

Morphologically conditioned intervocalic rhotacism in Algherese Catalan. An account with lexically indexed constraints

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1. Introduction

(1) General pattern of intervocalic rhotacism in Algherese Catalan:¹

<i>a. Intervocalic rhotacism of /d/</i>	
<u>Non alternating process</u>	<u>Alternating process</u>
<i>Nađal</i> [naɟál] 'Christmas'	<i>nebođa</i> [nabóɾa] 'niece' (cf. <i>neboɟ</i> [nabóɟ] 'nephew')
<i>neđar</i> [naɟá] 'to swim'	<i>delicadeśa</i> [derikaɟéza] 'delicacy' (cf. <i>delicadeɟ</i> [derikaɟé] 'delicate')
<i>cađa</i> [káɾa] 'every'	<i>ciutađà</i> [siwtará] 'citizen' (cf. <i>ciutaɟ</i> [siwtát] 'city')
<i>b. Intervocalic rhotacism of /l/</i>	
<u>Non alternating process</u>	<u>Alternating process</u>
<i>oli</i> [óɾi] 'oil'	<i>mała</i> [mára] 'bad FEM.' (cf. <i>mal</i> [mál] 'bad MASC.')
<i>bolet</i> [buɾét] 'mushroom'	<i>soła</i> [sóɾa] 'alone FEM.' (cf. <i>sol</i> [sól] 'alone MASC.')
<i>quiló</i> [kiɾó] 'kilogram'	<i>llençolet</i> [lan'suɾét] 'sheet DIM.' (cf. <i>llençoɟ</i> [lan'sóɟ] 'sheet')

2. Lexical conditioning of intervocalic rhotacism

Remarks from the statistical analysis (Cabrera-Callís 2009a):²

- No intraspeaker variation: the triggering of the process is only lexically and morphologically conditioned.
- No interspeaker variation: Algherese speakers tend to produce the same outputs, with very residual room for variation or linguistic creativity.
- The most important factors determining the triggering/blocking of the process are: the position of /d, l/ within the word and the word class in which they occur.

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¹ Unless otherwise noted, all data are from Cabrera-Callís (2009a, 2009b).

² The statistical analysis covered only the intervocalic /d/ rhotacism process. In this work, however, I also extend the statements to the intervocalic /l/ rhotacism process, since the observation of the data in the corpus (Cabrera-Callís, 2009b) leads to similar conclusions. Nevertheless, the statistical support of the claims is only valid for the first type of rhotacism.

(2) Morphological and lexical conditioning of intervocalic rhotacism

a. Lack of rhotacism at the left edge of the root

adolorir /a#dolor + i + r/³ [adururí] ‘to hurt’

prediure /pre#diw + r + e/ [predíwra] ‘to predict’

preludi /pre#ludi/ [prelúdi] ‘prelude’

relectura /re#lektur + a/ [reletúra] ‘re-reading’

b. Two patterns in root-internal position

Rhotacism

in inherited words

cadena /kadēn + a/ [kaɾéna] ‘chain’

medecina /medēsīn + a/ [maɾasína] ‘medicine’

matalaf /matalaf/ [mataráf] ‘mattress’

color /koɫor/ [kuɾó] ‘color’

Lack of rhotacism

in loanwords and learned words

odi /ɔdi/ [ódi] ‘hate’

escadença (It.) /skadēns + a/ [askadén'sa] ‘expiration’

dòlar (Engl.) /dɔlar/ [dólar] ‘dolar’

colorant /koɫor + ant/ [koɫoránt(e)] ‘artificial color’

c. Two patterns in root-final position

Rhotacism

in inherited words

buda (Sard.) /bud + a/ [búra] ‘type of plant’

foradar /forad + a + r/ [furaɾá] ‘to make a hole’

maɫa /maɫ+a/ [mára] ‘bad FEM.’

solitud /sɔɫ + itud/ [suɾitút] ‘loneliness’

Lack of rhotacism

in loanwords and learned words

Buda /bud + a/ [búda] ‘Buda’

güidar /gwid + a + r/ (It.) [gwidá] ‘to drive’

paral·lela /paraleɫ + a/ [paraléla] ‘parallel FEM.’

similitud /simil + itud/ [similitút] ‘similarity’

d. Rhotacism within a suffix

gatolí /gat + olɪ/ [gaturí] ‘kitten’

ratolí /rat + olɪ/ [raturí] ‘mouse’

adolorida /a#dolor + i + d + a/ [adururíɾa] ‘hurted FEM.’

servidor /serv + i + dor/ [salviró] ‘servant’

➤ Only three exceptions to the general tendency: *-idi*, *-dura* and *-edu* (Sard.). See: *genocidi* /genos + idi/ [swisídi] ‘suicide’, *adobadura* /adob + a + dur + a/ [adubadúra] ‘repair’, *escuredu* (Sard.) /skur + edu/ [askurédu] ‘poor DIM.’

