; Ladd 1996/2008). This study is part of the Interactive Atlas of the Prosody of Portuguese project².

For this purpose, a corpus of global and partial interrogative sentences was described and analyzed through the free software Praat (Boersma & Weenink 2014)³. This corpus consists of a comparable set of 85 interrogative sentences of 15 different clause types (Frota et al. 2015; Mateus et al. 2003) obtained in a reading task. Each sentence was produced three times by three female subjects with similar sociolinguistic characteristics, resulting in a total of 765 sentences.

The results show that global and partial interrogative sentences have similar tendencies on the nuclear contours: they present an ascendant nuclear pitch accent and a low boundary tone in general (see Charts 1 and 2). Global interrogatives present frequently an ascendant nuclear contour, confirming the findings of Frota et al. (2015), Moraes (2008) and Silva (2011), and the most common nuclear tonal configuration associated with this kind of interrogatives is L+(!H* L% (24,2%), – see Figure 1. WH- questions present both ascendant (L+H* H% (12,6%) and L+H* HL% (9,7%)) and descendant nuclear contours (!H+L* L% (11,3%)), but they are mainly ascendant in general (66%). The pre-nuclear contour (as Moraes 2008 and Silva 2011 pointed out) and the total contour also seem to present relevant prosodic information on the prosodic characterization of interrogative sentences. For example, global neutral rhetoric interrogatives (see Figure 2) have an unclear nuclear contour pattern: both ascendant (44%) and descendant (39%). This sentence type seems to be characterized in general by the lower tessiture in F0 between the first pitch accent associated with the first prosodic word of the sentence and the nuclear pitch accent – see Figure 2. In non-neutral global interrogative sentences, the focus was marked differently among confirmatory, negative manipulatory (Mateus et al., 2003, e.g. “Você não vai estudar para a prova?”)⁴ and focused interrogative sentences (early focused): whether by H*+L (negative manipulatory – 85%) or by L*+H L- or by L+H* L- (the last two configurations are related to early focused – 94% – and confirmatory – 68%). These results confirm previous works on the intonational characterization of focus elements in PB. According to Fernandes (2007), H*+L (as Frota 2000, 2002 also proposed for European Portuguese) and L*+H L- can mark focus elements prosodically in BP.

As an addition to previous researches on this field, this work shows that total contour seems to play a role on the pragmatic meaning determination of the interrogative sentences. For instance, global and partial interrogatives may share the same nuclear contour but differ in their global intonational configuration. This topic deserves further investigation, specially concerning the perception of the global and nuclear intonational patterns of interrogative sentences and their pragmatic meanings.

¹ The paulista variety is the one spoken at the state of São Paulo, in Brazil’s southeast.

² The Interactive Atlas of the Prosody of Portuguese (FROTA & CRUZ, 2012-2014) is a project developed mainly at the University of Lisbon, Portugal, which aims to investigate prosody, speech rhythm and intonation of Portuguese varieties, including European, African and Brazilian Portuguese, in order to create a free online interactive atlas.

³ Global interrogatives in BP have the same surface syntactic structure than declarative sentences (Frota 2014), for instance “*O enfermeiro encontrou o medico?*” (Did the nurse find the doctor?) in opposition to “*O enfermeiro encontrou o medico.*” (The nurse found the doctor). Partial interrogatives (or WH- questions) have the WH- word marking the pragmatic meaning, for instance, “*Quem é ela?*” (Who is she?).

⁴ Translation: Won’t you study for the test?

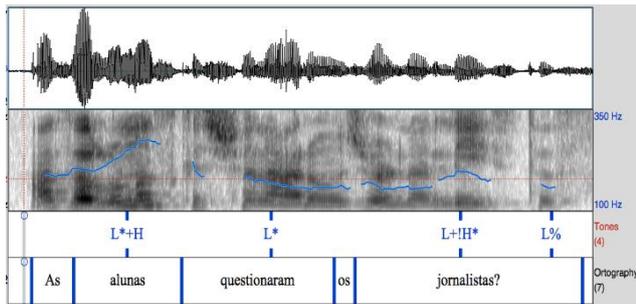


Figure 1 – Analysis of the sentence “As aLUnas questioNaram os jornaLISTas?”⁵.

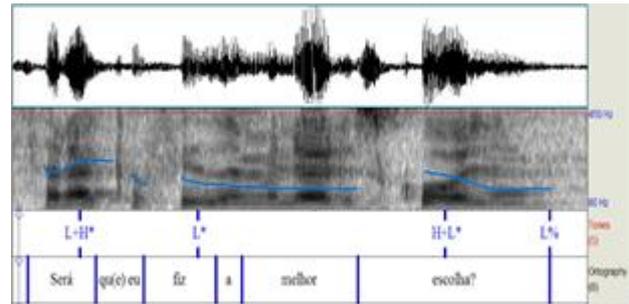


Figure 2 – Analysis of the sentence “SeRÁ que EU FIZ a meLHOR esCOLha?”⁶.

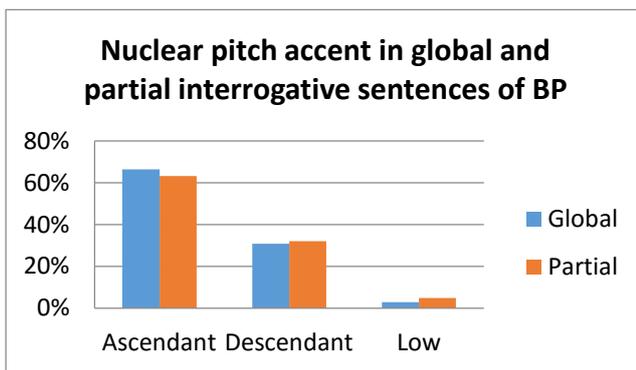


Chart 1 – Nuclear pitch accents in global and partial interrogative sentences of BP.

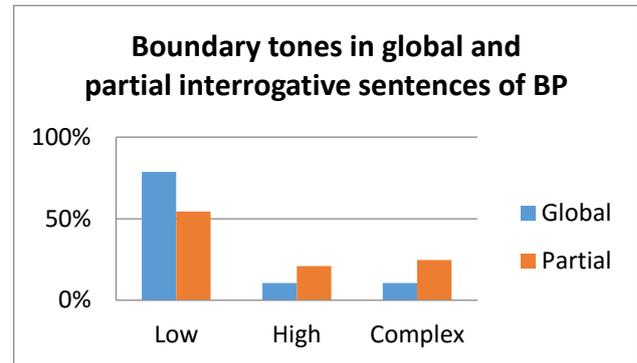


Chart 2 – Boundary tones in global and partial interrogative sentences of BP.

Poster Only

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⁵ Stressed syllables in caps. Translation: Did the students question the journalist?

⁶ Stressed syllables in caps. Translation: Have I made the best choice?