Stop deletion in Basque

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In Basque, oral stops are deleted before other stops. Affricates in similar clusters are simplified.

(1) Cluster simplification (Hualde 1988: 380)
    (i) /bat paratu/ → [ba paratu] 'put one'   (ii) /ot͡s bat/ → [os bat] 'a cold'
        /bat+naka/ → [banaka] 'one by one'   /it͡s+tegi/ → [istegi] 'dictionary'

Hualde (1988, 1991) interprets these two outcomes as an effect of a single rule of [-continuant] delinking. In this view, the supralaryngeal node is delinked from both types of segments before a non-continuant, which results in the deletion of plosives, (1i), and in rendering affricates as fricatives, (1ii). Stop deletion, however, is observed not only before non-continuants, as in (1), but also before continuants, as documented in (2).

(2)

Orthographic	*Underlying*	*Surface*	*Gloss*
batzuk sublimatzen	k#s	s	'sublimating some'
Truebak xaxetute	k#ʃ	ʃ	'*name* chat'
internet zelan	t#s	s	'like internet'

A similar segmental deletion process targeting affricates has not been observed. With the additional data at hand, the rule of [-continuant] delinking becomes problematic. The principal questions are: what are the drivers of the presented mappings and how to account for the asymmetry in stop/affricate deletion using Optimality Theory (OT; Prince and Smolensky 2004).

      A solution to this problem involves positing two separate processes reflected by the constraints in (3).

(3)   OCP[-cont]: no adjacent [-continuant] segments.
     *TT: do not be a cluster of C[-continuant, -strident] followed by a stop.
     *TS: do not be a cluster of C[-continuant, -strident] followed by a fricative.

      The OCP constraint militates against identical features on adjacent segments (e.g., Lombardi 1990, Morelli 1999, Coetzee 2004). The latter group of constraints prohibits preconsonantal (non-strident) stops (cf. NoWeakConsonant, Wilson 2001: 156). Stops exhibit only transitional phonetic cues and lack internal cues. Therefore, stops in stop-obstruent clusters have weak phonetic cues relative to pre-sonorant stops, especially prevocalic stops (Coetzee 2004, Jun 2004). Although the constraints in (3) overlap to some extent, this outcome is accidental. Using the proposed constraints, it is possible to account for the Basque data, as shown in (4).

(4)

Input	Output	*TT	*TS	Max-SEG	OCP[-cont]	Ident[-cont]
ot͡s bat	ot͡s bat				*!	
	o bat			*!		
	☞ os bat					*
bat paratu	bat paratu	*!			*	
	☞ ba paratu			*		
internet selan	internet selan		*!			
	☞ interne selan			*		

While cluster simplification is obligatory in morphological concatenation, it is optional in phrase-level phonology. The upshot of (4) is the possibility of introducing stochastic rankings for the variable application of the optional simplification across word boundaries.

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