The Development of Obstruent plus Lateral Clusters in Ibero-Romance

A Historical-Phonetic Approach to Cluster Palatalization

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2025

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Inaugural-Dissertation
zur Erlangung des Doktorgrades der Philosophie
der Ludwig-Maximilians-Universität München
im Cotutelle-Verfahren mit
der Université de Pau et des Pays de l'Adour

vorgelegt von

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aus

Vigo

2025

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Tag der mündlichen Prüfung: 12. November 2025

THÈSE DE DOCTORAT
ED 481 - Sciences sociales et humanités

Présentée et soutenue le 12 november 2025
Par Andrea García Covelo

Thèse pour obtenir le grade de
Docteure de l'Université de Pau et des Pays de l'Adour
en cotutelle avec l' Ludwig-Maximilians-Universität München
(Sciences du langage - linguistique)

The Development of Obstruent plus Lateral Clusters in Ibero-Romance

A Historical-Phonetic Approach to Cluster Palatalization

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Zusammenfassung

Obstruent-plus-Lateral-Cluster (OL-Cluster) entwickelten sich mit beträchtlicher Variation im gesamten romanischsprachigen Gebiet. Im Lateinischen gab es fünf hauptsächliche OL-Cluster, /pl fl bl kl gl/, und diese konnten primär oder sekundär sein. Anders als primäre OL-Cluster besaßen sekundäre O(V)L-Cluster ursprünglich einen unbetonten Vokal zwischen C_1 und C_2 – in einer $C_1(V)C_2$-Silbe –, der aufgrund von Synkope im Spätlateinischen oft verloren ging, z.B. Lat. PLŬVĬA ‘Regen’ vs. Spätlat. PŎPLUS (< Lat. PŎPŬLUS) ‘Volk’. OL-Cluster waren normalerweise tautosyllabisch, wobei beide Konsonanten im Silbenonset analysiert wurden (Weiss 2009: 67-70; McCullagh 2011: 90) und konnten wortanfänglich, postkonsonantisch und postvokalisch auftreten. Diese Cluster erschienen in sechs verschiedenen Konfigurationen: #OL, -COL-, -VOL-, -VO:L-, -VO(V)L-, -CO(V)L-.

Während OL-Cluster von verschiedenen Lautwandelprozessen betroffen waren, war der bedeutendste die OL-Palatalisierung, die OL-Cluster oft in einzelne palatale oder postalveoläre Laute oder in Sequenzen aus Obstruent + palatalem Segment umwandelte, z.B. Lat. PLŬVĬA > Gal. /ʧ/*uvia*, Sp. /ʎ/*uvia* or /ʝ/*uvia*, Tusc. It. /pj/*ova* (Zampaulo 2019). Dieser Prozess wird normalerweise als Palatalisierung bezeichnet, obwohl nicht die gesamte Entwicklung der OL-Cluster ein Palatalisierungsprozess war und nicht alle Ergebnisse palatal, sondern auch postalveolär waren.

Die OL-Palatalisierung führte zu einer Vielzahl unterschiedlicher Ergebnisse, die im gesamten romanischsprachigen Gebiet zu finden sind. Diese palatalen Ergebnisse variierten nicht nur zwischen den verschiedenen romanischen Zweigen sondern auch innerhalb derselben Varietät, abhängig von Faktoren wie Artikulationsort oder Stimmhaftigkeit von C_1 oder der Position des OL-Clusters innerhalb des Wortes. Die Verteilung der OL-Palatalisierung – welche OL-Cluster palatalisierten – unterscheidet sich zwischen den Varietäten und scheint ebenfalls von diesen Faktoren konditioniert gewesen zu sein.

Trotz großer Variation zeigen lateinische OL-Cluster klare und homogene evolutionäre Muster in den meisten romanischen Sprachen. Im Standard-(Toskanischen) Italienischen beispielsweise palatalisierten alle OL-Cluster regelmäßig und wurden zu Sequenzen aus Obstruent plus /j/. Nicht-palatalisierte Cluster können als (späte) Entlehnungen erklärt werden. Das Gegenteil trat im Galicischen, Portugiesischen und Spanischen auf, den iberoromanischen Sprachen im Zentrum dieser Dissertation. Im Iberoromanischen variieren die Verteilung der OL-Palatalisierung und die spezifischen palatalen Ergebnisse der OL-Cluster je nach Natur von C_1 und der Position des OL-Clusters innerhalb des Wortes. Außerdem scheint die OL-Palatalisierung im Iberoromanischen kein regelmäßiger Prozess gewesen zu sein, und wir finden palatale zusammen mit nicht-palatalen Ergebnissen in ähnlichen phonologischen Kontexten: z.B. Lat. CLĀVIS 'Schlüssel' > Gal. /ʧ/*ave* vs. Lat. CLĀVUS 'Nagel' > Gal. /kɾ/avo. Während einige dieser nicht-palatalen Ergebnisse tatsächlich als Entlehnungen erklärt werden können, können viele nicht erklärt werden.

Da jedoch einige OL-Cluster schlecht dokumentiert sind, ist die Rekonstruktion der Ergebnisse und diachronen Entwicklungspfade eines bestimmten OL-Clusters herausfordernd. Dementsprechend bleibt unklar, ob die OL-Palatalisierung in bestimmten Clustern – wie /bl/ oder postvokalischem /kl/ – historisch nicht belegt ist, oder ob solche Beispiele einfach noch nicht identifiziert wurden.

Am faszinierendsten ist, dass die Ursprünge der OL-Palatalisierung unklar bleiben. Während die häufigsten Palatalisierungsauslöser sprachübergreifend palatale Gleitlaute und Vorderzungenvokale sind (Bateman 2007: 62-77), wurden die meisten OL-Cluster von einem tiefen oder hinteren Vokal gefolgt. Daher herrscht allgemeine Einigkeit, dass die OL-Palatalisierung einen anderen phonetischen Ursprung gehabt haben muss, wahrscheinlich artikulatorisch, aus einer überlappenden Produktion von C_1 und C_2 (Recasens 2018; Tuttle 1975). Die genauen Mechanismen hinter diesem Palatalisierungsprozess durch artikulatorische Überlappung bleiben jedoch unklar.

Diese Dissertation geht diese Fragen an, indem sie OL-Cluster mit einem experimentell-historischen Ansatz untersucht. Das Ziel ist, ein tieferes Verständnis des Prozesses der OL-Palatalisierung im Iberoromanischen aus historischer und phonologischer Perspektive und der möglichen artikulatorischen Ursprünge der OL-Palatalisierung aus phonetischer Perspektive zu gewinnen. Der theoretische Rahmen gründet sich auf Blevins' *Evolutionary Phonology* (2004, 2015), die drei Hauptideen vorschlägt, die die klassischen neogrammatischen und phonetisch-basierten Ansätze des Lautwandels zusammenbringen (Ohala 1993, 2003): (1) Lautwandel, die unabhängig in nicht verwandten Sprachen belegt sind, entstehen aus sprachuniversellen Faktoren, d.h. physiologischen und psychologischen Eigenschaften der menschlichen Sprache; (2) Dieselben Prozesse, die heute in der Sprache operieren, operierten auch in der Vergangenheit, d.h. synchrone Variation spiegelt diachrone Variation wider; und (3) Die Integration moderner wissenschaftlicher Phonetik mit der vergleichenden Methode (Ohalas *experimental historical phonology*) ist der Schlüssel für eine gründliche laborbasierte Darstellung des Lautwandels.

Diese Dissertation umfasst drei Hauptkapitel, die als unabhängige Einheiten verstanden und gelesen werden können. Während die allgemeine Literatur, die die Probleme rund um die OL-Palatalisierung einführt, im Kapitel 1 überblickt wird, wird speziellere Literatur in den einzelnen Kapiteln besprochen.

Kapitel 2 präsentiert eine etymologische und historische Studie über ererbte iberoromanische Wörter, die möglicherweise von einem Etymon mit einem OL-Cluster stammen. Dieses Kapitel zielt darauf ab, eine gründliche historische Grundlage für die quantitative und qualitative Analyse der OL-Palatalisierung zu schaffen, um die folgenden Fragen zu beantworten: welche OL-Cluster im Iberoromanischen palatalisierten, war der Prozess der OL-Palatalisierung im Iberoromanischen unregelmäßig, was sind die häufigsten Ergebnisse der OL-Palatalisierung, und welche Lautwandel könnten sie behindert haben. Zu diesem Zweck wurde eine Wortliste zusammengestellt, die ererbte Wörter mit und ohne OL-Palatalisierung in mehreren iberoromanischen Sprachen, hauptsächlich Galicisch, Portugiesisch und Spanisch, einschließt (cf. Appendix A).

Mehrere Quellen aus verschiedenen Sprachen und Medientypen wurden für die Zusammenstellung dieses historisch-etymologischen Datensatzes verwendet. Unter diesen Quellen befinden sich etymologische Wörterbücher und einsprachige Wörterbücher, philologische Arbeiten – oft in Online-Datenbanken enthalten –, und historische Online-Korpora (Abschnitt 2.3).

Die historische Wortliste lieferte neue historische Belege für OL-Palatalisierung in Clustern, wo dieser Lautwandel zuvor nicht belegt war, wie /Vkl/ und /Vk:l/. Außerdem wurden Belege für OL-Palatalisierung in einer neuen Cluster-Konfiguration gefunden: sekundäre postvokalische Cluster mit geminaten Plosiven (/Vp:(V)l Vk:(V)l/), die in früheren Darstellungen nicht als der OL-Palatalisierung unterliegend beschrieben worden waren. Obwohl Beispiele für OL-Palatalisierung in /Vkl/ selten sind, deuten sie darauf hin, dass postvokalische primäre und sekundäre OL-Cluster ähnliche Entwicklungen durchliefen, da sie in Galicisch-Portugiesischem /ʎ/ und Altspanischem /ʒ/ resultierten (Abschnitt 2.4).

Bezüglich der Verteilung der OL-Palatalisierung zeigen die im Korpus gesammelten historischen Belege, dass der Cluster /kl/ in allen OL-Cluster-Konfigurationen palatalisierte, /pl fl/ nur in primären wortanfänglichen, postkonsonantischen und postvokalischen (mit langen Obstruenten) Clustern eine Palatalisierung durchliefen, /gl/ nur in sekundären O(V)L-Clustern palatalisierte, und /bl/ niemals eine OL-Palatalisierung durchlief (vgl. Abschnitt 2.4.2). Die Überprüfung der Ergebnisse von OL-Clustern deutete darauf hin, dass das Fehlen der OL-Palatalisierung im Iberoromanischen nicht notwendigerweise das Ergebnis unregelmäßiger Implementierung war. Vielmehr kann der Palatalisierungsmangel in den meisten lexikalischen Einträgen durch die Wirkung anderer phonologischer Prozesse erklärt werden, wie fehlende Synkope, Liquiddissimilation und Lenition, oder durch die Substitution der ererbten Form mit OL-Palatalisierung durch eine konservativere Form des Wortes ohne sie (Abschnitt 2.4.1 und Abschnitt 2.4.3). Schließlich haben die chronologischen Informationen der ererbten Wörter neue Einblicke in die relative Chronologie der OL-Palatalisierung geliefert (Abschnitt 4.4.5).

Kapitel 3 ist eine phonetische Studie über die Artikulation spanischer OL-Cluster. Dieses Kapitel zielt darauf ab zu bestimmen, ob die OL-Palatalisierung durch die artikulatorischen Synergien zwischen den Mitgliedern des Clusters ausgelöst worden sein könnte und ob diese artikulatorischen Synergien je nach C_1-Stimmhaftigkeit und der Position des OL-Clusters innerhalb des Wortes variieren. Um dies zu untersuchen, wurden die Zungenbewegungen bei der Produktion spanischer OL-Cluster mittels elektromagnetischer Artikulographie (EMA) analysiert.

Artikulographische Daten wurden für zehn Muttersprachler des Iberischen Spanischen mittels einer Elizitationsaufgabe gesammelt. Die Stimuli bestanden hauptsächlich aus echten spanischen Wörtern mit den Ol-Clustern /kl gl/ in drei Wortpositionen – wortanfänglich, postvokalisch und postkonsonantisch – und mit verschiedenen lexikalischen

Betonungsmustern, d.h. betont, prätonisch und posttonisch. Zum Vergleich wurden auch die Einzelkonsonanten /l k g/ in betonter Position in das Experiment einbezogen (Abschnitt 3.2).

