Explaining Gallo-Romance Palatalization: proposals, problems, and processes

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Among the Romance languages, French is well known for a typologically rare sound change which transformed the Latin "velar" stop, spelled <c>, into a palatal fricative when followed by the Romance vowel /a/, giving, Old French /ʧ/ and Modern French /ʃ/. This change did not generally occur in the rest of Romance (ex. in Tuscan Italian, Spanish or Languedoc Occitan) where the velar stop is maintained (cf. Figure 1). Though simple to describe, the details and implementation of this sound-change are substantially more complicated with consequences for the dating of other diachronic phenomena and for the construction of a theory of possible or likely paths of sound-change.

Figure 1: Latin etymon and Romance reflexes

Latin	Italian	Spanish	Languedoc	French	Gloss
CANTÁRE	*cantare*	*cantar*	*cantar*	*chanter*	'to sing'
CABÁLLUM	*cavallo*	*caballo*	*caval*	*cheval*	'horse'
MERCÁTUM	*mercato*	*mercado*	*mercat*	*marché*	'market'
CÁNEM	*cane*	*can*	*can*	*chien*	'dog'

Because the low open vowel /a/, characterised by an elemental specification |A|, is not generally considered a trigger of palatalization, most manuals explain the affrication of romance /k/ → OFr. /ʧ/ before /a/, through a two-step feeding order which first palatalizes /a/ → /æ/, i.e. |A| → |A.I| through the insertion of the |I| element (or a [+ANT] trait), thus providing the critical palatal element to trigger the palatalization and affrication of /k/ → /ʧ/. Rule Ⓐ "stressed /a/ → /æ/ → /e/" is said to feed rule Ⓑ "/k/→ /ʧ/ /_V|I|". This fronting of Romance /a/→ [æ] is supported by the fact that Romance /a/ results in a front vowel, pronounced [e], ex. LAVĀRE 'wash' → *lave* [laˈve] or [ɛ], ex. MAREM 'sea' → fr. *mer* [ˈmɛʁ] in Modern French. In fact, this stressed romance /a/ is already represented as a front vowel spelled <e> **in stressed open syllables** by the mid 9th century, ex. SPATHA 'sword' → <sp**e**de> (Eulalia, l.11).

However, this simple scenario is confronted by serious issues. For one, many handbooks only recognize the fronting of /a/ → [æ] in stressed open syllables as seen above (ex. Pope 1952, § 231; Bourciez 1955, § 35), whereas the palatalization of /k/ also occurs before an unstressed /a/ as in VÁCCA → ofr. *vache* [vaʧə] or CABÁLLUM → ofr. *cheval* [ʧəval], a vowel which eventually results in *schwa*. One also finds palatalization of /k/ → /ʧ/ in front of stressed /a/ in closed syllables, which does not result in a fronted [æ], ex. CARRUM → *char* [ʃaʁ] or CAMPUM → *champ* [ʃɑ̃]. Here, we highlight the difficulties of existing accounts and propose a surface-true description of the sound change and its consequences for phonological theory.

Figure 2: Evolution of /a/

Stressed Open	Stressed Closed	Unstressed
MAREM → *mer*	CARRUM → *char*	VACCA → *vache*
PATREM → *père*	CANTARE → *chanter*	CABALLUM → *cheval*

Ségéral and Scheer (2020) for example overcome the triggering problem by proposing that ALL instances of /a/ are fronted to [æ], thus providing the palatal environment for the affrication of /k/ → /ʧ/ before unstressed /a/ (ex VÁCCA → *vache*), but also explaining palatalization at the onset of closed syllables, ex. CÁRRUM → [ʧærro] → afr. *char*. This hypothesis has a near-parallel in the almost across-the-board fronting of /u/ → /y/. Less conveniently however, this solution introduces frequent Duke of York situations, where the fronted [æ] reverts to a central pronunciation in closed syllables (PARTEM → *pærte → ofr. *part* [par]) and in initial unstressed syllables (AMĺCUM → *[æmi] → *ami* [ami]), LAVÁRE → *[lævær] → *laver* [lave]). The

