

Valencian Catalan vowel harmony across morphological and prosodic boundaries

Ricard Herrero (Universitat de València)

In the vowel harmony typical of Valencian Catalan, the stressed mid-low vowels /é, ó/ expand their respective color features, [Palatal] and [Labial], towards the post-stressed low vowels /a/ within the boundaries of the main metric foot. However, both the dialectal (Hadwiger, 1905; Beltran Calvo & Segura-Llopes, 2017) and phonological descriptions (Jimenez, 1998) of the phenomenon allow us to assume an additional morphological constraint, since the corpus of examples displayed, with expressions as in (1), allows us to infer that the irradiation of features spreads up to the final low vowels and, therefore, within non-minimum or morpheme morphological boundaries.

- (1) *Perla* 'pearl' /pérla)_F⁺/
Pistola 'gun' /pis(tóla)_F⁺/

In this work we have analyzed the first two formants of the vowels involved in the phenomenon from the controlled expressions of a group of 32 informants, 8 from each of the three harmonic models of Valencian Catalan —harmonic with both mid-low vowels as trigger vowel or prototypical model (TM); harmony model restricted to stressed labial vowel /ó/ (LM); and harmony model restricted to stressed palatal vowel /é/ (PM)— and 8 from a non-harmonic variety (NH) taken as a control group.

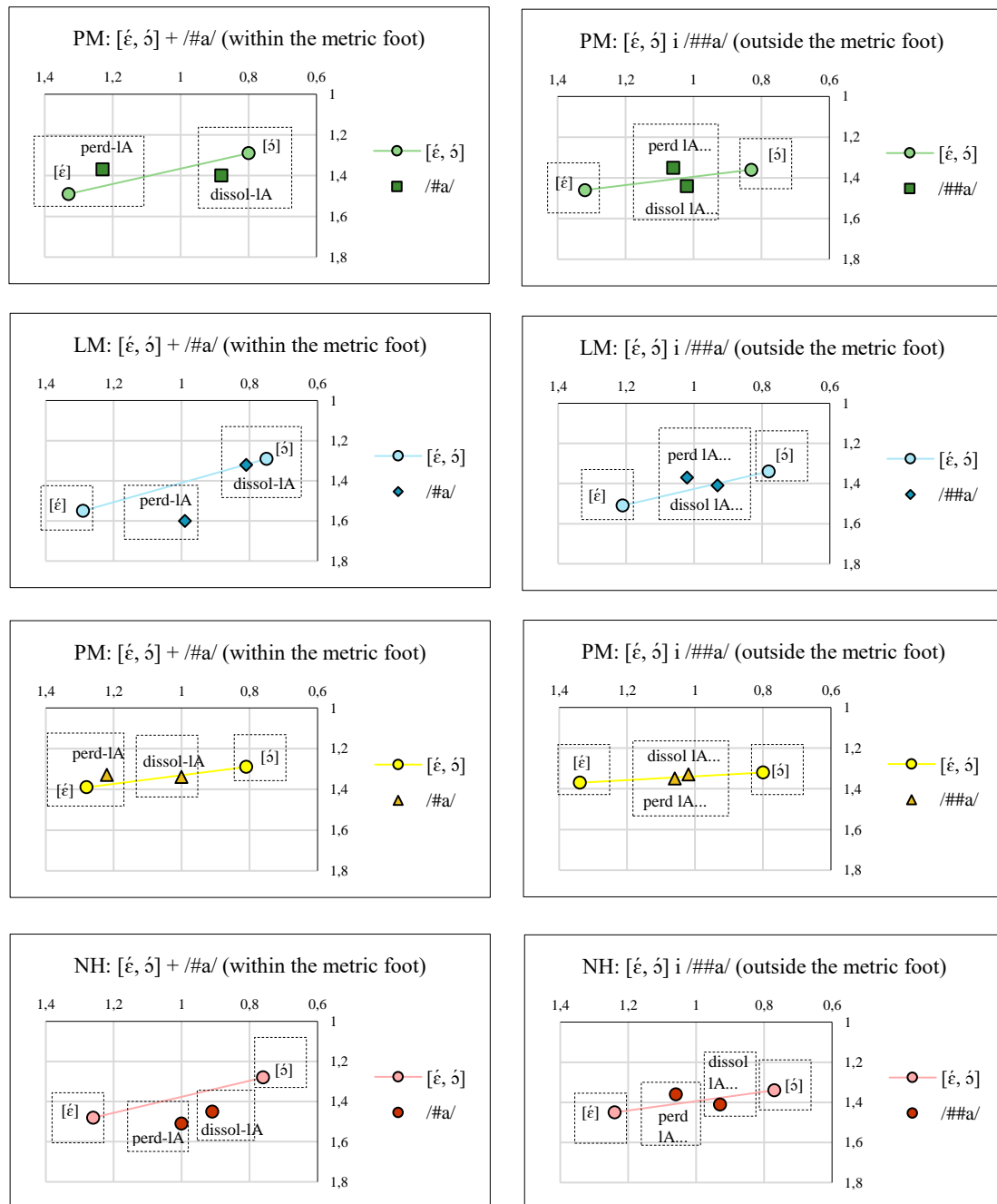
	Typical model	Restricted to /ó/	Restricted to /é/	Non-harmonic variety
/pérla/	[pérlɛ]	[pérla]	[pérlɛ]	[pérla]
/pistóla/	[pistólɔ]	[pistólɔ]	[pistóla]	[pistóla]

The linguistic corpus includes potentially harmonic vowel sequences /é, ó/ followed by /a#/ in three different morphoprosodic contexts: (1) inside the main metric foot, within the basic morphological boundaries; (2) inside the main metric foot, but with the implied vowels on each side of a minor morphological boundary, a clitic boundary (#), and (3), on both sides of a major morphological word boundary (##), and in different metric feet.

- (2) *Perd-la* 'lose that-FEM.' /pérð#la)_F⁺/
Dissol-la 'dissolve that-FEM.' /di(sól#la)_F⁺/
(3) *Ell perd la clau* 'He loses the key' /pérð)_F##(la...)_F/
Ell dissol la farina 'He dissolves the flour' /di(sól)_F ##(la...)_F/

The results (Fig. 1) suggest that, despite the classical descriptions and their canonical examples, feature spreading occurs even across morphological clitic boundaries (Fig. 1, left), if both vowels are within the boundaries of the prosodic foot, in agreement with predictions of the autosegmental descriptions of the phenomenon (Cabré, 1993; Jiménez & Lloret, 2011, 2020). However, when the vowels do not appear grouped in the same rhythmic category (Fig. 1, right), the irradiation of the color features is blocked by the higher morphological boundary: a word boundary.

Fig. 1. Normalized formant frequencies (F1, F2) of [é, ó] and /a/



References

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