Die artikulatorischen Daten wurden mit Mview segmentiert, das halbautomatische Algorithmen verwendet, die die Berechnung der Zeitpunkte artikulatorischer Landmarken unter Verwendung der Geschwindigkeitsprofile der relevanten Sensoren ermöglichen. Laterale Segmente wurden unter Verwendung der tangentialen Geschwindigkeit des Zungenspitzensensors gemessen, die die Geschwindigkeitskomponenten sowohl der vertikalen als auch der horizontalen Achsen einbezieht, während velare Laute unter Verwendung der vertikalen Geschwindigkeit des Zungenrückensensors segmentiert wurden. Aufgrund der stimmhaften velaren Spirantisierung konnte das velare Segment in /gl/ nicht unter Verwendung der vertikalen Geschwindigkeit segmentiert werden. Daher wurde der Referenzpunkt für die Segmentierung des Velars in /gl/ als der erste Geschwindigkeitspeak von TT minus 25 ms festgelegt, was der ungefähren Mitte des akustischen Signals für /g/ entspricht (Abschnitt 3.3.1). Für die statistische Analyse wurden zwei Modelle für jeden Sensor angepasst, eines für die vertikale und eines für die horizontale Achse, typischerweise mit derselben Struktur fester und zufälliger Effekte. Die Daten umfassten rohe Positionswerte, vertikal und horizontal, am Punkt maximaler Konstriktion (Abschnitt 3.3.2).

Frühere Darstellungen der OL-Palatalisierung stellten die Hypothese auf, dass sie durch Koartikultation zwischen beiden Mitgliedern von OL-Clustern mit velaren Segmenten ausgelöst wurde. Folglich untersuchte das Experiment, ob Veränderungen in der Produktion des Velars und des Laterals in OL-Clustern mit ihrer Palatalisierung übereinstimmen würden: velare Palatalisierung beinhaltet Verschlussfrontierung; laterale Palatalisierung beinhaltet posteriore Zungenblatthebung, möglicherweise auch Zurückziehung (Abschnitt 3.1.3).

Im Iberoromanischen schienen diese koartikulatorischen Effekte von der C_1-Stimmhaftigkeit und der Cluster-Position innerhalb des Wortes beeinflusst worden zu sein. Speziell schienen Cluster mit stimmlosen Obstruenten (/pl fl kl/) die OL-Palatalisierung mehr begünstigt zu haben als OL-Cluster mit stimmhaften Obstruenten (/bl gl/), da stimmhafte Plosiv-Spirantisierung die OL-Palatalisierung verhindert haben könnte (vgl. Abschnitt 1.2 und Abschnitt 2.2), wie das Ergebnis /l/ von wortanfänglichem /gl/ nahelegt. Daher sollte bezüglich der lateralen Produktion /kl/ höhere und möglicherweise frontalere posteriore und anteriore Zungenblatt-Positionen im Vergleich zu /gl/ zeigen, und bei postkonsonantischem /gl/ im Vergleich zu postvokalischem und wortanfänglichem /gl/ (Cluster-Positions-Effekte aufgrund stimmhafter Plosiv-Spirantisierung). Für die velare Produktion sollten ähnliche Muster auftreten: /kl/ sollte frontalere Zungenrücken- und posteriore und anteriore Zungenblatt-Positionen im Vergleich zu /gl/ zeigen, und bei postkonsonantischem /gl/ im Vergleich zu postvokalischem und wortanfänglichem /gl/.

Hypothesen bezüglich Höhenveränderungen während der lateralen Produktion fanden Unterstützung in den artikulatorischen Daten. Hypothesen bezüglich horizontaler Positionsveränderungen während der velaren und lateralen Produktion jedoch nicht.

Die artikulatorischen Daten enthüllten signifikante Muster, die mit lateraler sekundärer Palatalisierung in OL-Clustern übereinstimmen. Im Allgemeinen waren das posteriore und anteriore Zungenblatt während der lateralen Produktion in Clustern signifikant höher als bei /l/, mit größeren Unterschieden zwischen kl~l als zwischen gl~l. Zusätzlich waren die Zungenblatt-Sensoren in /kl/ als in /gl/ postvokalisch signifikant höher (Abschnitt 3.4.1). Diese Befunde stimmen mit dem Hauptindikator lateraler sekundärer Palatalisierung – einem gehobenen posterioren Zungenblatt (und möglicherweise anterior; vgl. Kochetov 2005 und Abschnitt 3.1.1) – überein und unterstützen die Hypothese, dass Koartikulation laterale Palatalisierung als ersten Schritt in der OL-Palatalisierung ausgelöst haben könnte (vgl. Abschnitt 1.5).

Unterschiede aufgrund von C_1-Stimmhaftigkeit und Cluster-Position innerhalb des Wortes können durch die Wirkung der Lenition erklärt werden: Lenition beeinflusste /k/ nicht durch Verringerung des Konstriktionsgrades des Plosivs, und die Zungenblatt-Sensoren während der velaren Produktion blieben bei /k/ über alle Positionen auf konstanter Höhe; im Gegensatz dazu wurde /g/ von Lenition beeinflusst, sodass die velare Konstriktion postvokalisch und teilweise wortanfänglich, wo die Bedingungen für Lenition erfüllt waren, signifikant reduziert wurde, und /g/ als Approximant oder Frikativ produziert wurde. Die reduzierte Konstriktion des stimmhaften velaren Plosivs spiegelte sich in gesenkten Zungenblatt-Sensoren während der lateralen Produktion wider. Im Gegensatz dazu war die Höhe aller Sensoren in /kl/ und /gl/ in postkonsonantischer Position ähnlich, wo die Bedingungen für Lenition nicht erfüllt waren. Diese Ergebnisse stimmen mit der Hypothese überein, dass Lenition die beobachteten artikulatorischen Dynamiken reduzierte, die potenziell zu lateraler Palatalisierung führten (Abschnitt 3.4.1).

Die horizontale Positionsveränderungen in den Zungenblatt-Sensoren während der lateralen Produktion waren minimal und nicht signifikant, ebenso wie die horizontale und vertikale Veränderungen in der Zungenspitze. Folglich variierte der primäre Artikulator (die Zungenspitze) des Laterals seinen Artikulationsort nicht, aber die Zungenblatt-Sensoren durchliefen signifikante Hebung in Clustern, besonders in /kl/. Ähnlich wurden keine signifikanten Unterschiede in der horizontalen Position des Zungenrückens, des posterioren und anterioren Zungenblatts während der velaren Produktion gefunden (Abschnitt 3.4.2). Daher unterstützen die artikulatorischen Daten nicht die Hypothese, dass Velare in OL-Clustern eher palatalisieren würden, oder dass C_1-Stimmhaftigkeit und Cluster-Position innerhalb des Wortes eine Rolle in der OL-Cluster-Koartikulation spielten.

Die beobachteten artikulatorischen Dynamiken sind mit einem artikulatorischen Ursprung der OL-Palatalisierung vereinbar. Da posteriore Zungenblatthebung ein Hauptmerkmal sekundärer Palatalisierung bei Lateralen darstellt (vgl. Abschnitt 3.1.1), stimmt der Beleg für posteriore und anteriore Zungenblatthebung während der lateralen Produktion mit der Hypothese überein, dass Koartikulation mit dem vorangehenden Velar zur Auslösung der OL-Palatalisierung beigetragen haben könnte. Dieser Effekt scheint besonders ausgeprägt gewesen zu sein, wenn C_1 stimmlos war. Diese Muster scheinen auch die Hypothese zu unterstützen, dass Lenition die koartikulatorischen Dynamiken, die zu OL-Palatalisierung führten, minimierte: die differenziellen Effekte über Positionen spiegeln direkt die Verteilung von Lenitionsprozessen wider, mit stabilen Dynamiken, wo Lenition abwesend war (/kl/, postkonsonantisches /gl/) und reduzierten Dynamiken, wo Lenition auftrat (postvokalisches /gl/). Umgekehrt, wenn C_1 stimmhaft war, schien laterale Palatalisierung am wenigsten wahrscheinlich postvokalisch, wo die Höhe der Zungenblatt-Sensoren während der lateralen Produktion signifikant reduziert war.

Kapitel 4 präsentiert eine historisch-phonologische Studie über die evolutionären Pfade von OL-Clustern. Dieses Kapitel zielt darauf ab, die Entwicklung der OL-Palatalisierung im Iberoromanischen und ihre diachronen Pfade im Galicischen, Portugiesischen und Spanischen zu beleuchten. Um dies zu erreichen, werden die Ergebnisse von Kapitel 2 und Kapitel 3 mit früherer historischer und typologischer Forschung kombiniert, einschließlich Diskussionen der Qualität des lateinischen Laterals, früherer Vorschläge für evolutionäre Pfade und iberoromanischer Lautwandel-Typologie, mit Fokus auf Synkope, Lenition, Vokalerhöhung und Silbifizierung.

Diese Analyse enthüllte mehrere Schlüsselbefunde. Erstens wurden unbetonte posttonische Vokale im Galicisch-Portugiesischen oft bewahrt, anstatt Synkope zu durchlaufen, was die OL-Palatalisierung in einigen lexikalischen Einträgen blockierte (Abschnitt 4.3.1). Zweitens koexistierte der OL-Palatalisierungsprozess mit verschiedenen Lenitionsveränderungen (Abschnitt 4.3.2; vgl. Abbildung 4.1 und Abbildung 4.2). Drittens erklärt die von der Gleitlaut-Hypothese vorgeschlagene Palatalisierung sekundärer postvokalischer O(V)L-Cluster nicht die phonetische Entwicklung dieser Cluster. Die in Abschnitt 4.3.3 und Abschnitt 4.3.4 präsentierten historischen Belege deuten darauf hin, dass diese Hypothese das Fehlen von Vokalerhöhung und Diphthongierung in den iberoromanischen lexikalischen Einträgen nicht erklären kann. Außerdem war velare Schwächung zu /j/ nicht das häufigste Ergebnis heterosilbischer Cluster, sondern Lenition war stattdessen der vorherrschende Prozess.

Basierend auf diesen Belegen wurden die phonetischen Entwicklungen der OL-Palatalisierung im Iberoromanischen diskutiert. Wortanfängliche und postkonsonantische OL-Cluster waren bereits weitgehend in der früheren Literatur berücksichtigt worden. Die verschiedenen Rekonstruktionen der Entwicklung von /k(V)l g(V)l/ – gemäß der Gleitlaut-Hypothese oder der gesturalen Hypothese – wurden diskutiert und es wurde geschlussfolgert, dass die gesturale Hypothese, die laterale Palatalisierung durch Koartikulation und C_1-Lenition annimmt, die diachronen Pfade sekundärer postvokalischer O(V)L-Cluster besser erklärt.

Mögliche evolutionäre Pfade, basierend auf denen für sekundäre postvokalische O(V)L-Cluster, wurden für primäres postvokalisches /kl/ vorgeschlagen, da die Gleitlaut-Hypothese die Vokalveränderungen oder die Ausbreitung der OL-Palatalisierung nicht vollständig erklären kann. Mögliche Rekonstruktionen für postvokalische OL-Cluster mit langen Obstruenten wurden auch basierend auf den diachronen Pfaden postkonsonantischer Cluster vorgeschlagen. Da die Obstruenten im Allgemeinen bewahrt wurden, wurden mehrere Rekonstruktionen für den Zeitpunkt der Degemination angeboten. Für /pːl fːl kːl/, die in spanischem [ʎ] resultierten, deutet Obstruentenverlust in diesen Clustern darauf hin, dass Degemination sie sehr früh beeinflusste. Folglich durchlief der Obstruent weitere Lenition, wie in wortanfänglichen OL-Clustern (Abschnitt 4.4)

Die relative Chronologie der OL-Palatalisierung und ihre Ausbreitung von einem OL-Cluster zu anderen wurde ebenfalls diskutiert. Die im Abschnitt 4.4.5 gelieferten historischen Belege zeigen, dass sekundäre postvokalische /k(V)l g(V)l/ die ersten Cluster waren, die OL-Palatalisierung durchliefen. Die Ergebnisse des artikulatorischen Experiments im Kapitel 3 scheinen die frühere Palatalisierung dieser Cluster zu unterstützen. Der unterschiedliche chronologische Zeitpunkt für die Palatalisierung verschiedener OL-Cluster widerspricht nicht der Hypothese, dass alle OL-Cluster durch denselben artikulatorischen Auslöser Palatalisierung durchliefen.

