Proliferating derivations: the coda-onset asymmetry in the light of candidate chains

It is a well-known fact that medial consonant clusters —if modified due to markedness reasons— are typically resolved by processes that involve a segmental or a featural alteration of the first consonant (1), but not of the second (2). It is the called «coda-onset asymmetry» effect. In OT, this asymmetry has been properly captured within the positional faithfulness theory (see Beckman 1998), where it is invoked a constraint demanding that the output consonant placed in onset position has the same featural specification as its input correspondent (*i.e.* IDENTONSET(F)). As depicted in (3), the ranking of a constraint like this above a markedness constraint requiring that adjacent consonants have the same featural specification ensures the regressive direction of the process of assimilation. The positional faithfulness theory is unable to capture this asymmetry when one of the two consonants is deleted. Indeed, the constraint mentioned above or a hypothetical constraint which demands that the consonant syllabified in onset position must have a correspondent in the input are equally satisfied either if the first or the second consonant is deleted to satisfy, for instance, the CODA-CONDITION constraint (4-5).

In a recent contribution, McCarthy (2006) resorts to the *candidate chains model* (McCarthy 2006), originally ideated to account for cases of phonological opacity, to formalize this asymmetry: according to the author, «a consonant can only assimilate or delete if it first loses its place features by debuccalizing, and debuccalization is only possible in coda position». That is why that the segment deleted is generally the first, in the case of cluster reduction, and that the segment which loses its features is also the first in case of assimilation. Any process of deletion or assimilation has, therefore, a stage of debuccalization to [h], [?], or [N] within the generated candidate chain for a given input. This stage of debuccalization always affects the consonant placed in coda position because of the *harmonic improvement* assumption, according to which «forms in a chain must increase in harmony relative to the constraint hierarchy of the language in question»: debuccalization of a consonant placed in coda position —and not in onset position— satisfies, for instance, a contraint like CODA-CONDITION.

The purpose of this paper is to discuss some of the empirical assumptions and the theoretical implications of this proposal on the basis of a set of data drawn from Romance languages. Some of them are sketched out by the author (i.e. the cases of progressive assimilation as a problem for the theory), but some others not: A. The first observation to be made has an empirical dimension and reinforces one of the predictions of the author: «because debuccalization is a step along the way toward assimilation or deletion, this proposal predicts that debuccalization and assimilation or deletion should sometimes occur together in a single language»; in many Romance varieties, indeed, the processes of assimilation and deletion coexist with processes of debuccalization and, also, of weakening (some examples are given in 6). B. The second observation to be made is also an empirical one, and refers to the claim that «debuccalization is only possible in coda position». The process of aspiration of /s/ or /x/ which applies in some dialects of Spanish (those spoken in Andalucía, Extremadura or in most part of Latin America, for instance) mainly affects the consonants placed in coda position, but it can also affect consonants placed in onset position (see 7). In the same varieties, total regressive assimilation can apply between adjacent segments, and a previous process of debuccalization of the consonant in coda position should be assumed according to the McCarthy's proposal. What prevents from progressive place assimilation in these varieties where debuccalization is also possible in onset position? C. Another observation refers to the existence of cases of progressive assimilation: for instance, some varieties spoken in the south of Spain and in Chile exhibit an interesting case of progressive manner assimilation, which seems to contradict the «coda-onset asymmetry», at least, as far as manner is concerned (8). **D.** The fourth observation to be made is also an empirical one. The regressive character of assimilation is not necessarily associated to a different syllabification of the segments of the cluster: indeed, regressive place assimilation can apply between consonants placed in coda position, and it is generally the first the one which loses its features (9). Why in these cases the direction of the assimilation is also regressive? E. The fifth observation to be made is a theoretical one: does the stage of debuccalization imply an improvement in languages with consonant inventories without segments that lack oral place specification ([h], [?], etc.) and, nevertheless, with instances of regressive assimilation? In this paper, we are going to investigate these and other components of the proposal, such as the introduction of derivational stages in the formalization of phenomena typically accounted for without derivations.

Data and references

(3)				(4)			
/pamka/	IDENT ONS(PA)	AGREE (place)	IDENT (PA)	/pat ₁ k ₂ a/	IDENT ONS(PA)	CODA- CONDITION	IDENT (PA)
a [nam ka]		*!	-	a [nat, kaa]		*!	

a. [pam.ka]		*!		a. $[pat_1.k_2a]$	*!	
≻ b. [paŋ.ka]			*	∽ b. [pa.k ₂ a]		
c [nam na]	*!		*	≎ с [na t₁a]		

(5)

/pat ₁ k ₂ a/	MAXONS	CODA-CONDITION	Max-IO
a. $[pat_1.k_2a]$		*!	
∽ b. [pa.k ₂ a]			*
∽ с. [pa.t₁a]			*

(6)

a. Some varieties of Spanish (see Hualde 1989 [2000: 427])

obispo [oβihpo]~[oβippo] 'bishop' [móhka]~[mókka] 'fly' mosca caspa [káhpa]~[káppa] 'dandruff' [fréhko]~[frékko] 'fresh' fresco

b. Some varieties of Spanish (see Hualde 1989 [2000: 427], Jiménez 1999, Montero 2006)

diez [djéh] ~ [djé] 'ten' (cf. diez plur. [djéθeh]~[djéθe]) 'ten plur.' 'month plur.' $mes [méh] \sim [mé]$ (cf. *mes* plur. [méseh]~[mése]) 'month'

c. Some varieties of southern Catalan (see Recasens 1996, Segura 2003)

dit gros [dið yrás]~[di yrás] 'big finger' pot dir [pɔð ðir]~[pɔ ðir] '(he/she) can say'

- (7) Some varieties of Spanish (El Salvador, Honduras, Colombia, Andalusia) (Lipski 1999: 198) semana [semána] la semana [la hemána]
- (8) Some varieties of Spanish (see Hualde 1989 [2000: 428-430])

las botas [laφ φόtah] (south of Spain) 'the boots' las gallinas [lax xaxinah] (south of Spain) 'the hens'

Andrés Bello [andrefféjo] (Chile)

(9)

a. Majorcan Catalan b. Alguerese Catalan c. Languedocian Occitan caps [káts] (cf. cap [káp]) caps [káts] (cf. cap [káp]) còps [kɔ̃ts] (cf. còp [kɔ́p]) 'heads' 'head' 'heads' 'head' 'blows' 'blow' (see Wheeler 1988)

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