Dissertation Abstract

Prosodic domains in Brazilian Portuguese:
intonational, segmental and rhythmic evidence

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(PhD. Dissertation, Universidade de Campinas, 2002)

The PhD dissertation *Domínios prosódicos no Português do Brasil: implicações para a prosódia e para a aplicação de processos fonológicos* deals with the prosodic structure of Brazilian Portuguese (BP) and compares it with the prosodic structure of European Portuguese (EP). In this comparison, intonational, segmental and rhythmic evidence for prosodic domains that are hierarchically superior to the phonological word were considered. These prosodic domains were the phonological phrase, the intonational phrase and the phonological utterance.

To accomplish the goal of comparing BP and EP prosodic structure, the same theoretical approach followed by Frota (1998) for EP was chosen. This approach is based on both (a version of) the theory of the Prosodic Phonology, as developed in work by Selkirk (1984), Nespor & Vogel (1986), and Hayes (1989), and (a version of) the theory of Intonational Phonology, as developed in work by Ladd (1996), Hayes & Lahiri (1991), among others.

The data collection reflects the aims of laboratory phonology research, in which experimentally collected speech data is used to investigate issues about the abstract categories of phonological structure. Part of the data is comprised of sentences that are similar to EP sentences. Such sentences were built based on the algorithms for the phonological phrase, the intonational phrase and the phonological utterance adapted by Frota (1998) to EP. The same sandhi

processes inspected in Frota (1998) (i.e. fricative voicing, syllable degemin-ation, vowel merger, vowel deletion and semivocalization) were also considered. The BP data further includes the process of tapping.

When BP and EP are compared, the following results arise. BP has no segmental evidence, but only intonational evidence for the three prosodic domains considered. This differs from EP which has both intonational and segmental evidence for the intonational phrase domain. In BP, intonational evidence challenge us with the issue of theoretically understanding the phonetics of pitch range, and the way it expresses phonological relations. It was found that such relations may happen between prosodic constituents at different structure levels, namely the phonological phrase and the intonational phrase.

BP differs from EP in the way stress blocks vowel merger (VM), back vowel deletion (BVD) and semivocalization (SV). In BP, VM is blocked just when the second vowel, in the VV sequence, is the prominent element of the phonological phrase. In EP, VM is blocked whenever one of the vowels involved is stressed (cf. Frota, 1998: 80). Thus, in BP, the sandhi process is sensible to the V_1/V_2 stress distinction and to the type of prosodic structure, while in EP stress on any of the vowels has a blocking effect. In BP, BVD is similar to VM in EP. BVD in BP is blocked whenever one of the vowels involved is stressed, except when stress on V_2 bears phonological phrase prominence and there are two intervening syllables between word stresses. BVD in EP is blocked by stress on V_1 and may be blocked by stress on V_2 depending on the distance between word stresses. The same conditions apply to SV in EP. Differently, in BP SV is always allowed, irrespective of stress position in the V sequence (i.e. initial stress or final stress), number of intervening syllables between stresses, and type of prosodic structure.

Different strategies for stress clash resolution in BP were inspected. It was found that: i) there is beat insertion across phonological phrase boundaries in BP, but not in EP; ii) within phonological phrases, there is beat insertion and the different pitch level strategy is not used in BP, similarly to EP.

Some considerations were also made on the relationship between phono-logical processes and rhythm. Based on the results from the occurring sandhi processes, there is evidence that BP is more syllable-timed than EP. We argue that these rhythmic differences may be related to the fact that phonological processes which affect syllables are sensitive to the boundaries of the higher domains of the prosodic hierarchy in different ways in each variety of Portuguese. In other words, prosodic constituents are relevant to the identification of rhythm patterns.

The evidence found allow us to demonstrate how relevant the prosodic structure is to explain the phonological properties of Brazilian and European Portuguese.

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