Die Phonologisierung der OL-Palatalisierung trat zuerst in /k(V)l g(V)l/ auf, weil diese Cluster mit -*cul*- identifiziert wurden, einem hochproduktiven und häufigen lateinischen Diminutivsuffix. Die chronologischen Informationen, die im für diese Dissertation zusammengestellten historischen Korpus enthalten sind (vgl. Appendix A), zusammen mit Belegen aus divergenten Lautwandelmustern, deuten darauf hin, dass postkonsonantische sekundäre /k(V)l g(V)l/, postvokalische /kː(V)l/, und postvokalisches /kl/ kurz danach gefolgt wären. Anschließend wäre die OL-Palatalisierung in primären OL-Clustern phonologisiert worden und hätte sich auf /pl fl/ ausgebreitet. Diese Variation im Zeitpunkt der Palatalisierung über verschiedene OL-Cluster kann den Palatalisierungsmangel in einigen Segmenten erklären, das beispielsweise durch Lenition verursacht wurde: als Lenition verallgemeinerter und durchdringender wurde, könnte die OL-Palatalisierung aufgrund von Spirantisierung oder Obstruentenverlust blockiert worden sein, wie im Fall von wortanfänglichem /gl/. Im Gegensatz dazu, als Lenition noch in ihren Anfangsstadien war, sollte /g/ keine Spirantisierung durchlaufen haben und /gl/ hätte von OL-Palatalisierung erfasst werden können, wie bei sekundärem postvokalischem /gl/.

Diese Dissertation stellt die erste gründliche laborphonetische Darstellung der OL-Palatalisierung im Iberoromanischen dar und hat unser Wissen über die Evolution und Mechanismen dieses Lautwandels erheblich vertieft. Die Rekonstruktion der iberoromanischen OL-Palatalisierungsentwicklung bietet wertvolle Einblicke in die Interaktionen zwischen verschiedenen Lautwandeln und wie solche Interaktionen in scheinbarer Unregelmäßigkeit oder in diversen diachronen Pfaden für denselben Lautwandelprozess resultieren können.

Résumé

Les groupes obstruante plus latérale (groupes OL) se sont développés avec une variation considérable dans tout le territoire romanophone. Il y avait cinq groupes OL principaux en latin, /pl fl bl kl gl/, et ceux-ci pouvaient être primaires ou secondaires. Contrairement aux groupes OL primaires, les groupes O(V)L secondaires possédaient à l'origine une voyelle non accentuée entre C_1 et C_2 – dans une syllabe C_1(V)C_2 –, qui était souvent perdue en raison de la syncope en latin tardif, par exemple lat. PLŬVĬA 'pluie' vs. lat. tardif PŎPLUS (< Lat. PŎPŬLUS) 'peuple'. Les groupes OL étaient habituellement tautosyllabiques, les deux consonnes étant analysées dans l'attaque syllabique (cf. Weiss 2009 : 67-70 ; McCullagh 2011 : 90) et pouvaient se trouver en position initiale de mot, post-consonantique et post-vocalique. Ces groupes apparaissaient dans six configurations différentes : #OL, -COL-, -VOL-, -VO:L-, -VO(V)L-, -CO(V)L-.

Bien que les groupes OL aient été affectés par divers changements phonétiques, le plus significatif était la palatalisation OL, qui convertissait souvent les groupes OL en sons palataux ou post-alvéolaires simples ou en séquences d'obstruante + segment palatal, par exemple Lat. PLŬVĬA > Gal. /ʧ/uvia, Sp. /ʎ/uvia ou /ʝ/uvia, It. /pj/ova (Zampaulo 2019). Ce processus est habituellement appelé palatalisation bien que tout le développement des groupes OL ne soit pas un processus de palatalisation et que tous les résultats ne soient pas palataux, mais aussi post-alvéolaires.

La palatalisation OL a donné lieu à une myriade de résultats différents trouvés dans tout le territoire romanophone. Ces résultats palataux variaient non seulement entre les différentes sous-familles romanes mais aussi au sein de la même variété selon des facteurs tels que le lieu d'articulation ou le voisement de C_1 ou la position du groupe OL dans le mot. La distribution de la palatalisation OL – quels groupes OL ont subi une palatalisation – diffère entre les variétés et semble également avoir été conditionnée par ces facteurs.

Malgré une grande variation, les groupes OL latins montrent des modèles évolutifs clairs et homogènes dans la plupart des langues romanes. En italien standard (toscan), par exemple, tous les groupes OL se sont régulièrement palatalisés et sont devenus des séquences d'obstruante plus /j/. Les groupes non palatalisés peuvent être expliqués comme des emprunts (tardifs). L'opposé s'est produit en galicien, portugais et espagnol, les langues ibéro-romanes qui constituent le cœur de cette thèse. En ibéro-roman, la distribution de la palatalisation OL et les résultats palataux spécifiques des groupes OL varient selon la nature de C_1 et la position du groupe OL dans le mot. De plus, la palatalisation OL ne semble pas avoir été un processus régulier en ibéro-roman et nous trouvons des résultats palataux avec des résultats non palataux dans des contextes phonologiques similaires : par exemple Lat. CLĀVIS 'clé' > Gal.

/ʧ/ave vs. Lat. CLĀVUS 'clou' > Gal. /kɾ/avo. Bien que certains de ces résultats non palataux puissent effectivement être expliqués comme des emprunts, beaucoup ne le peuvent pas.

Cependant, puisque certains groupes OL sont mal documentés, reconstruire les résultats et les voies diachroniques d'un groupe OL particulier est difficile. En conséquence, il reste peu clair si la palatalisation OL dans certains groupes – tels que /bl/ ou /kl/ post-vocalique – n'est pas attestée historiquement, ou si de tels exemples n'ont simplement pas encore été identifiés.

De façon plus intriguante, les origines de la palatalisation OL demeurent peu claires. Alors que les déclencheurs de palatalisation les plus communs translinguistiquement sont les glissantes palatales et les voyelles antérieures (Bateman 2007 : 62-77), la plupart des groupes OL étaient suivis d'une voyelle basse ou postérieure. Par conséquent, il est généralement admis que la palatalisation OL doit avoir eu une origine phonétique différente, probablement articulatoire, d'une production chevauchante de C_1 et C_2 (cf. Recasens 2018 ; Tuttle 1975). Cependant, les mécanismes exacts derrière ce processus de palatalisation par chevauchement articulatoire demeurent peu clairs.

Cette thèse aborde ces questions en étudiant les groupes OL en utilisant une approche expérimentale-historique. L'objectif est de gagner une compréhension plus profonde du processus de palatalisation OL en ibéro-roman d'une perspective historique et phonologique, et des origines articulatoires possibles de la palatalisation OL d'une perspective phonétique. Le cadre théorique se fonde sur la *Evolutionary Phonology* de Blevins (2004, 2015), qui propose trois idées principales qui rassemblent les approches néo-grammaticales classiques et phonétiquement basées du changement phonétique (Ohala 1993, 2003) : (1) Les changements phonétiques attestés indépendamment dans des langues non apparentées proviennent de facteurs universels du langage, c'est-à-dire des propriétés physiologiques et psychologiques de la parole humaine ; (2) Les mêmes processus qui opèrent dans le langage maintenant opéraient aussi dans le passé, c'est-à-dire que la variation synchronique reflète la variation diachronique ; et (3) L'intégration de la phonétique scientifique moderne avec la méthode comparative (la *experimental historical phonology* d'Ohala) est clé pour un étude approfondi basé sur le laboratoire du changement phonétique.

Cette thèse comprend trois chapitres principaux, qui peuvent être compris et lus comme des unités indépendantes. Alors que la littérature générale introduisant les questions entourant la palatalisation OL est passée en revue dans le chapitre 1, la littérature plus spécialisée est examinée dans les chapitres individuels.

Le chapitre 2 présente une étude étymologique et historique sur les mots ibéro-romans hérités qui pourraient provenir d'un étymon contenant un groupe OL. Ce chapitre vise à fournir une fondation historique approfondie pour l'analyse quantitative et qualitative de la palatalisation OL afin de répondre aux questions suivantes : quels groupes OL se sont palatalisés en ibéro-roman, le processus de palatalisation OL en ibéro-roman était-il irrégulier, quels sont les résultats les plus communs de la palatalisation OL, et quels changements phonétiques pourraient l'avoir entravée. À cette fin, une liste de mots a été compilée incluant des mots hérités avec et sans palatalisation OL dans plusieurs langues ibéro-romanes, principalement le galicien, le portugais et l'espagnol (cf. appendice A).

Plusieurs sources de différentes langues et types de médias ont été employées pour compiler cet ensemble de données historico-étymologique. Parmi ces sources se trouvent les dictionnaires étymologiques et monolingues, les travaux philologiques – souvent contenus dans des bases de données en ligne –, et les corpus historiques en ligne (Section 2.3).

La liste de mots historique a fourni de nouvelles preuves historiques de palatalisation OL dans des groupes où ce changement phonétique n'était pas attesté auparavant, tels que /Vkl/ et /Vk:l/. De plus, des preuves de palatalisation OL ont été trouvées dans une nouvelle configuration de groupe : des groupes post-vocaliques secondaires avec des occlusives géminées (/Vp:(V)l Vk:(V)l/), qui n'avaient pas été décrits comme subissant une palatalisation OL dans les comptes-rendus précédents. Bien que les exemples de palatalisation OL dans /Vkl/ soient rares, ils suggèrent que les groupes OL primaires et secondaires post-vocaliques ont subi des évolutions similaires, puisqu'ils ont résulté en galaïco-portugais /ʎ/ et vieil espagnol /ʒ/.

Concernant la distribution de la palatalisation OL, les preuves historiques rassemblées dans le corpus indiquent que le groupe /kl/ s'est palatalisé dans toutes les configurations de groupe OL, /pl fl/ n'ont subi une palatalisation que dans les groupes primaires en position initiale de mot, post-consonantique et post-vocalique (avec des obstruantes longues), /gl/ ne s'est palatalisé que dans les groupes O(V)L secondaires, et /bl/ n'a jamais subi de palatalisation OL (cf. Section 2.4.2). L'examen des résultats des groupes OL a suggéré que l'absence de palatalisation OL en ibéro-roman n'était pas nécessairement le résultat d'une implémentation irrégulière. Plutôt, l'absence de palatalisation OL dans la plupart des éléments lexicaux peut être expliquée par l'effet d'autres processus phonologiques, tels que l'absence de syncope, la dissimilation liquide et la lénition, ou par la substitution de la forme héritée avec palatalisation OL par une forme plus conservatrice du mot sans elle (cf. Section 2.4.1 et Section 2.4.3). Enfin, les informations chronologiques des mots hérités ont fourni de nouveaux aperçus sur la chronologie relative de la palatalisation OL (cf. Section 4.4.5).

Le chapitre 3 est une étude phonétique sur l'articulation des groupes OL espagnols. Ce chapitre vise à déterminer si la palatalisation OL aurait pu être déclenchée par les synergies articulatoires entre les membres du groupe et si ces synergies articulatoires varient selon le voisement de C_1 et la position du groupe OL dans le mot. Pour enquêter sur ceci, les mouvements de langue dans la production des groupes OL espagnols ont été analysés au moyen de l'Articulographie Électromagnétique (EMA).

Les données articulographiques ont été collectées pour dix locuteurs natifs de l'espagnol péninsulaire en utilisant une tâche d'élicitation. Les stimuli consistaient principalement en mots espagnols réels avec des attaques complexes impliquant /kl gl/ dans trois positions de mot – position initiale de mot, post-vocalique et post-consonantique – et avec différents modèles d'accent lexical, c'est-à-dire accentué, prétonique et post-tonique. Pour comparaison, des attaques simples en position accentuée ont également été incluses dans l'expérience.

Les données articulatoires ont été segmentées en utilisant Mview, qui emploie des algorithmes semi-automatiques permettant le calcul des points temporels de repères articulatoires en utilisant les profils de vitesse des capteurs pertinents. Les segments latéraux ont été mesurés en utilisant la vitesse tangentielle du capteur de pointe de langue, incorporant les composantes de vitesse des axes vertical et horizontal, tandis que les sons vélaires ont été segmentés en utilisant la vitesse verticale du capteur de dos de langue. En raison de la spirantisation vélaire voisée, le segment vélaire dans /gl/ n'a pas pu être segmenté en utilisant la vitesse verticale. Par conséquent, le point de référence pour segmenter le vélaire dans /gl/ a été établi comme le premier pic de vitesse de TT moins 25 ms, qui correspond au milieu approximatif du signal acoustique pour /g/. Pour l'analyse statistique, deux modèles ont été ajustés pour chaque capteur, un pour l'axe vertical et un pour l'axe horizontal, typiquement avec la même structure d'effets fixes et aléatoires. Les données comprenaient des valeurs positionnelles brutes, verticales et horizontales, au point de constriction maximale.

