

# A Gestural Approach to Latin /pl, fl, kl/ Cluster Realizations in Galego-Portuguese and Sardinian

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## I. INTRODUCTION

Among Romance languages, Galego-Portuguese and Sardinian are the only languages that replace the lateral with a rhotic from a Latin /pl, fl, kl/ onset cluster, as in (1):

- (1) Latin: *ECCLESIA*      English: ‘church’  
Portuguese: *igreja*      [i.ˈgre.ʒa]  
Galician: *igreja*      [i.ˈgre.ʃa]  
Sardinian: *crexia*      [ˈkre.ʃia]

The current study greatly adds to the field by addressing this unique environment in Romance languages in two distinct ways: first, it offers an analysis of a historical which includes treating apparent exceptions. Second, it discusses the phenomenon using both a gestural approach (i.e. Articulatory Phonology) and Phase Windows for both languages.

## II. ARTICULATORY GESTURES AND A PHASE WINDOW

Crucial to constricting the timing relationship in the onset cluster is a Phase Window, which acts to limit the temporal compressibility or disassociation of gestures. With regard to how Galego-Portuguese and Sardinian evolved from Latin, the Phase Window limited the cluster in terms of gestural overlap of the two consonant gestures. For the current analysis, the two gestures overlap within the Phase Window, however the gesture representing the liquid was realized with more overlap. In alignment terms, C<sub>2</sub>’s target aligns with C<sub>1</sub>’s release offset.

Less distance between the two consonant is allowed because the lateral is markedly different in its articulatory realization: laterals involve an additional gesture whereby the sides of the tongue are lowered as to allow for lateral air release. Taps lack this additional gesture and are shorter in duration, therefore, diachronically when a lateral loses the additional gesture, decreases in duration, and moves further away from the C<sub>1</sub> as noted by the presence of an intrusive vowel, it is reinterpreted as a rhotic tap.

## III. TYPE OF WORD TRANSMISSION

This explanation is particularly advantageous to the analysis because it can distinguish popular words from ones that were learned and semi-learned. Popular words were passed on orally and underwent the predictable phonological changes. However, the languages analyzed in the current study permitted the liquid as the second member of the cluster in semi-learned and learned words. For example, the noun in Latin *PLANTA* passes on to Portuguese as *planta* ‘plant’ and not as *\*pranta*. In this case, it is deemed a “learned word” *precisely* because the timing pattern is from Latin, and not from the timing relationship of the new languages, Galego-Portuguese and Sardinian.

## IV. CONCLUSION

In short, the current study is novel in that it treats a historical phonological change unique to Galego-Portuguese and Sardinian in a current phonological framework that is also capable of considering *how* the word was brought into the language. Moreover, it sheds light on how these languages treated /pl, fl, kl/ clusters from Latin and illustrates how modifications on gestural timing affected the evolution of the languages considered.