³ I slightly simplify the underlying representation for the sake of clarity. Notation: Engl. = English, It. = Italian, Sard. = Sardinian, Sp. = Spanish.

3. An account in terms of lexically indexed constraints

3.1. Descriptive generalizations and theoretical background

➤ The pattern of rhotacism analyzed can be understood as a sonority driven effect: along the lines of Uffmann (2005) and Pons (2008b), we consider that intervocalic onsets are peaks, and that there is a drive towards minimal sonority contrast between vowels. Hence, the prominence hierarchy in intervocalic position is that of peaks, not that of margins: the most sonorous, the better.

(4) Prominence hierarchy for consonants in intervocalic position [Adapted from Uffmann (2005) and Pons (2008b)]

$*V_V/\text{stop} \gg *V_V/\text{fricative} \gg *V_V/\text{nasal} \gg *V_V/\text{trill} \gg *V_V/\text{lateral} \gg *V_V/\text{flap} \gg *V_V/\text{glide}$
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Thus, ranking faithfulness between ($*V_V/\text{stop} \gg$) $*V_V/\text{lateral}$ and $*V_V/\text{flap}$, we can easily account for the process.

➤ Regarding intervocalic rhotacism, Algherese is clearly sensitive to morphological categories: it drastically blocks the process at the left edge of the root, it allows lexically conditioned alternation inside the root, and it generally triggers its activity within the suffix. This behavior can be straightforwardly captured by assuming a hierarchy protecting the left edge of the root above the root-internal position and, finally, the suffix internal position, as shown in (5).

(5) Positional faithfulness hierarchy

$\text{IDENT (Manner)}_{\text{Left-Root}} \gg \text{IDENT (Manner)}_{\text{Root}} \gg \text{IDENT (Manner)}_{\text{Suffix}}$
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➤ Along the lines of Pater (2000, 2006, 2009), it is assumed that faithfulness and markedness constraints can be lexically indexed in order to capture the variable behavior of some morphemes, which display a phonological pattern unaccountable in purely phonological terms.

Morphemes often behave differently phonologically in ways that cannot be explained purely phonologically: one morpheme undergoes or triggers a process while another morpheme fails to undergo or trigger that process, even though the two are in all relevant respects indistinguishable.

[Pater 2009: 1]

Under this view, a single constraint can be multiply instantiated in a constraint hierarchy, and each instantiation may be indexed to apply to particular set of lexical items.

[Pater 2006: 7]

It is perhaps inconsequential which [constraint] is chosen, since an indexed version of either one will allow inconsistency to be resolved. If, however, it is taken as a goal to lexically index the smaller set of forms (i.e. the 'exceptional' ones), then a bias to a smaller set of indexed morphemes could be built in.

[Pater 2009: 19]

➤ Within the root, morphemes displaying rhotacism belong to a closed group of inherited words that entailed the process diachronically. They are, thus, the ones indexed in the lexicon. The opposite works for suffixes: morphemes displaying rhotacism belong to a majority group that entails the process synchronically. The exceptional ones prohibiting its regular productive activity are, thus, indexed in the lexicon.

3.2. Posited constraints

*VdV: Assign one violation mark for every intervocalic voiced dental stop. (Adapted from Uffmann (2005) and Pons (2008b))

*VIV: Assign one violation mark for every intervocalic lateral. (Adapted from Uffmann (2005) and Pons (2008b))

*VrV: Assign one violation mark for every intervocalic flap. (Adapted from Uffmann (2005) and Pons (2008b))

*VdV_L: Assign one violation mark for every intervocalic voiced dental stop in a lexically indexed morpheme _L. (Adapted from Uffmann (2005) and Pater (2006))

*VIV_L: Assign one violation mark for every intervocalic lateral in a lexically indexed morpheme _L. (Adapted from Uffmann (2005) and Pater (2006))

IDENT(Manner)_{Left-Root}: Assign one violation mark for every segment in the input standing at the left edge of the root that doesn't bear the same features for (Manner) in the output.

IDENT(Manner)_{Root}: Assign one violation mark for every segment in the input standing in the root that doesn't bear the same features for (Manner) in the output.

IDENT(Manner)_{Suffix}: Assign one violation mark for every segment in the input standing in the suffix that doesn't bear the same features for (Manner) in the output.

IDENT(Manner)_{Suffix-s}: Assign one violation mark for every segment in the input standing in a lexically indexed suffix _s that doesn't bear the same features for (Manner) in the output.

