

# Palatals without coronal/dorsal counterparts: the lateral case

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Palatalization is one of the most common phonological processes in natural languages (Kramer & Urek 2016). Sometimes, historically, palatalized allophones become palatal consonants (in IPA, /ç ɟ c ʝ ç j/) and, therefore, one could assume that any language which has palatals also have/had coronal/dorsal counterparts (Bateman 2007). This research seeks to answer the question “Are there languages with palatals, but without coronal/dorsal counterparts?”.

Previous studies on palatals agree that they may be complex segments. Several authors that investigated palatals in Romance languages advocate that they are composed of a coronal consonant and a palatal element at the deeper phonological level (Davis 1999, Veloso 2019, Pimenta 2019). Evidence comes from (i) their prosodic behavior (there are no diphthongs to their left), (ii) their history (Lat. *fi/lj/us* > Port. *fi/ç/o*), and (iii) their variation (some African varieties of Portuguese do not have /ç/, but replace it either by /l/ or /j/). This kind of data has influenced language description. For instance, for Yauyos Quechua, /ç/ and /l/ is often included in its segmental inventory in support of the “universal tendency that /ç/ presupposes /l/” (Shimelman 2017). However, in this language, [l] displays a marginal behaviour and it seems to be an allophone of /r/.

The present investigation takes /ç/ as a case of study and aims at uncovering its segmental implications. Departing from PHOIBLE’s 147 entries, we selected a sample of 52 languages whose primary bibliography was accessible. According to this literature, we have been building spreadsheets where we register (i) implications, (ii) distributional constraints and (iii) prosodic effects of this consonant. Afterward, these spreadsheets are analysed using R code.

One of the major findings so far is that /ç/ does not imply the presence of a coronal /l/, at least in two varieties of Quechua and Cavineña, which have instead a phonological rhotic /r/. In addition, we found that all the languages from the sample which contain /ç/ in their inventories also include /ɲ/. In other words:

/ç/ ⊃ /l/-like || /r/-like sound

/ç/ ⊃ /ɲ/

These patterns are significant not only for typology but also for both phonological theory and reconstruction. Firstly, they suggest that /l/ is not necessarily part of the structure of /ç/, contrary to what is assumed by Veloso (2019) and Pimenta (2019). In fact, following the Element theory approach (Bacley 2011), we confirmed that what /l/ sounds and /r/ sounds have in common is the element |A| (convergence of F1 and F2) in C-position and that this element also underlies /ç/. In the second place, as /ç/ implies /ɲ/, it seems that these palatal sonorants share a big part of their autosegmental structure (/ɲ/ being slightly less complex, as proposed by Pimenta 2019). Secondly, despite the “universal tendency that /ç/ presupposes /l/”, these findings suggest that /ç/ can emerge either from /l/ or from /r/ palatalization. Therefore, there can be proto-languages that did not have /l/, even if their daughters have /ç/. However, this is an ongoing study and more clues are still to be uncovered, especially regarding their phonotactic behaviour.

## REFERENCES

Bacley, P. 2011. *An Introduction to Element Theory*. Edinburgh: Edinburgh University Press.

- Bateman, N. 2007. *A crosslinguistic investigation of palatalization*. University of California, San Diego thesis.
- Davis, S. 1999. On the Representation of Initial Geminates. *Phonology* 16. 93-104.
- Krämer, M.; Urek, O. 2016. Perspectives on palatalization. *Glossa: A Journal of General Linguistics* 31. DOI: <http://doi.org/10.5334/gjgl.226>
- Moran, S.; McCloy, D. (eds.) 2019. *PHOIBLE 2.0*. Jena: Max Planck Institute for the Science of Human History. (Available online at <http://phoible.org>).
- Pimenta, H. 2019. *Nasalité et syllabe: Une étude synchronique, diachronique et dialectologique du portugais européen*. Ph.D. Thesis: Université Paris VIII.
- Shimelman, A. 2017. *A grammar of Yauyos Quechua*. Berlin: Language Science Press. DOI: 10.5281/zenodo.376355.
- Veloso, J. 2019. Complex Segments in Portuguese: The Unbearable Heaviness of Being Palatal. In: I. E. Zendoia, O. J. Nazabal (eds.). *Bihotz ahots. M. L. Oñederra irakaslearen omenez*. Bilbao: Universidad del País Vasco, Euskal Herriko Unibertsitatea, 513-526.