Les comptes-rendus précédents de la palatalisation OL ont émis l'hypothèse qu'elle était déclenchée par un mélange gestuel entre les deux membres des groupes OL contenant des segments vélaires. Par conséquent, l'expérience a étudié si les changements dans la production du vélaire et de la latérale dans les groupes OL seraient cohérents avec leur palatalisation : la palatalisation vélaire implique un froncement de la fermeture ; la palatalisation latérale implique une élévation postérieure de la lame de langue, peut-être aussi un recul.

En ibéro-roman, ces effets coarticulatoires semblaient avoir été influencés par le voisement de C1 et la position du groupe dans le mot. Spécifiquement, les groupes contenant des obstruantes sourdes (/pl fl kl/) semblaient avoir favorisé la palatalisation OL plus que les groupes OL contenant des obstruantes voisées (/bl gl/) car la spirantisation de l'occlusive voisée pourrait avoir empêché la palatalisation OL de se produire (cf. Section 1.2 et Section 2.2), comme le suggère le résultat /l/ de /gl/ en position initiale de mot. Par conséquent, concernant la production latérale, /kl/ devrait montrer des positions de lame de langue postérieure et antérieure plus hautes et peut-être plus frontales comparées à /gl/, et dans /gl/ post-consonantique comparé à /gl/ post-vocalique et en position initiale de mot (effets de position de groupe dus à la spirantisation de l'occlusive voisée). Pour la production vélaire, des modèles similaires devraient émerger : /kl/ devrait montrer des positions de dos de langue et de lame de langue postérieure et antérieure plus frontales comparées à /gl/, et dans /gl/ post-consonantique comparé à /gl/ post-vocalique et en position initiale de mot.

Les hypothèses concernant les changements de hauteur pendant la production latérale ont trouvé un soutien dans les données articulatoires. Cependant, les hypothèses concernant les changements de position horizontale pendant la production vélaire et latérale ne l'ont pas fait.

Les données articulatoires ont révélé des modèles significatifs cohérents avec la palatalisation secondaire latérale dans les groupes OL. Généralement, la lame de langue postérieure et antérieure pendant la production latérale étaient significativement plus hautes dans les groupes que dans le /l/ singleton, avec de plus grandes différences entre kll qu'entre gll. De plus, les capteurs de lame de langue étaient significativement plus hauts dans /kl/ que dans /gl/ en position post-vocalique. Ces découvertes s'alignent avec l'indicateur principal de la palatalisation secondaire latérale – une lame de langue postérieure élevée (et possiblement antérieure ; cf. Kochetov 2005 et Section 3.1.1) – soutenant l'hypothèse que la coarticulation pourrait avoir déclenché la palatalisation latérale comme étape initiale dans la palatalisation OL (cf. Section 1.5).

Les différences résultant du voisement de C_1 et de la position du groupe dans le mot peuvent être expliquées par l'effet de la lénition : la lénition n'a pas affecté /k/ en diminuant le degré de constriction de l'occlusive, et les capteurs de lame de langue pendant la production vélaire sont restés à une hauteur constante dans /k/ à travers toutes les positions ; en contraste, /g/ a été affecté par la lénition, de sorte que la constriction vélaire a été significativement réduite en position post-vocalique et partiellement en position initiale de mot, où les conditions pour la lénition étaient remplies, et /g/ a été produit comme une approximante ou fricative. La constriction réduite de l'occlusive vélaire voisée s'est reflétée dans des capteurs de lame de langue abaissés pendant la production latérale. En contraste, la hauteur de tous les capteurs était similaire dans /kl/ et /gl/ en position post-consonantique, où les conditions pour la lénition n'étaient pas remplies. Ces résultats s'alignent avec l'hypothèse que la lénition a réduit les dynamiques articulatoires observées menant potentiellement à la palatalisation latérale.

Les différences de recul dans les capteurs de lame de langue pendant la production latérale étaient minimales et non significatives, comme l'étaient les changements dans la hauteur ou le recul de la pointe de langue. Par conséquent, l'articulateur primaire (la pointe de langue) de la latérale n'a pas varié son lieu d'articulation, mais les capteurs de lame de langue ont subi une élévation significative dans les groupes, particulièrement dans /kl/. Similairement, aucune différence significative n'a été trouvée dans le recul du dos de langue, de la lame de langue postérieure et antérieure pendant la production vélaire (Section 3.4.2). Par conséquent, les données articulatoires ne soutiennent pas l'hypothèse que les vélaires seraient plus susceptibles de se palataliser dans les groupes OL, ou que le voisement de C_1 et la position du groupe dans le mot ont joué un rôle dans la coarticulation des groupes OL.

Les dynamiques articulatoires observées sont cohérentes avec une origine articulatoire de la palatalisation OL. Étant donné que l'élévation postérieure de la lame de langue constitue une caractéristique principale de la palatalisation secondaire dans les latérales (cf. Section 3.1.1), la preuve d'élévation postérieure et antérieure de la lame de langue pendant la production latérale s'aligne avec l'hypothèse que la coarticulation avec le vélaire précédent pourrait avoir contribué à déclencher la palatalisation OL. Cet effet semble avoir été particulièrement prononcé quand C_1 était sourd. Ces modèles semblent également soutenir l'hypothèse que la lénition a minimisé les dynamiques coarticulatoires menant à la palatalisation OL : les effets différentiels à travers les positions reflètent directement la distribution des processus de lénition, avec des dynamiques stables où la lénition était absente (/kl/, /gl/ post-consonantique) et des dynamiques réduites où la lénition s'est produite (/gl/ post-vocalique). Inversement, quand C_1 était voisé, la palatalisation latérale semble avoir été moins probable en position post-vocalique, où la hauteur des capteurs de lame de langue pendant la production latérale était significativement réduite.

Chapter 4 présente une étude historico-phonologique sur les voies évolutives des groupes OL. Ce chapitre vise à éclairer le développement de la palatalisation OL en ibéro-roman et sur ses voies diachroniques en galicien, portugais et espagnol. Pour atteindre ceci, les résultats des chapitre 2 et 3 sont combinés avec la recherche historique et typologique précédente, incluant des discussions de la qualité de la latérale latine, des propositions précédentes pour les voies évolutives, et la typologie du changement phonétique ibéro-roman, se concentrant sur la syncope, la lénition, l'élévation vocalique et la syllabification.

Cette analyse a révélé plusieurs découvertes clés. Premièrement, les voyelles post-toniques non accentuées étaient souvent préservées en galaïco-portugais, plutôt que de subir une syncope, ce qui a bloqué la palatalisation OL dans certains éléments lexicaux (Section 4.3.1). Deuxièmement, le processus de palatalisation OL a coexisté avec divers changements de lénition (Section 4.3.2 ; cf. Figure 4.1 et Figure 4.2). Troisièmement, la palatalisation des groupes O(V)L post-vocaliques secondaires proposée par l'hypothèse de la glissante ne rend pas compte du développement phonétique de ces groupes. Les preuves historiques présentées dans Section 4.3.3 et Section 4.3.4 suggèrent que cette hypothèse ne peut pas rendre compte de l'absence d'élévation vocalique et de diphtongaison dans les éléments lexicaux ibéro-romans. De plus, l'affaiblissement vélaire en /j/ n'était pas le résultat le plus commun des groupes hétérosyllabiques, la lénition étant plutôt le processus prédominant.

Basé sur cette preuve, les développements phonétiques de la palatalisation OL en ibéro-roman ont été discutés. Les groupes OL en position initiale de mot et post-consonantiques avaient déjà été largement pris en compte dans la littérature précédente. Les différentes reconstructions du développement de /k(V)l g(V)l/ – selon l'hypothèse de la glissante ou l'hypothèse gesturale – ont été discutées et il a été conclu que l'hypothèse gesturale, assumant une palatalisation latérale par coarticulation et lénition de C_1, rend mieux compte des voies diachroniques des groupes O(V)L post-vocaliques secondaires.

Des voies évolutives possibles, basées sur celles pour les groupes O(V)L post-vocaliques secondaires, ont été proposées pour le /kl/ post-vocalique primaire puisque l'hypothèse de la glissante ne peut pas pleinement rendre compte des changements vocaliques ou de la propagation de la palatalisation OL. Des reconstructions possibles pour les groupes OL post-vocaliques avec des obstruantes longues ont également été proposées basées sur les voies diachroniques des groupes post-consonantiques. Étant donné que les obstruantes étaient généralement préservées, plusieurs reconstructions ont été offertes pour le timing de la dégémination. Pour /pːl fːl kːl/, qui ont résulté en espagnol [ʎ], la perte d'obstruante dans ces groupes suggère que la dégémination les a affectés très tôt. Par conséquent, l'obstruante a subi une lénition supplémentaire, comme dans les groupes OL en position initiale de mot.

La chronologie relative de la palatalisation OL et sa propagation d'un groupe OL à d'autres a également été discutée. Les preuves historiques fournies dans Section 4.4.5 indiquent que les

/k(V)l g(V)l/ post-vocaliques secondaires étaient les premiers groupes à subir une palatalisation OL. Les résultats de l'expérience articulatoire dans le chapitre 3 semblent soutenir la palatalisation antérieure de ces groupes. Le timing chronologique différent pour la palatalisation de différents groupes OL ne contredit pas l'hypothèse que tous les groupes OL ont subi une palatalisation par le même déclencheur articulatoire.

La phonologisation de la palatalisation OL s'est produite d'abord dans /k(V)l g(V)l/ parce que ces groupes étaient identifiés avec -*cul*-, un suffixe diminutif latin hautement productif et fréquent. Les informations chronologiques contenues dans le corpus historique compilé pour cette thèse (cf. appendice A), ensemble avec des preuves de modèles de changement phonétique divergents, suggèrent que les /k(V)l g(V)l/ secondaires post-consonantiques, les /kː(V)l/ post-vocaliques, et le /kl/ post-vocalique auraient suivi peu après. Subséquemment, la palatalisation OL aurait été phonologisée dans les groupes OL primaires et se serait propagée à /pl fl/. Cette variation dans le timing de la palatalisation à travers différents groupes OL peut rendre compte de l'absence de palatalisation dans certains segments causée par, par exemple, la lénition : quand la lénition est devenue plus généralisée et envahissante, la palatalisation OL pourrait avoir été bloquée en raison de la spirantisation ou de la perte d'obstruante, comme dans le cas de /gl/ en position initiale de mot. En contraste, quand la lénition était encore dans ses étapes initiales, /g/ ne devrait pas avoir subi de spirantisation et /gl/ aurait pu être ciblé par la palatalisation OL, comme dans le /gl/ post-vocalique secondaire.

Cette thèse représente le premier étude approfondi de phonologie de laboratoire de la palatalisation OL en ibéro-roman et a significativement approfondi notre connaissance de l'évolution et des mécanismes de ce changement phonétique. La reconstruction du développement de la palatalisation OL ibéro-romane offre des aperçus précieux sur les interactions entre différents changements phonétiques et comment de telles interactions peuvent résulter en irrégularité apparente ou en voies diachroniques diverses pour le même processus de changement phonétique.

Acknowledgements

This research was generously supported by the *Studienstiftung des deutschen Volkes* PhD scholarship and the *Elitenetzwerk Bayern* Marianne-Plehn Programme.

I am indebted to my supervisors, Marianne Pouplier and Ander Egurtzegi, whose expertise and valuable feedback marked this research journey.

I am deeply grateful to the many people who graciously shared their time, knowledge, and insightful advice: Carlota de Benito, Johannes Kabatek, Ramón Mariño, Michael Cysouw, Christoph Draxler, Iñigo Urrestarazu, Mario Casado, Nicole Benker, Francesco Burroni, and many more. I would also like to thank all the people of the IPS for creating such an companionable and inspiring environment.

I dedicate this dissertation to my parents, Rosa and Alberto, for their never-ending support, and, most importantly, to my partner and best PhD buddy, Philipp. Thank you for being my cheerleader and for believing in me, even when I didn't.

