On prosodic phrasing of *tag questions* (*"né?/¿no?"*): Brazilian Portuguese, Argentinean Spanish and Mexican Spanish

Carolina Serra & Carolina Gomes da Silva
Universidade Federal do Rio de Janeiro
carolserraufrj@gmail.com; cluques@ufrj.br

Phonetics and Phonology in Iberia (PaPI)
University of Lisbon - June 25-26, 2013

INTRODUCTION

Although there is no isomorphism between prosodic structure and any other grammatical structure (Nespor & Vogel, 1986/2007, i.a.), it is long attested that the location of prosodic boundaries is somehow related to the location of syntactic boundaries. Many researches have also provided evidences that phrase weight/size affects prosodic phrasing (Selkirk, 2000; Guini, 1993; Frota et al., 2007; Serra, 2009).
Under the traditional prosodic hierarchy perspective, tag questions *"né/¿no?"* should be phrased separately, as far as they are generated outside root sentence. The formation of IP, however, is also affected by prosodic length conditions: long phrases (in number of syllables and of prosodic words) tend to be divided, as well as small phrases tend to form one single IP with the adjacent IP, which leads to the formation of balanced length phrases (Nespor & Vogel 1986/2007, Ladd 1996, Frota 2000).

The Intonational Phrase algorithm
Intonational Phrase (IP) construction → strings not structurally attached to the sentence tree, as well as any remaining sequence of adjacent PhPs in a root sentence are mapped onto IPs (Frota 2000). According to Selkirk's (2005), Comma Phrase.
In Brazilian Portuguese (**BP**), IPs are characterized by the presence of a nuclear contour (a nuclear accent and a final boundary tone) and a pause (Tenani 2002, Serra 2009).
In Argentinean Spanish (**AS**) and Mexican Spanish (**MS**), a nuclear contour and a potential pause insertion are also attested (Gabriel *et alii* 2010, De-La-Mota *et alii* 2010). The presence of a initial tone associated to the right-edge of the first prosodic constituent is optional in all three varieties.

THEME and GOALS

This paper focuses on prosodic phrasing of *tag questions* ("*né?/¿no*?"/ isn't it?) in Brazilian Portuguese (BP), Argentinean Spanish (AS) and Mexican Spanish (MS), in order to observe:
(i) whether tag questions are produced as one single Intonational Phrase (IP), together with the precedent IP, or are produced in different IPs;
(ii) which are its intonational characteristics (Pierrehumbert 1980, Ladd 1996, Sosa 1999), both of the IP which contain the tag question and of the precedent IP; and
(iii) the relation between production and perception of these tag questions.

METHODOLOGY

Corpus: 12 extracts of spontaneous speech, around 30 minutes each.
Speakers: **BP** (1) Production - 5 female speakers. (2) Perception - 11 listeners. University students, born in Rio de Janeiro, from 22 to 38 years old. **AS and MS –** (1) Production - 14 speakers (male and female). University students, born in Buenos Aires and Mexico City, from 20 to 35 years old.

Procedure:
(1)Production **– BP -** Interviews in a noiseless room at UFRJ's Phonetics Lab. **AS and MS -** The Spanish data were extracted from seven colloquial long distance telephone calls (with male and female speakers) from USA to Buenos Aires or to Mexico City. Utterances fully annotated for phonological and intonational phrasing (for Portuguese, Frota 2000, Tenani 2002, Fernandes 2007, Serra 2009; for Spanish, Sosa 1999), to define the placement of **predicted prosodic breaks**.
The Intonational analysis aims to determine the tonal shape of the nuclear contours, under the Intonational Phonology approach (e.g. Beckman & Pierrehumbert, 1986; Ladd, 1996; Frota, 2002), using PRAAT (Version 4.3.12).

(2) Perception - Listeners had to signal the prosodic breaks they perceived in each utterance. Breaks should be wrote down on a piece of paper containing the orthographic transcription of each extract, without any kind of punctuation marks. To check consistency, listener have repeated the task in 2 sessions (for each session the items were grouped in a random way).
The perception experiment was preceded by a training period in which the listeners have received instructions to signal *any kind of break.*

RESULTS and DISCUSSION

Regarding the realization of tags in **BP**, the results show that only two *IP+né* of 37 *data* (5,4%) constitute one single IP (H*+LL% and L+H*LH%) and all other *data* present two separate IPs. The analysis indicates that BP presents a wider variety of intonational contours, which include the configuration H+L*L% + H+L*L% (**32**%) (Figure 1), and also (11%) the configurations H+L* L% + **L%** (Figure 2), H+L* L% + **H%**, L+H* L% + **L%** ("degenerated" IPs – Ladd, 1996), which are characterized by the occurrence of a boundary tone, without pitch accent, in the tag itself.

