Underapplication of vowel reduction in Majorcan Catalan and in other Romance varieties. Some evidence for the left edge of the stem as a prominent position and for subparadigms

1. Data. Majorcan Catalan shows vowel reduction of [e], [ɛ] and [ã] to [a] in unstressed position. However, productive derived words whose primitive has a stressed [ɛ] or [ɛ] vowel at the left edge of the stem do not undergo vowel reduction to [ã], but to [e]. There is, therefore, underapplication of vowel reduction to [ã]: v[e]nt ‘wind’ ~ v[e]ntet ‘wind dim.’; c[ɛ]/‘sky’ ~ c[ɛ]let ‘sky dim.’ (see [14], [1], [11], [12]). The very same patterns under similar conditions are found in inflectional verbal paradigms, although in this case underapplication of vowel reduction is not found when the alternating stressed vowel is [ɛ] (see [1], [11]). Learned words and loanwords with unstressed e also show [e], especially when located at the left edge of the stem and when preceded by a labial consonant [1]: esp[ɛ]cial ‘special’, p[e]llicula ‘film’, b[e]nigne ‘benign’, f[e]lic ‘happy’, etc.

2. Generalizations & analysis. Previous descriptive and theoretical approaches to these facts have already detected that a paradigmatic effect is at play here. According to [12], cases with normal application and cases with underapplication of vowel reduction exhibit a different behavior because the latter bear a lexical mark responsible for the demotion, in the constraint hierarchy, of the M constraint favoring the schwa in unstressed position. In this paper, we provide a different interpretation of the facts framed within OT. Within derivation, there are 4 crucial conditions for the underapplication of vowel reduction within derivation, which are not enough independently.

2.1 The unstressed affected vowel must have a correspondent stressed vowel in the stem of the primitive word. This circumstance can be interpreted as the result of an O-OLDENT(F) transderivational F constraint ([2]), which demands that surface correspondent segments must have the same featural specification; BASE-PRIORITY, on the other hand, ensures that the direction of the pressure is from the base to the derived form and not the opposite. 2.2 The vowels in the stressed stem of the primitive form must be front and mid (i.e. [ɛ] & [ɛ]), in that the pressure does not work when the primitive has [ã]. This condition, as well as the fact that the result of the process is always [e] (and never [ɛ]), can be explained by the high ranking of the M constraints *M/a and *M/e, penalizing these vowels in unstressed position and which inhibit the possible effects of the constraint demanding uniformity in the stem. 2.3 The position of the vowels under surface correspondence must be at the left edge of the stem (cf. pap[e]r ‘paper’ ~ pap[œ]ret, vs. p[ɛ][ix ‘fish’ p[ɛ]ixet, p[ɛ]ixot). This condition can be attributed to a prominence effect, in that in a prominent position (such as the left edge of the stem) a more prominent vowel than [ã] (i.e. [ɛ]) is selected, whereas in a non-prominent position (such as the right edge of the stem) a non-prominent vowel (i.e. [ã]) is selected. 2.4 The derived form must be productive (cf. p[ɛ][ix ‘fish’ ~ p[ɛ]ixet ‘fish dim.’, p[ɛ]ixot ‘fish augm.’ vs. p[œ][ixater ‘fisherman’, p[œ][ixatería ‘fish shop’; see [1], [11]). This can be interpreted as an O-O SUBPARADIGM IDENT(F) F effect, along the lines of [13]. Within verbal inflection, where there is no BASE-PRIORITY, underapplication of vowel reduction applies because overapplication is blocked by the high ranked constraint *N/[ã], penalizing a segment of low sonority as a nucleus. 3. Theoretical & empirical implications. 3.1 § 2.3 advocates the need of recognizing an additional prominent position (i.e. the left edge of the stem), and the subsequent prominence hierarchy for vowels according to their position within the stem *œ/L-Stem-Edge >> *i,w/L-Stem-Edge >> *e,o/L-Stem-Edge >> *œ,œ/L-Stem-Edge >> *a/L-Stem-Edge, apart from those already detected in previous studies ([10]; [5], [6]; [3], [4]; [7], [8]; [9]; additional evidence for this hierarchy based on data from other Romance languages will be provided). 3.2 § 2.4 demands an uneven and a hierarchical structure for the generated paradigm candidates, so that the members in it can be unequally be affected by the O-O F constraints ([13]; see also § 4). 3.3 The fact that labials favor [e] can be interpreted as a
coarticulation effect. 3.4 The high ranking of *[s] is not an *ad hoc* stipulation: it formally expresses that the phonemic character of the schwa is becoming a relic, a circumstance which is additionally corroborated by the fact that loanwords with a stressed e are systematically realized with [e]: Interim[e]nt, and not with [s]. 3.5 Loanwords and productive derivation exhibit, as seen, [e]; this suggests that the asymmetric unstressed vowel system of MC ([i] [u]; [ ] [o]; [s]) is progressively becoming symmetric ([i] [u]; [e] [o]; [s]) (see [11]). 4. Further empirical evidence. The need for an uneven and a hierarchical structure for the generated paradigm candidates finds further support in the behaviour of Brazilian Portuguese, where paradigmatic pressures in the derivational paradigm are subject to similar conditionings: underapplication of vowel reduction to [e] and to [o] due to the pressure of a base with [ê] or [s] is also found just in productive derivation (cf. caf[ê] ‘coffee’ ~ caf[e]zinho ‘coffee dim.’, *caf[e]zinho; f[ê]sta ‘party’ ~ f[ê]stinha ‘party dim.’, *f[e]stinha; forr[s] ‘popular dance’ ~ forr[s]zão ‘popular dance augm.’, *forr[o]zão), but not in non-productive derivation (cf. s[ê]la ‘chair’ ~ s[e]lim ‘saddle’; abric[s] ‘apricot’ ~ abric[o]teiro ‘apricot tree’).

REFERENCES

ABBREVIATIONS: M = MARKEDNESS; F = FAITHFULNESS; OT = OPTIMALITY THEORY