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Abbreviations

_	the discussed phone(me) or cluster
.	syllable-boundary
’	lexical stress
*	reconstructed word. In the context of a regular expression, it has the meaning “any number of characters”
**	agrammatical or nonsense word
#_	word-boundary, often used with the meaning word-initial position
a < b	a comes from b
a > b	a becomes b
a←b	a comes from b through derivation
a→b	a becomes b through derivation
AL	Astur-Leonese
Alav.	Alavese
Andal.	Andalusian Spanish
Arab.	Arabic
Arag.	Aragonese
Aran	Aranese (Occitan)
Arom.	Aromanian
Ast.	Asturian
Basq.	Basque
Burg.	Spanish spoken in Burgos
C	a consonant
C_	postconsonantal position
Cant.	Cantabrian
Cat.	Catalan
Celt.	Celtic
EMA	Electromagnetic articulography
(F)Prov.	(Franco-)Provençal
Fr.	French
Gal.	Galician
Gaul.	Gaulish
Germ.	Germanic
Got.	Gothic
GP	Galician-Portuguese
Gr.	Greek

IE	Indo-European
It.	Italian
L	a lateral
(Late) Lat.	(Late) Latin
Leon.	Leonese
Minh. Pt.	Minhoto Portuguese
Mir.	Mirandese
Montañ.	Montañés (Cantabrian)
Mozarab.	Mozarabic
NA	not available/applicable
Nav.	Spanish spoken in Navarra
O	an obstruent
O:	a long obstruent
Occ.	Occitan
OFr.	Old French
OHG	Old High German
OIt.	Old italian
OL	Obstruent-Lateral
OLat.	Old Latin
OSp.	Old Spanish
PIE	Proto-Indo-European
Pt.	Portuguese
R	a rhotic
Rib. Arag.	Ribagorçan Aragonese
Rom.	Romanian
Salm.	Spanish spoken in Salamanca
Sant.	Santander
Sp.	Spanish
TB	tongue back
TM1	tongue blade anterior
TM2	tongue blade posterior
Trasm. Pt.	Trás-os-Montes Portuguese
TT	tongue tip
u.e.	uncertain etymon
u.o.	uncertain origin
V	a vowel
(V)	potentially syncopated vowel
V_	postvocalic position

1. Introduction

1.1. About this dissertation

Obstruent plus lateral clusters - henceforth OL clusters - developed very differently throughout the Romance-speaking territory. There were five main OL clusters in Latin, /pl fl bl kl gl/, and these could be primary or secondary. In contrast to primary (or Latin) OL clusters, secondary (or Romance) O(V)L clusters originally had an unstressed vowel between C_1 and C_2 -in a C_1(V)C_2 syllable-, which was often lost due to syncope in Late Latin, e.g., Lat. PLŬVĬA 'rain' vs. Late Lat. PŎPLUS (< Lat. PŎPŬLUS) 'people'. OL clusters were usually tautosyllabic, i.e., both consonants were parsed in the syllable onset (cf. Weiss 2009: 67-70; McCullagh 2011: 90)[1] and occurred word-initially, postconsonantally and postvocalically. Six different configurations have been identified for these clusters: #OL, -COL-, -VOL-, -VO:L-, -VO(V)L-, -CO(V)L- (cf. García-Covelo 2020).[2]

OL clusters were affected by various sound changes but the sound change that first and most affected them was palatalization, which often rendered OL clusters to single palatal or post-alveolar sounds or to sequences of obstruent + palatal segment, e.g., Lat. PLŬVĬA > Gal. /ʧ/*uvia*, Sp. /ʎ/*uvia* or /ʝ/*uvia*, Tusc. It. /pj/*ova* (cf. Zampaulo 2019a). This process is usually labelled palatalization even though not the entire development of OL clusters was a palatalization process and not all the outcomes were palatal, but also post-alveolar. The term OL palatalization will be used throughout this dissertation to refer to changes in OL clusters resulting in both post-alveolar and palatal outcomes.

As a result of OL palatalization, a myriad of different outcomes are found across the Romance-speaking territory. These palatal outcomes varied not only across the different Romance subfamilies, they also differed within the same variety depending on factors such as the place of articulation or voicing of $C_{1,}$ or the position of the cluster within the word. The distribution of OL palatalization, i.e., which OL clusters underwent palatalization, differs across varieties and seems to also have been conditioned by those factors.

Despite great variation, Latin OL clusters show clear and homogeneous evolutionary patterns in most Romance languages. In Standard (Tuscan) Italian, for instance, all clusters regularly palatalized and became sequences of obstruent plus /j/. Non-palatalized clusters can be

[1] /fl/ behaved in a somewhat different manner than OL clusters containing a stop (ibid.). Other clusters such as /tl dl sl/ did certainly also exist in Latin but they were rarer and mostly heterosyllabic, borrowings or either obsolete or uncommon words, e.g., Lat. TRANS.LEGŌ, AD.LIDŌ, STLOP.PUS, STLAT.TA or STLĀ.TA, OLat. *STLĪS* > Lat. LĪS (cf. Georges).

[2] # = word-boundary, C = consonant, V = vowel, O: = long obstruent.

explained as (late) borrowings. Quite the opposite happened in Galician, Portuguese, and Spanish, the Ibero-Romance languages at the centre of this dissertation. In Ibero-Romance, the distribution of OL palatalization and the specific palatal outcomes of OL clusters vary depending on the nature of C_1 and on the cluster position within the word. Furthermore, OL palatalization appears not to have been a regular process in Ibero-Romance and we find palatal together with non-palatal outcomes in similar phonological contexts: e.g., Lat. CLĀVIS 'key' > Gal. /ʧ/*ave* vs. Lat. CLĀVUS 'nail' > Gal. /kɾ/*avo*. While some of these non-palatal results can indeed be explained as borrowings, many of them cannot.

Yet, most interesting of all is how OL palatalization originated. While the most common palatalization triggers cross-linguistically are palatal glides and front vowels (Bateman 2007: 62-77), most OL clusters were followed by low or back vowels. For this reason, it is generally agreed that OL palatalization must have had a different phonetic origin, mostly articulatory, from an overlapping production of C_1 and C_2 (cf. Recasens 2018; Tuttle 1975). However, the exact mechanisms behind this palatalization process through articulatory overlap are still unclear.

The goal of this dissertation is to tackle these issues and study the development of OL clusters using an experimental-historical approach. As a result, a deeper understanding is to be gained on the process of OL palatalization in Ibero-Romance from a historical and phonological perspective, and on the possible articulatory origins of OL palatalization from a phonetic perspective. Consequently, the theoretical framing of this dissertation is grounded in Blevins' Evolutionary Phonology (2004, 2015), which proposes three main ideas that bring together the classic neogrammarian and phonetically-based approaches to sound change (Ohala 1993, 2003): (1) Sound changes attested independently in unrelated languages arise from language-universal factors - physiological and psychological properties of human speech; (2) The same processes that operate in language now also operated in the past - synchronic variation reflects diachronic variation; and (3) The integration of modern scientific phonetics with the comparative method (Ohala's "experimental historical phonology") is key to a thorough laboratory-based account of sound change.

The experimental-historical approach to sound change described in this last point constitutes the core of this dissertation: first, the diachronic variation reflected in historical research reveals the patterns of OL palatalization; second, these patterns inform phonetic research, which sheds new light on the phonetic origins of this palatalization process through observed synchronic variation; finally, both the diachronic and synchronic data are used to reconstruct the development of OL palatalization in Ibero-Romance.

Therefore, this dissertation is divided into three main chapters, which can be understood and read as independent units. While the general literature introducing the questions surrounding OL palatalization is reviewed in the Introduction (Chapter 1), more specific literature is reviewed in each of the individual chapters.

Chapter 2 is an etymological and historical study on inherited Ibero-Romance words that might have come from etyma containing OL clusters. The goal of this chapter is to provide a thorough historical foundation for the quantitative and qualitative analysis of OL palatalization in order to answer the following questions: which OL clusters palatalized in Ibero-Romance, whether the process of OL palatalization in Ibero-Romance was irregular, what were its most common outcomes, and what sound changes might have hindered it. To that end, a historico-etymological corpus was compiled including inherited words with and without OL palatalization in several Ibero-Romance languages, primarily Galician, Portuguese, and Spanish.

Chapter 3 is a phonetic study on the articulation of Spanish OL clusters. This chapter aims to determine whether OL palatalization could have been triggered by the articulatory synergies between the members of the cluster and whether those articulatory synergies changed depending on the C_1 voicing and on the cluster position within the word. In order to do this, the tongue movements during the production of Spanish OL clusters are analysed by means of Electromagnetic Articulography (EMA).

Finally, Chapter 4 is a historico-phonological study on the diachronic pathways of OL palatalization. The goal of this chapter is to trace the phonological steps from the original OL clusters to the Galician, Portuguese, and Spanish outcomes. To this end, the results of Chapter 2 and Chapter 3 are combined with a review of Ibero-Romance sound change typology (Chapter 4).

1.2. The distribution of OL palatalization in Romance and Ibero-Romance

OL palatalization was a pan-Romance sound change: even though it did not affect all dialectal varieties in the same manner or to the same extent, most Romance varieties still underwent OL palatalization in one way or another.[3] Most Italo-Romance varieties palatalized all OL clusters; however, an exception is found in Northern Abruzzo varieties, where only OL clusters containing velar segments (/kl gl/) underwent OL palatalization (Tuttle 1975). Similarly, only /kl gl/ palatalized in Fassano and Moenan, dialects of Ladin (Raetho-Romance), in Romanian, and in several Gallo-Romance and French dialects (cf. Repetti & Tuttle 1987: 64-71; Zampaulo 2019a: 63). Yet, other Gallo-Romance varieties had a tendency to palatalize only secondary postvocalic O(V)L clusters (ibid., 52-63). This is the case, for example, of Catalan and Standard French. Franco-Provençal varieties, however, also tended to palatalize primary OL clusters, as did Ribagorçan Aragonese.

Conversely, Ibero-Romance varieties like Galician, Portuguese, and Spanish tended to palatalize primary OL clusters containing voiceless obstruents (/pl fl kl/), and secondary O(V)L clusters containing velar segments. Table 1.1 illustrates the outcomes and distribution of OL palatalization in several Romance varieties. For the sources of the linguistic information

[3] Exceptions to this rule may be older Sardinian, Dolomitic Ladin and Friulian (Raetho-Romance), and Vegliote (Dalmatian) (cf. Repetti &Tuttle 1987: 58-60, Zampaulo 2019a: 63).

on the table, see Repetti and Tuttle (1987), Tuttle (1975: 418-21), Ahlborn (1946), GCLI, Zampaulo (2019), Müller (2011), Lausberg (1967) and Viudas Camarasa (1979: 355-75).

Table 1.1.: Overview of the outcomes of OL clusters in several Romance varieties. The outcomes in bold underwent OL palatalization.

OL cluster	Gal.	Sp.	Rib. Arag.	Cat.	Fr.	FProv.	It.	Rom.
#/pl/	**/ʧ/**	**/ʎ/**	**/pʎ/**	/pl/	/pl/	**/pʎ/**	**/pj/**	/pl/
#/fl/	**/ʧ/**	**/ʎ/**	**/fʎ/**	/fl/	/fl/	**/fʎ/**	**/fj/**	/fl/
#/kl/	**/ʧ/**	**/ʎ/**	**/kʎ/**	/kl/	/kl/	**/kʎ/**	**/kj/**	**/k^j/**
#/bl/	/br/	/bl/	**/bʎ/**	/bl/	/bl/	**/bʎ/**	**/bj/**	/bl/
#/gl/	/l/	/l/	**/gʎ/**	/gl/	/gl/	**/gʎ/**	**/gj/**	**/g^j/**
/Cpl/	**/ʧ/**	**/ʧ/**	**/pʎ/**	/pl/	/pl/	**/pʎ/**	**/pj/**	/pl/
/Cfl/	**/ʧ/**	**/ʧ/**	**/fʎ/**	/fl/	/fl/	**/fʎ/**	**/fj/**	/fl/
/Ckl/	**/ʧ/**	**/ʧ/**	**/kʎ/**	/kl/	/kl/	**/kʎ/**	**/kj/**	**/k^j/**
/Cbl/	NA	NA	**/bʎ/**	/bl/	/bl/	**/bʎ/**	**/bj/**	/bl/
/Cgl/	NA	NA	**/gʎ/**	/gl/	/gl/	**/gʎ/**	**/gj/**	**/g^j/**
/Cp(V)l/	NA	**NA**	**/pʎ/**	/pl/	/pl/	**/pʎ/**	**/pj/**	/pl/
/Ck(V)l/	**/ʧ/**	**/ʧ/**	**/kʎ/**	/kl/	/kl/	**/kʎ/**	**/kj/**	**/k^j/**
/Cb(V)l/	NA	NA	**/bʎ/**	/bl/	/bl/	**/bʎ/**	**/bj/**	/bl/
/Cg(V)l/	**/(n)ʎ/**	**/ɲ/**	**/gʎ/**	/gl/	/gl/	**/gʎ/**	**/gj/**	**/g^j/**
/Vk(V)l/	**/ʎ/**	**/ʒ/**	**/ʎ/**	**/ʎ/**	**/ʎ/ > /j/**	**/ʎ/**	**/k:j/**	**/k^j/**
/Vb(V)l/	/br/, /b/	/bl/	**/ʎ/**	/l/, /bl/	/bl/	**/bʎ/**	**/b:j/**	/l/
/Vg(V)l/	**/ʎ/**	**/ʒ/ > /x/**	**/ʎ/**	**/ʎ/**	**/ʎ/ > /j/**	**/ʎ/**	**/g:j/**	**/g^j/**

The overview in Table 1.1 shows that secondary postvocalic O(V)L clusters tended to palatalize in all varieties, regardless of whether other clusters also palatalized. This is the case for Catalan and French. With the exception of postvocalic O(V)L segments, OL palatalization tended to affect all or none of the clusters. In this manner, all OL clusters underwent palatalization in Italian, Ribagorçan Aragonese and Franco-Provençal. Conversely, Catalan and French exhibit no traces of OL palatalization (except in O(V)L clusters). However, there are two exceptions to this pattern: some varieties like Romanian only palatalized OL clusters containing velar stops (/kl gl/); in Ibero-Romance varieties, such as Galician and Spanish, principally palatalized OL clusters containing voiceless obstruents (/pl fl kl/). The palatalization of only /kl gl/ is attested in several Romance varieties apart from Romanian, such as several Gallo-Romance and French dialects. However, the distribution of OL palatalization seen Ibero-Romance is distinctive.

