

## Two kinds of epenthesis in Brazilian Portuguese

Alex Chabot – Université Côte d'Azur

**Purpose.** This talk identifies two distinct kinds of epenthesis in Brazilian Portuguese as spoken in Rio de Janeiro (henceforth Carioca) and shows how two variants of one of them that do not appear to occur in the same environment in fact follow from the exact same mechanism.

**The data.** Epenthesis effects in Carioca are of two kinds: (1) after coda obstruents *te[k]nico* → *te[ki]nico* 'coach' and after word-initial onset obstruents when followed by a consonant that does not qualify for a branching onset *[p]neu* → *[pi]neu* 'tire'; (2) before word-final sibilants in stressed syllables *ra[paʃ]* → *ra[pajʃ]* 'boy'. The two epenthesis effects present two disjunctions: (1) is triggered by stops and occurs *following* the triggering context while (2) is triggered by a sibilant and occurs *preceding* the triggering context. As a result of (1), codas in BP are distributionally limited to the set of sonorants /r l N/ and a sibilant, /S/. When root-final, all four of these segments alternate: word-finally they incur coda damage, but appear without damage when followed by a vowel: /r/ → [x], /l/ → [w], /N/ is deleted and nasalizes a preceding vowel, and /S/ → a palatal fricative that gets contextual voicing from a following consonant: (3) *ma[x]* 'sea' → *ma[r]*es 'seas'; *brasi[w]* 'Brazil' → *brasi[ɲ]*eiro 'Brazilian'; *b[õ]* 'good' → *b[on]*issimo 'supremely good'; *lu[jʃ]* 'light' → *lu[z]*is 'lights'.

**The analysis.** The analysis is couched in Government Phonology (GP) (Kaye et al. 1990), specifically the strict CV model (Lowenstamm 1996; Scheer 2004). The variable behavior of coda consonants is argued to follow from the limited licensing abilities of empty nuclei relative to filled nuclei (Cyran 2010). In Strict CV coda consonants occur before empty nuclei, which are only able to license one melodic prime—or Element. Lenition occurs when the consonant is made of two primes (sonorants and /S/, resulting in the loss of a prime: l → w etc, see above), but epenthesis is observed when it contains more primes (obstruents). Epenthesis into the empty nucleus (1) is thus a consequence of its inability to license a 3-prime consonant. Melody driven epenthesis as in (2) is not the same. It cannot be a syllabic effect since it occurs only in final, stressed syllables closed by /S/ as in [lújʃ] 'light', and not in words such as [báʃ]ta 'enough' with a word-internal stressed vowel, or [méw] 'honey' after a word-final stressed vowel which is not followed by [ʃ]. The fact that ʃ never alternates with s in word-internal codas (*basta*) but does alternate morpheme-finally (*lu[ʃ]-lu[z]*is) shows that underlyingly they are /ʃ/ in the former, but /s/ in the latter case, neutralized to [ʃ] in codas. BP has tonic lengthening of vowels in open syllables (Major 1985). Stress identifies as syllabic space in the phonology (x-slot, mora, empty CV depending on the theory) which is inserted to the right of the tonic vowel (Chierchia 1986, Scheer & Szigetvári 2005). In *luʃ* coda /s/ produces a floating palatal item to its left when it becomes [ʃ]. This palatal item anchors in the syllabic space provided by stress.

Interestingly, the extra syllabic space has no phonetic manifestation in closed syllables (tonic lengthening occurs only in open syllables), yet in this particular case—when floating segmental material is available—it is visible phonetically before coda /s/. It does not manifest itself in other closed syllables, as in *mel* because no melodic material is provided, and is eliminated after stress assignment. There is no epenthesis in *báʃ*ta because the /ʃ/ is underlying, hence no /s/ → [ʃ] process that produces the palatal item occurs. The analysis discussed affords a unification of (2) with the epenthesis observed in word-initial s+C clusters: diachronically ([i]scola 'school', [i]strella 'star') and synchronically in recent loans ([i]startar 'to start', [i]staff 'staff'), an [i] is inserted to the left of the /s/, which produces a palatal item when becoming [ʃ]. The syllabic space that this palatal item attaches to does not represent stress, but the beginning of the word (the so-called initial CV; see Lowenstamm 1999, Scheer 2012).

**Conclusion.** The analysis discussed identifies two distinct mechanisms that lead to i-epenthesis in Carioca, to the right or left of triggering coda consonants. It affords the unification of the two variants of epenthesis triggered by ʃ which do not seem to share anything at first sight – word-final ʃ preceded by a tonic vowel and word initial ʃ+C.