

Metathesis patterns through the prism of complex segments: the Sardinian development

Purpose. This paper aims to reconstruct the development of Latin liquids into the Sardinian system from the Sardinian synchronic perspective. I concentrate on two successive snapshots of this development, the neutralization of L to /r/ in the conservative Central Sardinian varieties (CSard) and the further development in Southern Sardinian (SSard).

Diachronic facts. One of the most distinctive features of the development from Latin to Sardinian is the neutralization of Latin L and R in consonant clusters (Wagner 1941, Pittau 1972, Virdis 1978 among others). The neutralization takes place both in tautosyllabic (1) and heterosyllabic (2) consonant sequences, independently from the place of articulation and voicing of the non-liquid consonant (Pittau 1972:45-46; note that Latin TL, DL, and LD are rare). The neutralization of L and R is transparent in CSard; SSard further develops a ban on coda /r/ (Wagner 1941:175, 235), thus eliminating /rC/ clusters. The conditions on coda segments in SSard are strict and the banned sequence is systematically repaired, either through assimilation (to or with the following consonant) or metathesis, as shown in (3). A further striking developmental feature is that Latin tautosyllabic CR clusters appear to be admitted only in word-initial position in Sardinian, thus giving rise to another metathesis pattern for R, (4).

First step. The analysis of the development of the liquid sub-system from Latin to Sardinian exploits the phonological assumption that sounds can pattern in different ways in different grammars. Latin L neutralizes to Sardinian /r/ in consonant clusters because, as the distribution facts reveal, Latin L is an obstruent in the Sardinian system. In intervocalic position, for instance, L and P present the same developmental pattern, (5). The retroflex output of geminate L suggests that the contrast within the obstruent sub-inventory is implemented along the dimension of tongue height, rather than along the horizontal dimension of place (for such an analysis of retroflexes, see Lahiri and Reetz 2003). Place cannot be contrastive for L, given the wide range of variation in the realization of singleton L with respect to place of articulation (all of these options are attested, within and across dialects: [β/w, β, ʎ, ɟ^w, l]). Once Latin L became interpreted as an obstruent, other steps ensued in SSard.

Second step. The analysis of the further SSard development relies on the notion of structural similarity. The different repair strategies for the /rC/ heterosyllabic sequences banned by the SSard phonology can be computed according to different degrees of similarity between the two segments involved. Given /r/, the relevant dimension for the computation of similarity are coronality and sonorant voicing (*sensu* Avery 1996)–see (3a,b) and (6) for details. Is the evolution in SSard the reflex of sharpened coda conditions, or is /r/ re-interpreted within SSard?

One step backward. The re-analysis of some phonological patterns found in the conservative central varieties seems to suggest that /r/ was already a problematic coda in Sardinian. Consider for instance the alternation of [s] and [r] in word-final position: the final consonant is [s] if the following morpheme begins with a voiceless obstruent, otherwise [r]. [-r] thus appears when followed by voiced obstruents, sonorants (except [n] and [l]), affricates and vowels. Interestingly, in this phrasal context, obstruents and affricates undergo lenition when preceded by [-r] as they do when preceded by a -V. Lenition never occurs to consonantal onsets preceded by [s] or by a nasal in the same environment. While /s/ and /N/ are optimal codas, /r/ appears to be an optimal onset, or an optimal sub-part of an onset. The hypothesis thus is that not only /Cr/ but also /rC/ clusters need to be considered complex segments.

One step forward. The difference between CSard and SSard then lies in the inventory of complex segments, with SSard admitting only /Cr/, a no /rC/ segments. The synchronic distribution of /Cr/ complex segments both in CSard and SSard presents a positional asymmetry in line with the rest of the system. The consonantal inventory is fully displayed in the morpheme-initial prominent position, and neutralized morpheme-internally. If the analysis of /Cr/ clusters as complex segments is assumed, the metathesis of /r/ of the type illustrated in (4), active both in CSard and in SSard, actually corresponds to a strategy of preserving a /Cr/ segment within the morpheme.

A careful consideration of inter-dialectal variation along the diachronic dimension seems to offer new perspectives on long-standing puzzles.

(1)	Latin	CSard	gloss	(2)	Latin	CSard	gloss
	BLANDUS	brandu	'light'		CULPA	curpa	'guilt'
	PLOVERE	progere	'rain'		CALCINA	karkina	'lime'
	UNGLA	ungra	'nail'		ALTU	artu	'tall'
(3)	Latin	SSardinian	gloss	(4)	Latin	Sardinian	
a.	PALMA	pram:a	'palm'		VENTRE	brente	
	CALCINA	kratʃ:ina	'lime'		CAPRA	kraβa	
b.	FORTIS	fɔt:i	'strong'		PEDUC(U)LUS	preduɣu	
	ALTU	at:u	'tall'				
(5)	Latin	Sardinian		(6)	Latin	SSard	gloss
	VLV	VβV/VwV/VβV			SURDU	suðru	'deaf'
	VPV	VβV			CARDU(U)S	kaðru	'thistle'
	VLLV	VqV					
	VCPV	VpV					

Reference

- Avery, Peter. 1996. *The representation of voicing contrast*. Ph.D. dissertation, University of Toronto.
- Lahiri, Aditi and Henning Reetz. 2003. "Retroflexes and dentals in the FUL-Model". Proceedings of the 15th International Congress of Phonetic Sciences.
- Pittau, Massimo. 1972. *Grammatica del Sardo Nuorese*. Bologna: Patron.
- Viridis, Maurizio. 1978. *Fonetica del dialetto Sardo Campidanese*. Cagliari: Edizioni della Torre.
- Wagner, Max Leopold. 1941. *Historische Lautlehre des Sardischen*. Halle (Saale): Max Niemeyer Verlag.