

# **Variant patterns of sibilant debuccalization in Camuno: Phonetic and phonological implications of \*s > h in Valcamonica**

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Camuno is a variety of Eastern Lombard spoken in Valcamonica, Italy - one of the largest valleys in the central Alps, usually divided into three parts: lower (Pisogne – Breno); middle (Breno – Edolo), and upper (Edolo – Tonale Pass). Phonological study of varieties in the lower and middle areas (including the villages of Cagno, Esine, Gorzone, Prestine, Breno, Malegno, Darfo, Piamborno, Bienno) shows clear evidence of a sound change of \*s > h as illustrated in Table 1, though the same change has not occurred in the upper parts of the valley (represented by the villages of Rino, Garda, and Temú) (Bonfadini 1995; Cresci 2014).

	CAMUNO	COMPARANDA	GLOSS
V_V	mahét	Lat. MASSA	small bunch/lump
	róħo	Lat. RUSSU(M)	red
V_CV	dəhbutuná	Cat. <i>desbotó</i>	unbutton
	kahtél	Lat. CASTELLU(M)	castle
V_C#	fóhk	Lat. FUSCUS	hazy/ muffled, dusky
	móht	Lat. MUSTUM	must (n.)
VC_V	kalhét	Lat. CALCEUS	sock/ shoe
	porhél	Lat. PORCUS, Fr. <i>porcelet</i>	pig / pig / piglet
V_#	mýh	OFr. <i>musel</i>	face / muzzle
	póh (< pós)	Lat. PUTEUS	well (n.)
#_V	hédħ	Lat. SETA(M)	silk
	hét	Lat. SEPTE(M)	seven
#_C	htélħ	Lat. STELLA	star
	hpért	Lat. EXPERTUS	smart / experienced
C_#	(v)énħ (<véns)	Lat. VINCIT	s/he wins
	fálħ (<fáls)	Lat. FALSU(M)	false

**Table 1. \*s > h in Camuno lower and middle valley varieties**  
(Lat. = Latin; Cat. = Catalán; Fr. = French; OFr. = Old French)

The environments in the first column of Table 1 exhaust the phonotactic positions of historical \*s, showing that, at least for some varieties of Camuno, the sound change was context free and occurred without exception. However, in at least one Camuno variety, the sound change is context sensitive: in Cervenò, debuccalization occurs intervocally only.

In this study we attempt to explain dialect variation in Camuno in terms of \*s-debuccalization as a weakening or lenition process (cf. O’Brien 2012) within the general framework of Evolutionary Phonology (Blevins 2004, 2006, 2015). The probability of articulatory undershoot is greatest in the V\_V environment, and all dialects with \*s > h show the sound change in this context, beginning at the phrasal level, and accounting for phonetic variants such as *Servé* vs. *Hervé* in Cervenò. In initial clusters like \*st, \*sp, \*sk, where there is articulatory overlap, and longer sustained constriction, articulatory undershoot is less likely, and \*s is most likely to be maintained. A treatment of \*s > h as lenition implies that [s] is produced with spread vocal folds in languages where this sound change occurred. If the folds are not spread widely, but merely in a “neutral” position, the expected result of articulatory undershoot in a V\_V environment would be a voiced continuant of some sort as, for example, in the intervocalic change of \*s > z > r in Latin. But why would Camuno speakers produce [s] with spread vocal folds, while their ancestors, speaking Latin, produced

similar sounds with a neutral position of the folds? A suggested answer is that speakers of Camuno and other neighboring Romance languages have been influenced by contact with Germanic languages. As demonstrated by Cresci (2015), Camuno shows clear evidence in its final devoicing patterns of aspiration associated with laryngeal spreading gestures, while other Gallo-Romance languages (e.g. French, Catalán) have been classified as true “voicing” languages (Jansen 2004) and appear to lack these gestures. Additional support for laryngeal spreading gestures in Camuno is found in the study of nasal loss, where, via rhinoglottophilia, aspiration and nasalization are confused (Cresci 2019).

A final question explored in this study is what potential factors might facilitate or inhibit context-free \*s>h sound change in the world’s languages. In a typological survey targeting this change, we have identified two structural properties that hold of all known cases: (i) the language in question does not have contrastive /h/ prior to the change; and (ii) the language does not have consonant clusters. The first property suggests that the absence of contrast between [s] and [h] plays a significant role. The second characteristic supports the view of \*s>h as lenition: although it appears to be context free, in languages without consonant clusters, the canonical context of change (excepting absolute phrase-initial and phrase-final position) will be intervocalic V\_V. Data from Kambera, a language of the Lesser Sundas, is instructive: wordlists from 1872, 1891 & 1909 show the language before, during and after \*s>h, reinforcing V\_V as the phonetic conditioning context for change (Klamer 1998:12-13). Indeed, context-free \*s > h may not exist: either a sound change begins (and ends) as \*s > h/V\_V, or begins as such (as in Cervenó), with \*s > h then spreading to other pre- or post-vocalic contexts, and only at the latest stage (as in the Camuno data in Table 1) to consonant clusters. This view is consistent with some of the best-studied context-sensitive cases of \*s > h. For example, in the transition from proto-Indo-European to Ancient Greek, \*s was generally preserved word-finally, in \*sT clusters where T was an obstruent, and in \*Rs clusters where R was a sonorant, but shifted to /h/ elsewhere. This trajectory distinguishes leniting \*s>h from common coda \*s>h (as in many varieties of Spanish) which begins in pre-consonantal position (Núñez-Méndez 2022), and has been linked to general coordination of gestures in tautosyllabic V-C sequences (Goldstein et al. 2008; Tilsen 2013).

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