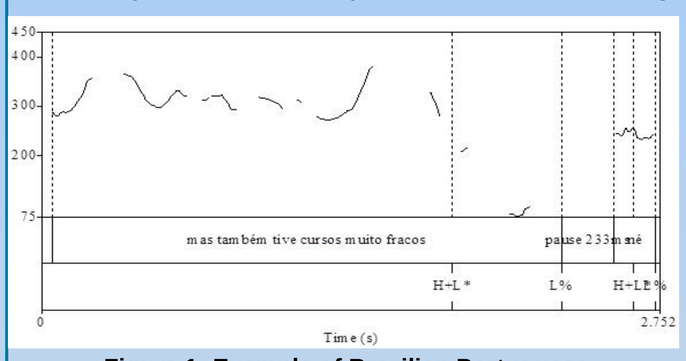

Figure 1: Example of Brazilian Portuguese [mas também tive cursos muito fracos]IP [né?]IP [but I also had very weak lessons]IP [*isn´t it*?]IP

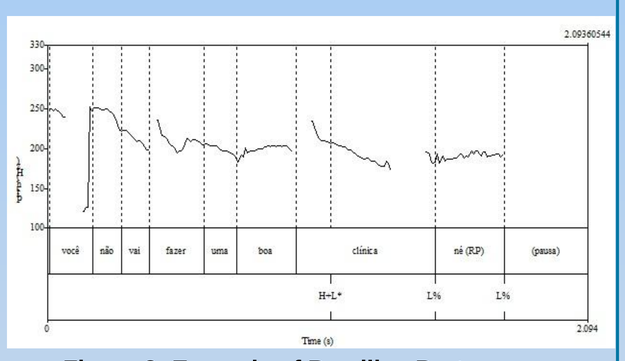

Figure 2: Example of Brazilian Portuguese [você não vai fazer uma boa clínica]IP [né?]IP [you are not going to have a good clinic]IP [*isn´t it*?]IP

In BP, 32% of data present the neutral declatative pattern, not only in the IP which composes the expression "né" but also in the precedent IP.

In spontaneous speech, in BP, the ocurrence of a low (L%) boundary in the tag question prevails, which can represent an evidence of the loss of interrogative mark in this item.

So far, regarding perception, the analyses pointed out to a preference for marking the break after *IP+né* only in Brazilian Portuguese, despite the presence of a nuclear contour in both IPs and the presence of a pause between the IP and the tag question.

In Spanish *data*, both from Buenos Aires and Mexico varieties, there is a tendency to the realization of *IP+no* as two IPs, with both IPs presenting a nuclear contour. We verify that in 47/52 *data* (90%) the boundary tone of the first IP is low (L%) and in 51/52 *data* the tag IPs (*¿no?*) display raising configurations (H%), also containing a pitch accent LH*, L+H*, L+¡H* or L* (Figures 3 and 4).

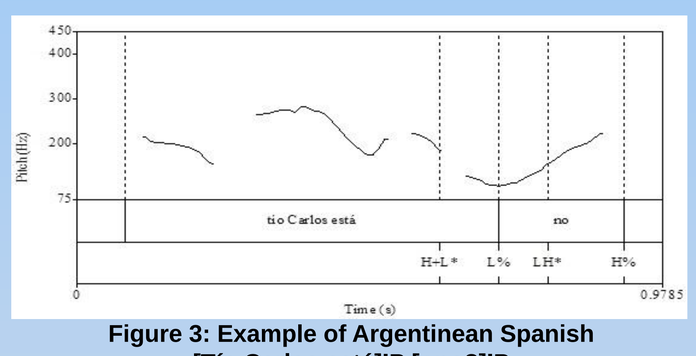

Figure 3: Example of Argentinean Spanish [Tío Carlos está]IP [¿no?]IP [Uncle Carlos is here]IP [*isn't it*?]IP

