The paradox of /l/-vocalisation in Romance: phonetics, phonotactics, and frequency effects
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The vocalisation of a dark lateral to a back vowel or approximant (/l/ > /u, w, o, .../) in
preconsonantal and word-final position is a widespread phenomenon both historically as in
Proto-Romance and as a sound change in progress today in languages such as English or
Brazilian Portuguese. Articulatory and perception studies suggest that, for vocalisation in
preconsonantal position, following labial and velar consonants favour the development of /l/-
vocalisation, while alveolars inhibit it. From an articulatory point of view, the homorganicity
of /l+alveolar stop/-clusters will contribute to the maintenance of the tongue tip and prevent
vocalisation; also, following labial and velar consonants confer to the preceding sound a
darker acoustic quality, which decreases the difference in formant structure between /u, w/
and /l/ and leads to a greater rate of confusion between the two sounds. This predicts that /l/-
vocalisation in preconsonantal position will occur first and perhaps, exclusively, before labial
and velar consonants, and will only then extend to laterals before alveolar consonants.

While the languages exhibiting /l/-vocalisation in progress bear out this prediction, the
historical process of /l/-vocalisation in Romance, initiated in the Proto-Romance period (ca.
4th-9th c. CE) and completed during the Middle Ages, shows a different pattern. Here, the
first attestations of the sound change invariably occur in the sequence /alt, ald/. In some
Romance languages and dialects, this is the only context where /l/-vocalisation eventually
became established. These facts are at odds with the findings from phonetic studies and have
been explained as resulting from perceptual dissimilation (e.g., Recasens 1996).

The present study investigates the role of frequency effects in this apparently paradoxical path
taken by the sound change. Token frequencies of /VlC/ and /VwC/-sequences (where V = /a,
e, i, o, u/ and C = /p, b, t, d, k, g/) have been retrieved from the 3,2 million word corpus of the
Perseus under PhiloLogic corpus of Latin texts, and type frequencies of these same sequences
have been obtained from the electronic version of the Lewis & Short (1879) Latin-English
dictionary. Latin has been chosen since the initiation of the sound change goes back to Late
Latin, and also because there are no written documents from the critical period of Proto-
Romance. If purely phonetically motivated sound change takes place faster in sequences of
high token frequency, but analogical change is due to the application of one phonotactic
schema ranging over more types than another, similar, one (Bybee 2001), then the results of
the study in comparison to the Romance data suggest that 1. the evolution of /l/-vocalisation
in sequences of the type /alt, ald/ could be seen as being enhanced by phonotactic
generalisations, as the latter schema encompasses twice as many types (and five times as
many tokens) than the former; 2. the absence of vocalisation in /ult/-sequences (“multum” >
“mucho”) in Iberoromance may be due to this schema being better represented than any other
/Vl+alveolar/ schema without having a competing /uw+alveolar/ schema; 3. the fact that the schema /ul+velar/ has a similar strength as /ult/ would suggest that it, too, would constitute an
exception to /l/-vocalisation – this being not the case, it seems that in favourable phonetic
contexts, regular phonetic sound change may override phonotactics; 4. in the case of the
remaining sequences involving velar consonants, the situation is comparable to that of the
lateral+alveolar sequences, while with the /Vl+labial/-sequences, the existing /Vw+labial/
schema seems too weak to allow for a strong phonotactic influence, and the sound change
would consequently rely solely on phonetic tendencies.
References:


Perseus under PhiloLogic corpus of Latin texts, under the supervision of HELMA DIK: http://perseus.uchicago.edu/. (accessed 15/02/2011)