

From positional faithfulness to contextual markedness

1. Introduction. Optimality Theory has commonly made use of two types of constraints: faithfulness and markedness constraints (Prince & Smolensky 1993, McCarthy & Prince 1995). Moreover, both kinds of constraints admit to be relativized according to the position or the context to which they apply or are active. Indeed, in addition to standard faithfulness constraints and context-free markedness constraints, *positional* faithfulness constraints (Beckman 1998; Casali 1996, 1997) and *contextual* markedness constraints (Prince & Smolensky 1993) are generally invoked. Both kinds of constraints, however, are alleged to be redundant and thus mutually excluding, in that they do the same job. The former just interact with context-free markedness constraints: the effects of a general markedness constraint can be inhibited by the higher ranking of a faithfulness constraint which protects a segment, a feature, etc., in a specific structural position. The latter, on the other hand, interact with standard faithfulness constraints: the effects of a specific markedness constraint can be reduced by relativizing it to a specific context.

2. Goal. The purpose of this paper is to explore the relation between positional faithfulness and contextual markedness constraints, and to show how, in some particular cases and from a diachronic point of view, the latter can be interpreted as induced by the effects of the former into the grammar of languages throughout its historical development. Our proposal is illustrated with a set of cases of underapplication of vowel reduction which occur in some dialects of Catalan.

3. Data. In Majorcan Catalan (MC), the process of vowel reduction of the mid front vowels /e/ and /ɛ/ to schwa [ə] in unstressed position underapplies under certain circumstances: *a*) in productive derived forms with an unstressed vowel located in the initial syllable of the stem, which alternates with a stressed mid front vowel in the stem of the underived form (*p[é]ix* ‘fish’ ~ *p[e]ixet* ‘fish *dim.*’; see also (1)); *b*) in verbal forms with an unstressed vowel located in the initial syllable of the stem, which alternates with a stressed close mid front vowel in another verbal form of the same inflectional paradigm (*p[é]ga* ‘(s/he) hits’ ~ *p[e]gam* ‘(we) hit’; see also (2)); *c*) in learned and loan words with an unstressed *e* located in the initial syllable of the stem (*p[e]culiar* ‘peculiar’; see also (3)).

4. Proposal. 4.1. *Alternating forms* (cases *a* and *b*). In Pons-Moll (in press a, b), it is argued that underapplication of vowel reduction to schwa in MC derivational and inflectional forms is a direct consequence of the interaction of the prominence constraint hierarchy banning certain vowels in unstressed position according to their sonority value and a set of output to output faithfulness constraints relativized according to two factors: the productivity of the derivational process and the position of the affected vowel within the stem (see the referred works for a more formal details about the proposal). 4.2. *Non-alternating forms* (cases *c*). Underapplication of vowel reduction to schwa in learned and loan words is also circumscribed to those cases in which the unstressed vowel is located in the initial syllable of the stem. In these cases, however, the unstressed vowel does not alternate with a stressed one. O-O *positional faithfulness constraints*, therefore, cannot explain this behavior, but *contextual markedness constraints* banning a schwa in this specific position (*i.e.*, the initial syllable of the stem) can. From a diachronic perspective, a plausible explanation of these facts is to consider that the activity of the O-O faithfulness constraints relativized according to the position of the vowel within the stem, responsible for underapplication of vowel reduction to schwa in productive derivation and inflection, that is, in the productive phonology of the dialect, and which have provoked a drastic reduction of the occurrences of the schwa in stem-initial position, have led, throughout time, to a reinterpretation of the unstressed vowel system by MC speakers. That is to say, the effects of the positional faithfulness constraints enhancing the appearance of [e], instead of [ə], in the initial syllable of the stem, would have been reinterpreted by MC speakers as a consequence of a contextual or positional markedness constraint of the type * $\text{ə}/\text{Initial-Syll-Stem}$, banning a schwa in the initial syllable of the stem and which at present is operating just in loanwords. Furthermore, the prediction is that this constraint will likely affect all kinds of words, motivating the massive disappearance of the schwa in this specific position.

DATA AND REFERENCES(1) *Normal application vs. underapplication of vowel reduction in derivation*

BASE (UNDERIVED FORM)	PRODUCTIVE DERIVATION	NON-PRODUCTIVE DERIVATION
<i>a. Stressed stem with [é] or [é]</i>	<i>b. Unstressed stem with the vowel in the initial syllable of the stem → unexpected [e]</i>	<i>c. Unstressed stem with the vowel in the initial syllable of the stem → expected [ə]</i>
<i>p[é]ix</i> ‘fish’	<i>p[e]ix[ə]t</i> ‘fish dim.’	<i>p[ə]ixat[é]r</i> ‘fisherman’
<i>t[é]rra</i> ‘earth’	<i>t[e]rr[ə]ta</i> ‘earth dim.’	<i>t[ə]rr[é]stre</i> ‘terrestrial’
<i>d. Stressed stem with [é] or [é]</i>	<i>e. Unstressed stem with the vowel not in the initial syllable of the stem → expected [ə]</i>	<i>f. Unstressed stem with the vowel not in the initial syllable of the stem → expected [ə]</i>
<i>pap[é]r</i> ‘paper’	<i>pap[ə]r[ə]t</i> ‘paper dim.’	<i>pap[ə]rera</i> ‘paper basket’
<i>fid[é]u</i> ‘noodle’	<i>fid[ə]u[ə]t</i> ‘noodle dim.’	<i>fid[ə]u[á]da</i> ‘noodle dish’