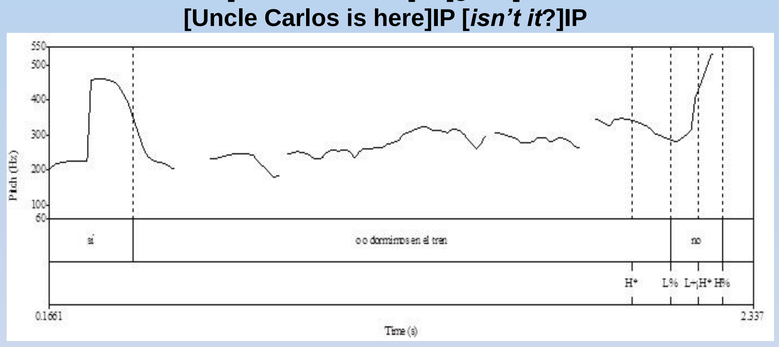

Figure 4: Example of Mexican Spanish [Sí]IP [o o dormimos en tren]IP [¿no?]IP [Yes]IP [or we'll sleep in the train]IP [*isn't it*?]IP

Differently from BP, in AS and MS, a high (H%) boundary is predominant (98%); in another words, the expression *¿no?* maintains its interrogative characteristics. Regarding perception, our hypothesis is that there is a preference for marking the break after *IP+no*, due to the fact that there are only one example (4%) from AS and two examples (7%) from MS which present a pause between the IP and the tag question.

FINAL REMARKS

→ small phrases tend to constitute a compound domain with adjacent IP, although there is a strong tendency to realize as separate forms the tag question and the precedent IP.
→ this research represents a contribution to the cross-linguistic knowledge about the placement and shape of prosodic boundaries and to the understanding of how prosodic boundaries are realized and perceived.

References
DE-LA-MOTA, C. *et alii.* (2010) "Mexican Spanish Intonation". In: PIETRO, P. & ROSEANO, P. (org.). *Transcription of Intonation of the Spanish Language.* Lincom Europa: München.
FROTA, S., M. D'IMPERIO, G. ELORDIETA, P. PRIETO & M. VIGÁRIO. (2007) The phonetics and phonology of intonational phrasing in Romance. In: PRIETO, P.; MASCARÓ, J. & SOLÉ, M.-J. (eds). *Prosodic and segmental issues in (Romance) phonology.* Berlin: John Benjamins, p.131-153.
FROTA, S. (2000) *Prosody and focus in European Portuguese. Phonological phrasing and intonation.* New York: Garland Publishing.
GABRIEL, C. *et alii.* (2010) "Argentinian Spanish Intonation". In: PIETRO, P. & ROSEANO, P. (org.). *Transcription of Intonation of the Spanish Language.* Lincom Europa: München.
GUINI, M. (1993) ϕ-formation in Italian: a new proposal. In: DYCK, Carrie (ed.). *Toronto working papers in linguistics*, v.12, n.2. Toronto: University of Toronto, p.41-78.
LADD, D. R. (1996) *Intonational phonology*. Cambridge: CUP.
NESPOR, M. & VOGEL, I. (2007) *Prosodic phonology*. Berlin: Mouton De Gruyter. Originallly published in 1986 (Dordrecht: Foris).
PIERREHUMBERT, J. (1980) *The phonology and phonetics of English intonation.* PhD Thesis. Massachussets: M.I.T.
SELKIRK, E. (2000). The interaction of constraints on prosodic phrasing. In M. Horne (ed.) *Prosody: Theory and Experiment (Studies presented to Gösta Bruce)*. Dordrecht: Kluwer, 231-261.
SERRA, C. R. (2009) *Realização e percepção de fronteiras prosódicas no Português do Brasil: Fala espontânea e Leitura.* PhD Thesis. Rio de Janeiro: UFRJ.
SOSA, J. M. (1999) *La entonación del españo*l. *Su estructura fónica, variabilidad y dialectología.*Madrid: Cátedra.
TENANI, L.E. (2002) *Domínios prosódicos do português do Brasil: implicações para a prosódia e para a aplicação de processos fonológicos.* PhD Thesis. Campinas: LEL/UNICAMP.