Overriding sonority preferences in the distribution of Catalan rhotics

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Catalan contrasts two rhotics, but only in intervocalic position: the alveolar tap (*pa*[ɾ]*a* 'stop.IMP') and the alveolar trill (*pa*[r]*a* 'grapevine'). The contrast is neutralized in all other positions. The trill systematically appears as the first element of an onset root-initially ([r]*oca* 'rock', *pre*[r]*omà* 'pre-Roman') and after a consonant (*hon*[r]*a* 'honor'). The tap usually appears as the second element of a complex onset (*t*[ɾ]*enta* 'thirty') and word-finally before a vowel-initial word (*co*[ɾ] *obert* 'open heart'). The main locus of variation between both realizations is the coda position, whether word-internally (*po*[ɾ]*ta*, *po*[r]*ta* 'door') or word-finally (*co*[ɾ], *co*[r] 'heart'). It is essentially determined by dialectal differences but also due to prosodic and contextual factors (Recasens & Espinosa 2007; Recasens 2014: 215–238).

In this talk, we focus on the study of two types of contexts. The first are the contexts that are the most common locus of variation between a tap and a trill realization, to which less attention has been paid in the phonological literature. The second are the contexts that exhibit less common changes such as lambdacism (or lateralization) and rhotacism derived from other consonants, which have been the focus of renewed interest recently (Pons-Moll 2008, 2011; Cabrera-Callís 2014). In the analysis we present, we depart from previous claims according to which the overall distribution of rhotics depends on sonority-related segmental preferences for syllabification (Bonet & Mascaró 1997; Pons-Moll 2008, 2011). As a novelty, we show that any deviation from these tendencies derives from uniformity effects or contextually-marked and prominence-driven constraints taking precedence over sonority conditions.

The study is based on the distribution of rhotics in three Catalan dialects: Algherese (spoken in the city of Alghero in Sardinia), Central Catalan (spoken in the northern and eastern areas of Catalonia), and Valencian. Central Catalan and Valencian display patterns of rhotic distribution that only differ in the outcomes of the coda position, while Algherese deviates from the regular Catalan pattern in onsets as well. Table 1 summarizes the distribution of rhotics in non-contrastive positions according to the context in which they occur (in the contextual column, rhotics are represented orthographically; 'approx' stands for approximant, and ˈV indicates a stressed vowel and V̆ an unstressed one whenever that distinction is relevant).

TABLE 1: Contextual realizations of rhotics in non-contrastive positions.

Context	Valencian	Central Catalan	Algherese	Example
a. #rV	trill	trill	trill	*roca* 'rock'
b. C.r	trill	trill	trill	*honra* 'honor'
c. ˈVr#	tap	trill	trill	*cor* 'heart'
d. Vr.#C$_{[non\text{-}approx]}$	tap	trill	trill	*cor ple* 'full heart'
e. Vr.C$_{[non\text{-}approx]}$	tap	trill	[l] or trill	*porta* 'door'
f. VrC#	tap	trill	[l] or trill	*arc* 'arch'
g. V̆r#	tap	tap	trill	*Sàsser* 'Sassari'
h. Vr.#C$_{[approx]}$	tap	tap	—	*cor de bou* 'ox heart'
i. Vr.C$_{[approx]}$	tap	tap	—	*herba* 'grass'
j. V.r#V	tap	tap	trill	*cor obert* 'open heart'
k. .CrV	tap	Tap	tap (or trill)	*trenta* 'thirty'

According to the predictions made by the Split Margin approach to syllable organization (Baertsch 2002), we expect that the tap, being more sonorous than the trill (Bonet & Mascaró 1997; Pons-Moll 2008, 2011; Parker 2011), appears in margin 2 (M2), that is, in the second position of an onset (*braç*) and in the first position of a coda (*cor*, *arc*, *cor ple*). Additionally, although intervocalic consonants occupy the first position of an onset (a margin 1, M1), the cross-linguistic preference for more sonorous segments to appear in that position as well

(Uffmann 2007) upholds the presence of the tap in intervocalic M1 (*para*, *cor ample*) (Pons-Moll 2011). Instead, the trill should be reserved for the remaining M1, that is, the initial position of a non-intervocalic onset (*roca*, *honra*); uniformity to the left edge ensures the maintenance of all root-initial trills, even intervocalically (*preromà*). This is the pattern found in Valencian Catalan, except for the intervocalic contrasting environment (*parra*), for which some kind of underlying specification is needed in all dialects. In our view, the divergences from this pattern shown by Central Catalan and Algherese stem from requirements not related to the sonority of rhotics and their consequences for syllabification.

Central Catalan limits the contexts in which the tap can show up through the activation of contextual and prominence constraints above the constraint that disfavors trills in M2. To begin with, the selection of trills in word-final stressed syllables, as in *co*[r], can be interpreted as the conjoined action of constraints searching for the alignment of segmental prominence (trills more salient than taps) and positional prominence (final syllable more salient than medial and stressed more salient than unstressed). Moreover, a marked cluster constraint, presumably universal (Recasens 1993), against the co-occurrence of a tap and a non-approximant consonant promotes the presence of trills in some codas, as in *a*[rk]. Algherese presents further intricacies. Unlike other dialects, it does not show /b, d, g/ lenition; hence, the contextual constraint against taps preceding non-approximant consonants targets all preconsonantal rhotics, as in *a*[rk] or *co*[r] *de bou*. Furthermore, the positional constraint promoting more constricted segments word-finally seems to be not prosodically limited in Algherese, since all rhotics in that position are realized as trills (*co*[r], *Sàsse*[r]). What singles out Algherese is the maximization of the contexts in which trills may occur. This result is obtained through the activation of constraints pursuing either the uniformity of the realizations of words at the right edge, with word-final trills maintained when resyllabified before a vowel (*co*[r] *obert*), or the segmental consistency of non-contrasting rhotics, generalizing trills to the second position of an onset as well (*t*[r]*enta*). Finally, the same constraints suggested for the distribution of rhotics can account for the outcomes of liquid neutralization in Algherese, with the selection of the most sonorous segment available in each position: [ɾ] intervocalically (*ma*[ɾ]*a* 'bad.F'; cf. *ma*[l] 'bad.M') and generally in M2 (*p*[ɾ]*at*, instead of *p*[l]*at* 'dish'), but the lateral [l] in preconsonantal codas, where [ɾ], the best option in terms of sonority, is independently discarded (*po*[l]*ta*).

In sum, Catalan dialects provide rich evidence for the variability of rhotics, which is a classic cross-linguistic trait of this class of segments. Nevertheless, the variation that is found is far from random. There is an inclusive relationship between the contexts in which the tap can appear, in the order Algherese ⊂ Central Catalan ⊂ Valencian. This inclusive relationship indicates that the intervention of additional constraints progressively narrows the contexts in which one realization, e.g., the tap, can occur. As a logical consequence, this enlarges the contexts with the alternative outcome, e.g., the trill.

References

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