(2) *Normal application vs. underapplication of vowel reduction in inflection*

STRESSED-STEM VERBAL FORM	UNSTRESSED-STEM VERBAL FORM
<i>a. Stressed stem with [é] or [é]</i>	<i>b. Unstressed stem with the vowel in the initial syllable of the stem → unexpected [e]</i>
<i>p[é]ga, p[é]gues, p[é]gui, p[é]guis, p[é]guen</i> ‘to hit’ verbal forms	<i>p[e]g[á]m, p[e]g[á]u, p[e]gar[é], p[e]gar[í]es...</i> ‘to hit’ verbal forms
<i>esp[é]r, esp[é]res, esp[é]ra, esp[é]ri, esp[é]rin</i> ‘to wait’ verbal forms	<i>esp[e]r[á]m, esp[e]r[á]u, esp[e]r[á]ssis</i> ‘to wait’ verbal forms
<i>c. Stressed stem with [é]</i>	<i>d. Unstressed stem with the vowel in the initial syllable of the stem → expected [ə]</i>
<i>x[é]rr, x[é]rra, x[é]rren, x[é]rris, x[é]rren</i> ‘to chat’ verbal forms	<i>x[ə]rr[á]m, x[ə]rr[á]u, x[ə]rrar[í]es</i> ‘to chat’ verbal forms
<i>at[é]rra, at[é]rren, at[é]rri, at[é]rrin</i> ‘to land’ verbal forms	<i>at[ə]rr[á]m, at[ə]rr[á]u, at[ə]rrar[í]es...</i> ‘to land’ verbal forms
<i>e. Stressed stem with [é]</i>	<i>f. Unstressed stem with the vowel not in the initial syllable of the stem → expected [ə]</i>
<i>cont[é]st, cont[é]stes, cont[é]sta...</i> ‘to answer’ verbal forms	<i>cont[ə]st[á]m, cont[ə]st[á]u, cont[ə]star[í]a...</i> ‘to answer’ verbal forms
<i>acc[é]pt, acc[é]ptes, acc[é]pta...</i> ‘to accept’ verbal forms	<i>acc[ə]pt[á]m, acc[ə]pt[á]u, acc[ə]ptar[í]a...</i> ‘to accept’ verbal forms

(3) *Normal application vs. underapplication of vowel reduction in inherited and loanwords*

<i>a. LEARNED AND LOAN WORDS</i>	<i>b. INHERITED WORDS</i>
<i>p[e]culi[á]r</i> ‘peculiar’	<i>p[ə]ssig[á]r</i> ‘to pinch’
<i>p[e]d[á]l</i> ‘pedal’	<i>b[ə]s[á]da</i> ‘kiss’
<i>p[e]l[í]cula</i> ‘film’	<i>b[ə]ss[ó]</i> ‘twin’
<i>comm[e]mor[á]r</i> ‘to commemorate’	<i>m[ə]nt[í]da</i> ‘lie’
<i>llargm[e]tr[á]tge</i> ‘feature film’	<i>m[ə]l[ó]</i> ‘melon’
<i>imp[e]c[á]ble</i> ‘impeccable’	<i>p[ə]ned[í]r-se</i> ‘to regret’
<i>m[e]dic[í]na</i> ‘medicine’	<i>m[ə]norqu[í]</i> ‘Minorcan’
<i>f[e]l[í]ç</i> ‘happy’	<i>f[ə]ix[ú]c</i> ‘heavy’
<i>f[e]tix[í]sme</i> ‘fetishism’	<i>f[ə]r[í]r</i> ‘to hurt’
<i>v[e]rm[ú]t</i> ‘vermouth’	<i>v[ə]ll[ú]t</i> ‘velvet’
<i>v[e]rb[é]na</i> ‘party’	<i>v[ə][í]</i> ‘neighbor’

Selected references: Pons-Moll, Clàudia (accepted, in press) «Underapplication of vowel reduction to schwa in Majorcan Catalan productive derivation, verbal inflection and learned and loan words». A: *Proceedings of Going Romance 2009*. Amsterdam-Philadelphia: John Benjamins. Clàudia Pons-Moll (in press) «Underapplication of vowel reduction to schwa in Majorcan Catalan. Some evidence for the left syllable of the stem as a prominent position and for subparadigms». A: Kan, S.; Moore-Cantwell, C.; Staufs, R. (ed.) *Proceedings of NELS 40*. Prince, A.; Smolensky, P. 1993. *Optimality Theory: Constraint Interaction in Generative Grammar*. New Brunswick / Boulder: Rutgers University / University of Colorado. Published (2004), Malden / Oxford: Blackwell.