Notably, secondary postvocalic /k(V)l g(V)l/ exhibit similar developmental patterns in many Romance varieties. As shown at the end of Table 1.1, these clusters resulted in /ʎ/ in more than half of the surveyed varieties, including Galician, Rib. Aragonese, Catalan, French, and Franco-Provençal.

A final pattern to highlight is outcome uniformity: specific OL clusters yielded the same results across positions, with the possible exception of secondary postvocalic O(V)L clusters. Consequently, the evolution /pl fl kl bl gl/ > Rib. Arag. [pʎ fʎ kʎ bʎ gʎ] or It. [pj fj kj bj gj] is the same in primary and secondary OL clusters, word-initially and postconsonantally. The Ibero-Romance varieties are, again, an exception, especially Spanish. As seen in Table 1.1, word-initial /pl fl kl/ became Spanish [ʎ], while postconsonantal /pl fl kl/ resulted in Spanish [ʧ], and postvocalic /k(V)l/ resulted in /x/ (Old Spanish /ʒ/) .

Nevertheless, Table 1.1 only provides a partial overview of the outcomes and distribution of OL palatalization. For example, not all clusters and cluster configurations are illustrated there, such as primary postvocalic OL clusters with short and long obstruents and secondary postvocalic /p(V)l f(V)l/. Moreover, some clusters in the table cannot be attributed any outcome since historical evidence is unavailable due to the typological rarity of these segments. This absence of evidence hinders the thorough study of the diachronic pathways of OL clusters and impedes the formulation of well-founded hypotheses about the outcomes and diachronic pathways of particular OL clusters. These issues are addressed in Chapter 2.

1.3. The origin of Romance OL palatalization

It has been traditionally believed that the first step in OL palatalization was the palatalization of the lateral (cf. Tuttle 1975; Zampaulo 2019a: 62-8; Recasens 2018; cf. Section 1.5). Cross-linguistically, the most common palatalization triggers are /i/, /e/ and /j/ (Bateman 2007: 62-3), that is, high and front vowels or glides. However, most OL clusters were not followed by such segments (cf. Appendix A).

This raises the question of how the lateral palatalized, an issue often overlooked in the literature: Lathrop (2003: 110-1) and Bateman (2004: 124) claimed that the lateral in Vulgar Latin was already palatal (or more palatal than alveolar) and that this palatal lateral "released" a palatal glide, perhaps interpretable as glide epenthesis, which triggered changes in OL clusters (cf. Section 4.2.1). Similarly, Menéndez Pidal (1964: 501) stated that the palatal lateral would have existed in all romance-speaking territories as a pronunciation variant, even in the French and Catalan speaking regions. Menéndez Pidal (2005) provided no further explanations for the origin of the palatal lateral, nor did Bonfante (1999: 31-3, 92-3) or Lausberg (1967). Meyer-Lübke (1972: 345-6) hypothesized that OL palatalization was stress-conditioned in Ibero-Romance: if OL clusters were in the stressed syllable, the lateral would have palatalized; if not, the lateral would have either not changed or become a rhotic.[4]

However, many linguists agree that the shift in the place of articulation of the lateral was caused by coarticulation, i.e., the mutual influence that sounds exert on each other when pronounced in adjacency. Tuttle (1975: 404-6), following Rousselot (1891), claimed that the

[4]This hypothesis, however, does not seem to be supported by historical evidence: multiple etyma where OL clusters were unstressed underwent palatalization, e.g., Lat. ˈAMPLUM > OSp. GP *ancho* or Lat. CLAUˈSŪRA > GP *chousura*, while etyma where OL clusters were stressed did not, e.g., Lat. ˈBLANDUS > GP *brando,* OSp. *blando* or Lat. ˈCLĀRUS > OSp. *claro,* GP *craro* (cf. Appendix A).

tongue gestures for /k, g/ and /l/ would have met half-way, producing both a fronted velar and a palatalized lateral: “[...] the posture of the back of the tongue, raised against the soft palate to produce an occlusion *k* or *g*, caused the tip to be in a retracted position (to the rear of the alveola in the palatal area) when it was allowed to make contact with the roof of the mouth to produce the lateral resonant.” (ibid). Similarly, Lloyd (1987) described OL palatalization as “[...] an assimilation of the dorsovelar articulation of /k/ to the succeeding lateral. The raising of the back of the tongue caused the tip to be retracted toward the palatal area.” (ibid., 224-5). Müller and Mota (2009: 1695) suggested that “both tongue gestures would have met half-way, thus producing a sequence of palatalised velar obstruent + palatalised lateral”. Recasens (2018: 22-4, 133) preferred to use the term gestural blending, which is defined as the articulatory adaptation between consecutive consonants resulting in a compromised realization between the two. This blending between the tongue front gesture for /l/ and the dorsal gesture for /k/ would have rendered an alveolopalatal realization of the lateral.[5]

For all the similarities in these accounts, it is unclear whether the coarticulatory process leading to lateral palatalization would have affected only the lateral or whether changes in the place of articulation of the velar would also have been expected: thus, Recasens (2018) did not suggest that blending would also have fronted the articulation of the velar, as did Lloyd (1987), while Tuttle (1975) and Müller and Mota (2009) claimed that coarticulation would have rendered palatalized variants of both C_1 and C_2. In short, the palatal lateral would have arisen because of coarticulation between the tongue tip gesture for the alveolar lateral and the tongue dorsum gesture for the velar stop.

It should be noted that this coarticulation process would only account for OL palatalization in clusters containing velar stops (/kl gl/). The clusters /pl fl bl/ contain labial and labiodental obstruents, which are articulated with the lips, an independent articulator from the tongue. Thus, they are not subject to lingual coarticulation. The theory that OL palatalization through coarticulation would have been possible in /kl gl/ but not in /pl fl bl/ was experimentally tested by Müller and Mota (ibid.): “[...] velar + lateral and velar + yod clusters may resemble each other during the first few milliseconds of the sound, with the consequence that listeners may easily confound them. This could not be seen in labial + lateral clusters” (ibid., 1698). However, it should be noted that this experiment proved the acoustic similarity of /kl/ and /kj/, not the perceptual similarity (Egurtzegi 2019: personal communication). Further research is needed in order to test whether this acoustic similarity also causes perceptual confusion between both clusters. Whether coarticulation might have been involved (and how) in triggering OL palatalization is studied in Chapter 3.

Nevertheless, it remains unclear why OL palatalization was triggered and phonologized in very few languages, even though OL clusters are widespread cross-linguistically (Müller 2011; Recasens 2020). OL palatalization, to different degrees, is found in Albanian, Transcarpathian Ruthenian Yiddish, Hungarian, Inscriptional Burmese, languages of the Tibeto-Burman group, such as in Mpi (Southern Lolo- Burmese) and Classical Tibetan, and

[5] See Recasens et al. (1993) for a similar blending of the lingual gestures in /kt, tk/ into a single gesture in the prepalatal region.

several Thai languages, such as Lung-chow, Po-ai, T'ien-chow, and Kam-Sui (Sui dialect) (Müller 2011: 104). However, OL palatalization may have been motivated by different factors in these languages. In this regard, Recasens (2020: 8, 135, 142) claimed that OL palatalization might be triggered by the relatively high second-formant (F2) frequency for both clear [l] and [j] in several Thai languages and in Albanian. In contrast, Romance languages, showing intermediate forms between /pl fl kl/ and /pj fj kj/, such as Lat. CLĀVIS > Rib. Arag. *cllau* (cf. Section 1.5), would be better explained by articulatory approximation.

Language-specific factors such as the phonological inventory or phonotactics, might have contributed to why OL palatalization was pervasive in Romance despite being a rare sound change overall. Previous research suggested that the changing phonological system from Latin to Late Latin might have promoted the articulatory triggers leading to OL palatalization (cf. García-Covelo 2020). Contrary to Latin, whose phonological inventory only included one palatal sound, i.e., /j/ (cf. McCullagh 2011; Repetti 2016: 658), palatal and post-alveolar sounds were actively emerging in Late Latin and Proto-Romance (cf. Clackson & Horrocks 2007: 274; Weiss 2009: 58, 512-3), as the phonological inventories of many Romance languages show (see Zampaulo 2019: 45-98). This emergence of palatal and post-alveolar sounds might have affected and enhanced the way in which a possibly not-too-salient coarticulation between the velar C_1 and lateral C_2 in OL clusters was perceived. Accordingly, the perception of a particular coarticulatory pattern might interact with the presence of other palatalized sounds in the phonological inventory, making the speakers more sensitive to the changes produced by coarticulation.[6]

1.4. The spread of OL palatalization

The question of the spread of OL palatalization involves two distinct debates. First, it is unclear whether OL palatalization was one single sound change acting over centuries, extending from one dialect to others, or whether it occurred in all Romance dialects at roughly the same time. Second, it remains uncertain how OL palatalization spread from the clusters /kl gl/ to /pl fl bl/.

Lausberg (1967: 20-1) argued that lateral palatalization began in OL clusters containing velar stops because only /kl gl/ underwent palatalization in Romanian. Lloyd (1987: 224-5) shared this opinion and added that the palatal lateral would have spread to /pl fl/ due to analogy or allophonic unification. Contrary to Menéndez Pidal (1964: 501), who argued that the sound changes affecting OL clusters would have begun and extended from Italy in a single process, Lausberg claimed that the palatalization of /l/ would have happened independently in the different Romance languages: Western Romance (represented by Portuguese and Spanish) on the one hand, and Italian and Romanian on the other hand. It is unclear whether Bonfante (1999: 31-3, 92-3) agreed with Lausberg or with Menéndez Pidal, but he

[6] See Chitoran and Hualde (2007) for a similar argument in the context of diverging diphthong and hiatus developments in the Romance languages.

repeatedly stated that OL palatalization in Western Romance-speaking areas was much more recent than in Italy and Romanian (cf. Section 4.4.5).

Repetti and Tuttle (1987) also claimed that OL palatalization began in /kl gl/ (ibid., 57). All OL clusters containing a velar stop would have developed a palatal lateral. Therefore, all Romance languages at an early period would have had [pl fl bl kʎ gʎ] in all positions. This system is preserved in varieties where only /kl gl/ palatalized, such as Romanian, Northern Abruzzo Italian, Gallo-Romance dialects, and Veneto (ibid., 64). Subsequently, /ʎ/ would have spread from /kʎ gʎ/ to the OL clusters containing labial obstruents, i.e., /pl fl bl kʎ gʎ/ > /pʎ fʎ bʎ kʎ gʎ/. This spread would have resulted from the productivity and frequency of the Latin suffixes -*cul*- and -*gul*-, which became /kl gl/ following the syncope of the unstressed vowel. This would have been the scenario for linguistic varieties where OL palatalization affected all clusters, such as most Italian dialects and Franco-Provençal varieties (ibid., 78-89) (and partly also Galician-Portuguese and Spanish, cf. ibid., 97-101).