interaction of this palatalization with the reduction of final /a/ to *schwa* in the prehistory of Old French likewise complicates their proposal.
In the case that /a/ really did front to [æ] across the board before returning to [a] in closed (and possibly unstressed) syllables, the question is begged is whether palatality was ever part of the phonemic representation: /a/→ /æ/ = |A.I|, or whether the palatality of /a/ pronounced [æ] was just some low-level phonetic detail. In the former case |I| can phonologically trigger rule Ⓑ, while in the latter case, the absence of |I| from the representation should exclude this palatality from any phonological computational process, thus making the affrication a simple coarticulatory effect: /k/ would be realised more [c]-like or [ʧ]-like before a front vowel.

Among other solutions, Buckley (2009) proposed that the affrication of /k/ → /ʧ/ elsewhere than in the stressed open syllable would be due to simple analogy, but here the sheer quantity of analogy required also makes it an unattractive solution, though it should be noted that Ohala (1981) has argued that sporadic inability of speakers to attribute contextual variants, ex. [c] and [ʧ] to the conditioning environment, may explain the updating of a phonological target. In this case, the updating of /k/ → /ʧ/ in front of all examples of /a/, concerns not-so-much the vowel /a/ as the inherent spectral values of /k/. As Ohala (2012) has argued, though this type of misidentification is common at the individual level, it is rarely spread to the entire community, which may explain the typological rarity of this change.

Whether the palatalization and affrication of /k/ → [c] → /ʧ/ was triggered by |I| as is generally claimed, or whether the change of /k/ → /ʧ/ is a hyperextension of an environmentally conditioned contextual variant, a single phonological reality unites both explanations: **/k/ → /ʧ/ everywhere except before the back vowels /u/, /o/, /ɔ/**, ex. CŪRA → ofr. *cure,* CŎRPUS → ofr. *cors* ‘body’, CŌNSUĔRE→ ofr. *cosdre* ‘to sew’. The velar quality of these vowels, all containing an |U| element in their representation, seems to have had an inhibitory effect on the palatalization of /k/ → /ʧ/. Under this interpretation, we can remain agnostic as to the potential **feeding** relation between rules Ⓐ and Ⓑ. Instead, we observe that **adjacency to a following back velar vowel has bled a preceding /k/ of its potential to palatalise and affricate.** By questioning the obligatory triggering role of |I| for the affrication of /k/ both processes are logically unbound from a strict chronological sequence. Furthermore, Element theory’s ability to group all palatalization-bleeding vowels under the natural class of vowels containing the |U| element provides a simple description of the conditioning environment leading to the phonological split of /k/ into /k/ before round-back vowels and /ʧ/ elsewhere.

References

Bourciez, Édouard. 1955. *Précis historique de phonétique française*. 8th edn. Paris: Klincksieck.
Buckley, Eugene. 2009. Phonetics and phonology in Gallo-Romance palatalisation. *Transactions of the Philological Society* 107(1). 31–65.
Ohala, John J. 1981. The listener as a source of sound change. *Chicago Linguistic Society* 17.
Ohala, John J. 2012. *An update: The listener as a source of sound change* (Current Issues in Linguistic Theory). (Ed.) Maria-Josep Solé & Daniel Recasens. *The Initiation of Sound Change: Perception, production, and social factors* (Current Issues in Linguistic Theory). John Benjamins Publishing Company.
Pope, Mildred K. 1952. *From Latin to Modern French with Especial Consideration of Anglo–Norman Phonology and Morphology*. 2nd edn. Manchester: Manchester University Press.
Ségéral, Philippe & Tobias Scheer. 2020. Les palatalisations. In Christiane Marchello-Nizia, Bernard Combettes, Sophie Prévost & Tobias Scheer (eds.), *La Grande Grammaire Historique du Français*, 226–258. De Gruyter Mouton.