3.3 Analysis

3.3.1 Root-internal cases

(6) *oli* ‘oil’, *dòlar* ‘dolar’, *cada* ‘every’, *odi* ‘hate’

/ɔli/L	*VdV _L	*VIV _L	IDENT(Man) _{Root}	*VdV	*VIV	*VrV
a. ☞ [óri]			*			*
b. [óli]		*W	L		*W	L
/dɔlar/						
a. ☞ [dólar]					*	
b. [dórar]			*W		L	*W
/kada/L						
a. ☞ [kára]			*			*
b. [káda]	*W		L	*W		L
/ɔdi/						
a. ☞ [ódi]				*		
b. [óri]			*W	L		*W

Ranking arguments: *VdV_L >> IDENT(Man)_{Root}, IDENT(Man)_{Root} >> *VdV
 *VIV_L >> IDENT(Man)_{Root}, IDENT(Man)_{Root} >> *VIV

3.3.2. Lack of rhotacism at the left edge of the root

(7) *adolorir* ‘to hurt’, *preludi* ‘prelude’

/a#dolor _L + i + r/	IDENT(Man) Left-Root	*VdV _L	*VIV _L	IDENT(Man) _{Root}	*VdV	*VIV	*VrV
a. ☞ [adururí]		*		*	*		**
b. [adulurí]		*	*W	L	*	*W	*L
c. [arururí]	*W	L		**W	L		***W
d. [arulurí]	*W	L	*W	*	L	*W	**
/pre#ludi/							
a. ☞ [prelúdi]					*	*	
b. [preurí]	*W			**W	L	L	**W
c. [prelúri]				*W	L	*	*W
d. [preurí]	*W			*W	*	L	*W

Ranking arguments: IDENT(Man)_{Left-Root} >> *VdV_L
 IDENT(Man)_{Root} >> *VdV
 *VIV_L >> IDENT(Man)_{Root}

3.3.3. Rhotacism within the suffix

(8) *servidor* ‘servant’, *escuredu* ‘poor DIM.’

/serv + i + dor/	IDENT(Man) _{Suffix-S}	*VdV	IDENT(Man) _{Suffix}
a. [salviró]			*
b. [salvidó]		*W	L
/skur + edu _s /			
a. [askurédu]		*	
b. [askuréru]	*W	L	*W

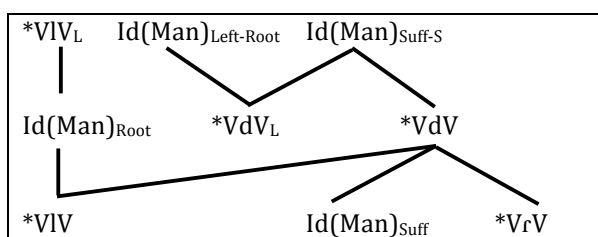
Ranking arguments: IDENT(Man)_{Suffix-S} >> *VdV
 *VdV >> IDENT(Man)_{Suffix}

3.3.4. Summary tableau

(9) *adolorida* ‘hurted FEM.’, *adobadura* ‘repair’

/a#dolor _L + i + d + a/	Id(M) Left-Root	Id(M) Suffix-S	*VdV _L	*VIV _L	Id(M) Root	*VdV	*VIV	Id(M) Suffix	*VrV
a. [adururíra]			*		*	*		*	***
b. [adururída]			*		*	**W		L	**L
c. [aduluríra]			*	*W	L	*	*W	*	**L
d. [adulurída]			*	*W	L	**W	*W	L	*L
e. [arulurída]	*W			*W	*	*	*W	L	**L
f. [arururída]	*W				**W	*		L	***
g. [arururíra]	*W				**W	L		*	***W
h. [aruluríra]	*W			*W	*	L	*W	*	***
/adob + a + dur _s + a/									
a. [adubadúra]						**			*
b. [arubadúra]					*W	*L			**W
c. [arubarúra]		*W			*W	L		*W	***W
d. [adubarúra]		*W				*L		*W	**W

3.3.4. Hasse Diagram



4. *The comedy of errors*. Conclusions and future research lines

- The main problem of the analysis has to do with the legitimacy of deriving from an OT grammar what, in strictly synchronic terms, is just a mere distributional idiosyncrasy of the lexicon. (See among others Pater's (2006, 2008) and Zuraw's (2010) proposals.)
- The extra burden of the lexicon with both faithfulness and markedness constraints indexed must also be revised.
- In order to explain the diachronic change in Algherese Catalan, in which the categorical application of rhotacism was relativized progressively with a (massive) introduction of loans, it could be explored the hypothesis that only faithfulness constraints are lexically indexed at a first stage. Later on, a shift from faithfulness to markedness may be achieved if the process becomes residual.

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