Yet, if the palatal lateral in /kʎ gʎ/ did not spread to /pl fl bl/ before stop lenition acted, the spread of /ʎ/ would have been truncated, and /l/ would have been generalized in OL clusters. Stop lenition would have caused many changes in secondary postvocalic O(V)L clusters and, consequently, a parallel system would have arisen: new /bl fl ul ʎ ʎ/ for (secondary) postvocalic OL clusters, which underwent stop voicing and spirantization, and /pl fl bl kʎ gʎ/ for all other positions. After obstruent loss due to lenition, i.e., /kl gl/ > /kʎ gʎ/ > /ʎ ʎ/, the secondary postvocalic O(V)L clusters would no longer have been identified as OL clusters. As a consequence of /ʎ ʎ/ no longer being identified with /kʎ gʎ/ or /kl gl/, /ʎ/ would have become much less frequent as the second member of OL clusters; secondary postvocalic /k(V)l g(V)l/ were the source of most instances of /kʎ gʎ/ and that source would no longer have been available due to stop loss. Therefore, /ʎ/ could no longer have spread to the other OL clusters because of the lower frequency of /kʎ gʎ/. This scenario, i.e., /bl fl ul ʎ ʎ/ for secondary postvocalic clusters and /pl fl bl kl gl/ for all other clusters, is found in varieties such as French and Catalan (ibid. 69-82).

In the case of Galician-Portuguese and Spanish, Repetti and Tuttle still presupposed a system /pʎ fʎ bʎ kʎ gʎ/, where /ʎ/ would have spread to all OL clusters. For the lack of evidence of word-initial /gʎ/ and /bʎ/, they argued that word-initial /gʎ/ and /bʎ/ "were uniformly eliminated in favour of a more conservative, less vernacular pair of articulations, gl- and bl-." (ibid., 100). The loss of the voiced stop that is common in many outcomes would have been caused by lenition in postvocalic contexts over word-boundaries: "It has further been observed that word-boundary did not constitute an impervious barrier to numerous phonologic processes even in Western Romance languages during their earliest phases" (ibid., 101; cf. Hualde 2011). /g/ would have been more regularly lenited because it was more prone to spirantization and loss than /b/ (Repetti & Tuttle 1987). OL clusters with long obstruents are not mentioned in this paper, and it is unclear whether a distinction is made between primary and secondary OL clusters.

Similarly, Wireback (1997b: 78-85; 1997a: 289) saw the origin of OL palatalization in articulation, namely in the assimilation of alveolar /l/ to the dorsal quality of the velar stops. However, OL palatalization would have originally been stress-conditioned, i.e., [ʎ] would have first arisen in words with antepenultimate stress and OL clusters containing velar stops.[7] According to this theory, secondary postvocalic O(V)L clusters, such as Lat. ˈŎ.CŬ.LUS or AUˈ.RĬ.CŬ.LA, would have been primarily affected by OL palatalization. The point at which OL palatalization stopped being stress-conditioned accounts for the different distributions of OL palatalization between Romance families.

In the case of Ibero-Romance, OL palatalization would have spread from secondary postvocalic O(V)L clusters to postconsonantal O(V)L clusters. However, the stops in the postvocalic O(V)L clusters gradually disappeared due to lenition before OL palatalization stopped being stress-conditioned. Consequently, the outcomes of Lat. /k(V)l g(V)l/ merged with the outcomes of Lat. /lj/ (Wireback 1997b: 80-2). With the restructuring of the secondary postvocalic O(V)L clusters from [kʎ gʎ] to [ʎ], the great majority of the input for OL palatalization would have been lost, which would have led to rule atrophy and eventually to rule loss (ibid.). At that point, OL palatalization would have stopped being a phonetically conditioned rule and become a rule transmitted across the lexicon via lexical diffusion. Since not only the velar in postvocalic /g(V)l/ but also that in postconsonantal /g(V)l/ was lost, there was no input for the palatalization of /bl gl/, which did not palatalize and lost their initial stop (cf. Section 2.4.1.2). /k/ was preserved in secondary postconsonantal O(V)L clusters and could have therefore been used as a model to palatalize word-initial /kl/ and /pl fl/ in all positions.[8] As for central and southern Italian, and Romanian, the stop preservation in secondary postvocalic O(V)L clusters meant that OL palatalization could have regularly spread to /kl gl/, in the case of Romanian, and to all clusters, in the case of Italian (ibid., 81).

Zampaulo (2019a: 51-70) argued that the sound changes involving primary and secondary OL clusters in Western-Romance did not come from a single source and took place in different historical periods. He claimed that the evolution of secondary postvocalic O(V)L clusters must have occurred earlier and through different mechanisms than that of other OL clusters. This is because OL palatalization in these clusters is very widespread and resulted in the same outcome, /ʎ/, in most Ibero- and Gallo-Romance varieties (ibid., 51-7). The theory of the spread of palatalization proposed by Wireback (1997b) is criticized, but the criticisms raised are not well justified.

First, Zampaulo (2019a: 55) argued that Wireback's proposal assumed the palatalization, and then the subsequent depalatalization, of the lateral, in all OL clusters (except for secondary postvocalic O(V)L clusters) in French and Catalan. However, Wireback (1997b: 82-3) clearly stated that OL palatalization would have been initially stress-conditioned and restricted to words with antepenultimate stress where OL clusters would have been in posttonic position. In the case of Gallo-Romance, OL palatalization would have stopped being stress-conditioned after /k(V)l g(V)l/ became [kʎ gʎ] and then [ʎ]. Since the rule input was lost, OL palatalization could not have spread to other OL clusters. Consequently, [kʎ gʎ] were only ever available in the original secondary postvocalic clusters.

[7]OL palatalization should have been initially restricted to secondary postvocalic O(V)L clusters because these are the clusters most widely palatalized (Wireback 1997b: 78; cf. Section 1.2).

[8]It is unclear when primary postvocalic and postconsonantal /kl/ (or /kːl/) underwent OL palatalization.

Another point of criticism is that Wireback's proposal does not convincingly explain the absence of OL palatalization in /Vg(V)l/, while /k(V)l/ did palatalize, in Romanian and Italian (Zampaulo 2019a: 55-6). Based on the available examples in Tuttle (1975), Repetti and Tuttle (1987), and REW, the claim that /Vg(V)l/ did not undergo OL palatalization in these varieties appears unfounded: Lat. vĭgĭlāre > Rom. *veghia*, OIt. *vegghiare* (REW: 9326), Arom. *(a)vegʎu*, Lat. strĭgŭla or strĭgĭlis > OIt. *stregghia* (REW: 8312), Lat. tēgŭla > It. *tegghia* (also *teglia* and *tegola*) (REW: 8618), Lat. coagŭlāre > Rom. *închega*, It. *quagliare* (pronounced as [ʎː]) (REW: 2005), Lat. coagŭlum > Rom. *chiag (*< *[kagju], cf. Lausberg 1967: 48)*,* It. *caglio* (REW: 2006).

Chapter 4 discusses in depth the topics mentioned in this section: whether OL palatalization had one or several triggering mechanisms, whether different clusters underwent palatalization at different times, and how OL palatalization spread to all clusters.

1.5. Three noteworthy patterns

The historical evidence of OL palatalization reveals several patterns, which have been briefly mentioned in this chapter: 1. The palatalization of the secondary postvocalic clusters /k(V)l g(V)l/ is much more widespread than that of other OL clusters, and the outcome remains constant across numerous Romance dialects, namely /ʎ/; 2. If a dialect exhibits OL palatalization, then OL clusters with velar obstruents will necessarily be palatalized, but not those with labial obstruents; and 3. Despite the great outcome diversity, several dialects belonging to different Romance subgroups show the outcome /Oʎ/. These three facts are important because they offer insight into the chronology and origins of OL palatalization.

(1) **Palatalization of secondary postvocalic O(V)L clusters**

OL palatalization seems to have happened in two main waves: first affecting only secondary postvocalic clusters and then affecting all other clusters. This is clear from the evidence of non-palatalizing varieties, such as Standard Catalan and Standard French, where only secondary postvocalic O(V)L clusters palatalized. In addition, OL palatalization in these clusters resulted in the same outcome in many Romance languages, specially in Ibero-Romance and Gallo-Romance, i.e., /ʎ/ (Repetti & Tuttle 1987). This uniformity is noteworthy, given that the outcomes of the other OL clusters often vary across different varieties (cf. Table 1.1).

Repetti and Tuttle (1987), Zampaulo (2019a) and Wireback (1997b) claimed that secondary postvocalic O(V)L clusters were the first to undergo palatalization. Ample Ibero-Romance historical evidence supports this claim. In Galician-Portuguese and Latin sources, there are more examples of OL palatalization for secondary postvocalic O(V)L clusters than for other clusters before the 13th century (pre-literary documentation in Latin).

According to Mariño Paz (FF), there is definite evidence of /ʎ/ as a result of the palatalization of secondary postvocalic clusters since at least the end of the 9th century. These are the examples he provided, found in Latin documents written in Galicia (FF: 354): *Navalia* (<

Lat. NOVĀCŬLA 'razor', year 1098); *ovella* (ca. 1020-1052), *ovilia* (year 1175), *ouelias (*year 898 and 935) or *ovilias* (ca.1005) (< Lat. OVĬCŬLA '(little) sheep'); *Vellia* (< Lat. VĔTŬLA 'elderly', year 1091), *relia(s)* (> Lat. RĒGŬLA 'rule', year 964 and ca. 1058); and *vermelia* (> Lat. VERMĬCŬLA 'purple, red', year 938 and 942) .

There is also clear evidence of /t͡ʃ/ as the outcome of word-initial OL clusters since before the 13th century (also in Latin documents written in Galician territory), though the examples are fewer (FF: 330): *Chano* (< Lat. PLĀNUS 'flat', ca. 742-936); cluster confusion in *flomazo* (< Lat. PLŪMĀCIUM 'feather pillow', ca. 1005), which is also attested as *chomacio* or *chomazo* in the 9th century; cf. CODOLGA or see *chomacio* in Appendix A); and in the name *Chamua* (< Lat. FLAMMULA, year 1162) (further information in Section 4.4.5).

A similar scenario is found in Old Spanish. The first examples of OL palatalization in secondary postvocalic clusters date from the 10th century, e.g., OSp. *relias* (< Lat. RĒGŬLA, year 974), OSp. *spillu* and *espejo* (< Lat. SPECULUM, from the *Glosas Eminalienses* and the 11th century respectively), OSp. *Ualleijo* (< Lat. UALLICULUM, 11th century) (Menéndez Pidal 1964: 274-6).

Between the 11th and 13th centuries, multiple instances of hyper-corrections and cluster confusions can be found in Leonese and Castilian documents (Torreblanca 1990). These cluster confusions, for example Lat. CLAUSA > *flausa* (ca. year 1034), *plosa* (ca. year 1084) and *flosa* (13th century), may indicate the final stages of obstruent deletion before the final outcome /ʎ/ in word-initial and postvocalic OL clusters (the latter with geminate obstruents). According to Torreblanca (ibid.), reliable evidence of the outcome /ʎ/, without any trace of the previous obstruent, is found from the beginning of the 13th century:[9] Lat. FLAMMULA > *Lambla* and *Llambla* (ca. 1210); Lat. PLĀNUS > *Llanos* (ca. 1203), *Llano* (ca. 1212) and *llan* (1217); and Late Lat. PLĬCĀRE > *llegaron* (ca. 1217).

(2) **Palatalization of OL clusters containing velars**

Regarding the origin of OL palatalization, it is generally agreed that the palatalization process began in the clusters /kl gl/. One reason is that, while there are varieties where only /kl gl/ underwent palatalization, such as Romanian, Northern Abruzzo Italian, and several Occitan and Franco-Provençal dialects, there are none where only /pl bl fl/ did (cf. Repetti & Tuttle 1987; Müller 2011: 97-100; Zampaulo 2019a: 63; cf. Table 1.1).

A further reason is that the proposed coarticulatory dynamics that triggered OL palatalization are only possible in /kl gl/, since both velars and laterals are lingual segments. In contrast, the clusters /pl fl bl/ contain labial and labiodental obstruents, which are articulated with the lips, and thus, are not subject to lingual coarticulation.

In this sense, Galician, Portuguese, and Spanish exhibit a somewhat unusual distribution of OL palatalization: while /pl fl kl/ usually underwent palatalization, /gl/ only did so in secondary O(V)L clusters.

[9] Note that Torreblanca (1990: 320) only included original documents, excluding document copies, in this search.

(3) **The outcome /Oʎ/**

It is generally agreed that the first step in OL palatalization was the palatalization of the lateral, i.e., the change from /l/ to /ʎ/. This hypothesis finds support in several linguistic varieties from different Romance subfamilies, where the stage /p f k b g/ + /ʎ/ is preserved, such as Ribagorçan dialects of Catalan and Aragonese, Aromanian, and Franco-Provençal (Ruffieu-en Valromey) (cf. Repetti and Tuttle 1987: 65, 83-4; Ahlborn 1946; Viudas Camarasa 1979; Müller 2011; Recasens 2020). Table 1.2 provides several lexical items exhibiting this outcome in the mentioned linguistic varieties (unavailable inherited words are marked with "NA").

