



The paradox of /l/-vocalisation in Romance: phonetics, phonotactics, and frequency effects

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1. Background

The phenomenon:

/l/ > ul, w, y, ... preconsonantly or word-finally

frequently found in, e.g., among Indo-European languages, in Germanic, Slavic, Romance, etc.

Example:

Lat. "alterum" > Fr. "autre", Occ. "autre", Sp. "otro", Port. "outro"

Dark quality of the Latin syllable-final lateral:

L triplicem, ut Plinius [1st c. CE] uidetur, sonum habet: [...] plenum, quando finit nomina vel syllabas [...], ut 'sol', 'silva', [...].

("According to Plinius, I has three kinds of quality: [...] dark ('full') when it is in word-final or syllable-final position [...], as in 'sol', 'silva', [...].") Priscianus (6th c. CE), *Institutiones grammaticae*, I, 38 (Keil 1961b: 29)

First indirect attestation from Suetonius (1st c. CE), *De Vita Caesarum*, Book III: Tiberius 42: 1: wordplay where the emperor Tiberius had been given the nickname "Caldius" ('mulled wine') instead of his real first name "Claudius".

First direct attestation in an edict of the Roman emperor Diocletian from 301 CE: "καυκουλаторι" (Leumann 1977: 142, §148d.e).

The Romance /l/-vocalisation was initiated in Late Latin/Proto-Romance and completed during the Middle Ages.

2. The Romance paradox

Observations from ongoing /l/-vocalisation and synchronic variation (e.g., from English, Brazilian Portuguese (Caffee 1940, Espiga 2002, among many others)) suggest that

- /l/ before labial and velar consonants vocalises first,
- followed by vocalisation of word-final /l/,
- /l/ before dental-alveolars vocalises last, if at all.

➢ A following labial or velar consonant contributes to further darkening of the lateral and confusion with velar/labio-velar approximants;

➢ Following silence masks tongue tip contact release;

➢ The homogeneity in /l/ + alveolar/-clusters prevents tongue tip contact loss.

But: Both historical and dialectological data suggest that /l/-vocalisation in Romance

- occurred first before alveolar consonants, often exclusively so;
- sometimes only when the preceding vowel was /a/.

➢ Perceptual dissimilation in /at, atd/ > /awt, awd/ (e.g., Recasens 1996)?

Can frequency effects contribute to a better understanding of the Romance paradox?

3. Method, materials

Token frequencies of /VIC/ and /VwC/-sequences

V = /a, e, i, o, u/

C = /p, b, t, d, k, g/

from the Perseus under PhiloLogic corpus of Latin texts (3,2 million words of poetry, theater and prose texts from 25 different authors, ranging from the 3rd c. BCE to the 4th c. CE)

Type frequencies of the same /VIC/ and /VwC/-sequences from the Lewis & Short Latin-English Dictionary (L&S, electronic version).

(/iwC/-sequences could not be counted because the graphical representation "iuC" also refers to /juC/-sequences.)

4. Theoretical predictions

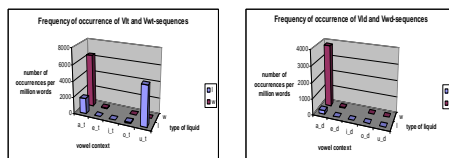
Purely phonetically motivated sound change takes place faster in sequences of high token frequency,

analogical change is due to the application of one phonotactic schema ranging over more types than another, similar, one. (based on Bybee 2001)

➢ Can the Romance paradox be better understood when taking into account analogical sound change?

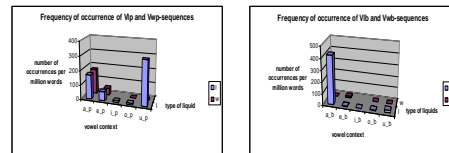
5. Results

a) /VI, Vw + alveolar/



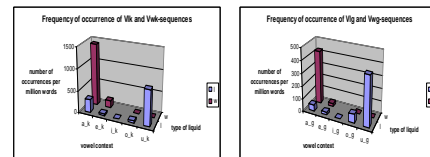
	Token frequency (per million words)	Type frequency (words in L&S)
/VI + alveolar/	7184,314	510
/Vw + alveolar/	20742,434	345

b) /VI, Vw + labial/



	Token frequency (per million words)	Type frequency (words in L&S)
/VI + labial/	1018,632	247
/Vw + velar/	465,183	55

c) /VI, Vw + velar/



	Token frequency (per million words)	Type frequency (words in L&S)
/VI + velar/	1739,634	441
/Vw + velar/	2043,768	542

6. Discussion

a) /at, atd/	Token frequency (per million words)	Type frequency (words in L&S)
/al + alveolar/	2117,479	141
/aw + alveolar/	10260,341	330

➢ Strong enhancement of /l/-vocalisation by phonotactic generalisations.

b) /ult, uld/	Token frequency (per million words)	Type frequency (words in L&S)
/ul + alveolar/	4889,372	330
/uw + alveolar/	0	0

➢ The absence of vocalisation in /ult/-sequences ("multum" > "mucho", "muito") in Spanish and Portuguese may be due to this schema being better represented than any other /VI+alveolar/ schema without having a competing /uw+alveolar/ schema, in addition to tongue tip contact preservation by articulatory homogeneity.

c) /ulk, ulg/	Token frequency (per million words)	Type frequency (words in L&S)
/ul + velar/	1199,502	243
/uw + velar/	0	0
/u + velar/	not known	1334

➢ The fact that the schema /ult+velar/ has a similar strength as /ult+alveolar/ suggests that it, too, would constitute an exception to /l/-vocalisation – this not being the case, it seems that in favourable phonetic contexts, regular phonetic sound change may override phonotactics.

d) /VI, Vw + labial/

➢ With the /VI+labial/-sequences, the existing /Vw+labial/ schema seems too weak to allow for a strong phonotactic influence; /l/-vocalisation seems to be grounded in articulation and perception only.

7. Upshot

The study of frequency effects, together with our knowledge of the historical developments and the articulatory and acoustic-perceptual underpinnings of the sound change can enlarge our understanding of /l/-vocalisation in the Romance languages.



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Acknowledgments: This poster was made possible by a PhD scholarship (Landesgraduiertenförderung) of the State of Baden-Württemberg, Germany. I would like to thank Ana Paula Huback who was involved in early stages of this research. Of course, all errors are mine.