Table 1.2.: The outcome /Oʎ/ in several Romance varieties

Latin	Ribagorçan Aragonese	Aromanian	Franco-Provençal
CLĀVIS 'key'	*cllau*	/kʎ/*ae*	*kʎa*
PLUMBUM 'lead'	*pllom*	NA	*pʎõ*
GLĀNDULA 'acorn'	NA	/gʎ/*înda*	(*a*)*gʎã*
IMPLĒRE 'to fill'	*enpllir*	NA	*rēpʎire*
INGLUTTIŌ 'to swallow down'	NA	*an*/gʎ/*litari*	NA
CINGULAM 'belt, binding'	*zinglla*	NA	NA
VETULUS 'old'	NA	*ve*/kʎ/*u*	NA

2. Diachronic corpus research

2.1. Introduction

Section 1.2 and Table 1.1 showed that the distribution of OL palatalization follows three patterns in Romance: (1) OL palatalization affected all OL clusters, like in Italian or in Ribagorçan Aragonese; (2) only OL clusters with a velar C_1 were targeted, like in Romanian or in Northern Abruzzo Italian; and (3) only secondary postvocalic O(V)L clusters underwent OL palatalization, like in French and in Catalan. In addition, the phonological outcomes are uniform across word positions, e.g., Lat. PLANTA > Rib. Arag. [pʎ]*anta* and It. [pj]*anta*, Lat. COMPLĒRE > Rib. Arag. *cum*[pʎ]*ir* and It. *com*[pj]*ere*, and Lat. DŬPLĀRE > Rib. Arag. *do*[bʎ]*ar* and It. *do*[p:j]*are*.

In contrast, Galician (and Portuguese) and Spanish exhibit an unusual distribution of OL palatalization: while OL clusters with voiceless obstruents exhibit OL palatalization (/pl fl kl/), OL clusters with voiced obstruents (/bl gl/) rarely do, e.g., Lat. CLĀVIS > GP *chave* and OSp. *llave* vs. Lat. GLANS, -DIS > OSp. GP *lande*. Furthermore, the outcomes of OL palatalization in Ibero-Romance vary depending on three factors: the cluster position within the word, obstruent length (only relevant for postvocalic clusters), and whether it is a primary OL cluster or a secondary O(V)L cluster.[1] This is specially true for Spanish: Lat. CLĀMĀRE > OSp. [ʎ ʝ]*ama*, Lat. CONCLAVĀRI > OSp. *con*[t͡ʃ]*avarse*, Lat. ACCLĀMĀRE > OSp. a[ʎ ʝ]*amare,* and Lat. ŎCŬLUS > OSp. *o*[ʒ]*o.* The regularity of OL palatalization in Ibero-Romance has been questioned due to its unusual distribution and to its absence in many inherited words, e.g., Lat. CLĀVIS > GP *chave*, OSp. *llave* vs. Lat. CLĀVUS > GP *cravo*, OSp. *clavo* or Lat. CUNĬCŬLUS > GP *cõelio*, OSp. *coneio* vs. Lat. PĔRĪCŬLUM > GP *perigo,* OSp. *peligro* (cf. Appendix A).

The absence of historical evidence, combined with the typological rarity of certain OL clusters such as /bl/, makes it difficult to formulate well-founded hypotheses about the outcomes and diachronic pathways of a particular OL cluster. However, many linguists relied solely on written evidence - or on a limited set of examples, often from a single language - in their descriptions of OL palatalization (cf. Repetti & Tuttle 1987; FF; Zampaulo 2019). Accordingly, it remains unclear whether OL palatalization in certain clusters - such as /bl/ or postvocalic /kl/ - is unattested historically, or whether such examples have simply not yet been identified.

A comprehensive and cross-linguistic corpus-based study is therefore essential not just for surveying the conditions and outcomes of OL palatalization in Ibero-Romance, but also for

[1]The various combinations of word position, OL cluster type (primary or secondary), and obstruent length (short and long) are often referred to as "cluster configurations" in this thesis.

quantifying the irregularity of this sound change and identifying which factors or sound changes might have contributed to that irregularity. The present diachronic study aims to fill this gap by collecting inherited words in (principally) Galician, Spanish, and Portuguese that may derive from etyma containing OL clusters. Consequently, this historical corpus research should answer three questions:

1. For which OL clusters is there historical evidence of OL palatalization?

2. How regular was OL palatalization in Ibero-Romance?

3. What sound changes might have interfered with OL palatalization, potentially blocking it?

2.2. The distribution of OL palatalization in Ibero-Romance

The outcomes and distributions of OL palatalization in Romance were reviewed in Section 1.2. However, a more detailed account of OL palatalization in Ibero-Romance - both in terms of distribution and outcomes - is needed to pinpoint where historical evidence is most lacking. Table 2.1[2] showcases the oldest and most common development patterns, wherever sufficiently attested, in Old Spanish and Galician-Portuguese.[3]

Table 2.1.: The distribution and outcomes of OL palatalization in Old Spanish and Galician-Portuguese. "NA" represents unavailable historical evidence and "-" insufficient evidence of OL palatalization or lack thereof. If the given results are attested only for particular clusters, this is indicated alongside the outcomes.

OSp.	/pl fl kl/	/gl/	/bl/	GP	/pl fl kl/	/gl/	/bl/
#OL-	/ʎ/	/l/	/bl/	#OL-	/ʧ/	/l/	/bɾ/
-COL-	/ʧ/	NA	NA	-COL-	/ʧ/	NA	NA
-VOL-	/bl fl gl/	-	-	-VOL-	/bɾ fɾ gɾ/	-	-
-VO:L-	/ʎ/ (/p:l f:l/)	NA	NA	-VO:L-	/ʧ/ (/p:l f:l/)	NA	NA
-CO(V)L-	/ʧ/ (/kl/)	/ɲ/	NA	-CO(V)L-	/ʧ/ (/kl/)	/nʎ/, /ɲ/	NA
-VO(V)L-	/ʒ/ (/kl/)	/ʎ/	-	-VO(V)L-	/ʎ/ (/kl/)	/ʎ/	-

[2]The information in the table is based on the following sources: Tuttle (1975: 418-21), Repetti and Tuttle (1987: 53-115), GCLI, Zampaulo (2019a), Lausberg (1967), and FF, REW, DRAE, DRAG, DEHLP, DLPC, DCECH, and DXL.

[3]The outcomes in Old Spanish and Galician-Portuguese are basically the same as in Spanish, Galician and Portuguese, with only two changes: OSp. /ʒ/ > /ʃ/ > Sp. /x/ and GP /t͡ʃ/> Pt. /ʃ/ (cf. Penny 2002; Zampaulo 2019a). The older stages were chosen for this overview for the sake of simplicity. It should be noted that the table does not capture all attested outcome variation, and certain outcomes may therefore differ.

The diachronic pathways of OL palatalization in Ibero-Romance exhibit clear and unclear patterns. This sound change in word-initial and postconsonantal /pl kl fl/ and /k(V)l/ is historically well-attested, both in Galician-Portuguese and in Old Spanish. This is not the case for other OL clusters, such as primary postvocalic /pl fl kl bl gl/ or postconsonantal /bl gl/, where no traces of OL palatalization have been found. In a similar manner, OL palatalization in certain cluster configurations is attested for some clusters, like postvocalic /p:l f:l/, but not for others, like postvocalic /k:l/.

Undoubtedly, some OL clusters show no regular change patterns because they were less common in Latin than other logically possible segmental combinations of OL clusters.[4] In consequence, they are poorly documented. For instance, the Latin etyma containing /Cgl Cbl Vg:l Vb:l/ documented in my master's thesis either yielded no descendants in the Ibero-Romance languages or entered these languages later as learned words (García-Covelo 2020), e.g., Lat. CONGLŪTINĀRE > Gal. Pt. Sp. *conglutinar* or Lat. SUBBLANDĪRĪ. Similarly, few tokens were available for primary postvocalic OL clusters and none exhibited palatalization, e.g., Lat. DŬPLĀRE > Sp. *doblar.* The lack of such examples hinders the thorough study of the diachronic pathways of OL clusters, since written evidence constitutes the base of any historical linguistics research. A historical foundation for the qualitative and quantitative analysis of OL palatalization is, therefore, needed.

To this end, Romance and Latin sources are used, including monolingual and etymological dictionaries, philological studies and online historical corpora (cf. Section 2.3.1). The initial documentation stages indicated that the best course of action was to begin the diachronic research with etymological dictionaries, which provide historical and semantic information on the inherited words. Following consultation of etymological sources, specific lexical items or OL clusters that exhibit no evidence of OL palatalization may be further investigated through phonological derivation. Phonological derivation enables us to predict, based on established sound change patterns, how a word might have evolved if it had undergone all applicable sound changes: for instance, through this method Lat. DECLARĀRE was derived as Sp. **dejarar* or perhaps Sp. **dellarar* (with OL palatalization) or Sp. **deglarar* (with stop voicing), instead of the attested Sp. *declarar* (borrowing). The derived words with OL palatalization, Sp. **dejarar* and Sp. **dellarar*, were subsequently searched in historical corpora to find any possible attestations.

The result of this diachronic corpus research is a wordlist documenting the etymologies of inherited words principally in Galician, Spanish, and Portuguese (Appendix A). The methodology for compiling and analysing this wordlist is outlined in the following section, including outcome derivation, word selection, corpus structure, and statistical analysis.

[4] For instance, PIE *b was a very rare segment (Weiss 2009: 34), and PIE *b^h regularly became /f/ word-initially in Latin. Similarly, PIE *g^h became Lat. /h/ of /f/, depending on the following vocalic environment (ibid., 75-80). Due to these sound changes, the number of instances of /bl gl/ in Latin was limited.

2.3. Methodology

2.3.1. Main sources, source digitalization and processing

Multiple sources, from different languages and media types, were employed for the etymological research of the wordlist. Among these sources are etymological dictionaries and monolingual dictionaries, philological works - often contained in online data bases -, and online historical corpora. The principal materials consulted are listed below with their corresponding abbreviations (see the full references and links in the Bibliography):

- CRC: *Cronología relativa del castellano*
- CORDE: *Corpus diacrónico del español* (Spanish, until 1975)
- DRAE: *Diccionario de la lengua española*
- DEEH: *Diccionario etimológico español e hispánico*
- DCECH: *Diccionario crítico etimológico castellano e hispánico*
- GCLI: *Gramática comparada de las lenguas ibéricas*.
- DDGM: *Dicionario de dicionarios do galego medieval. Corpus lexicográfico medieval da lingua galega.*
- TMILG: T*esouro medieval informatizado da lingua galega* (Galician and Galician-Portuguese, 8th-17th century)
- FF: *Fonética e fonoloxía históricas da lingua galega*
- DELG: *Dicionario etimolóxico da lingua galega*
- CODOLGA: *Corpus Documentale Latinum Gallaeciae*
- TLPGP: *Tesouro do léxico patrimonial galego e portugués*
- DEHLP: *Dicionário eletronico Houaiss da língua portuguesa*
- DEM: *Dicionário etimológico da língua portuguesa : com a mais antiga documentação escrita e reconhecida de muitos dos vocábulos estudados*
- REW: *Romanisches etymologisches Wörterbuch*
- LS: *A Latin Dictionary*
- Georges: *Ausführliches Lateinisch-Deutsches Handwörterbuch*

Many of these sources, especially dictionaries, are not accessible in digital form. Even when a digital version is available, the search engine may be limited by the software, making it difficult to search for the relevant OL clusters. To optimise and automate the documentation research, while improving reproducibility, selected sources were transformed into data frames, enabling efficient searches for the relevant OL clusters. This was done for the *Diccionario Crítico Etimológico Castellano e Hispánico* (DCECH).

The DCECH already has an electronic version. However, the dictionary's search engine only allows character searches at the start and end of words. Consequently, searching for OL clusters within a word is not possible. Moreover, each OL cluster would need to be individually and manually searched. To optimize the search process, the content of the electronic dictionary was extracted, which was in the form of rtf files. Each rtf file included the information of one dictionary entry.

Through a Python program, the content of the rtf files was extracted and structured into different categories: word, etymology, 1st documentation, general information, derivational forms, compound forms, and notes. The structured information was transformed into a data frame (.csv), where the etymology column was searched for words containing a primary or secondary OL cluster, indicated by the characters <ptkbdgf(u)l>. Subsequently, words that were clearly Spanish and contained no etymological information were excluded from the results, such as verbal forms. Following this exclusion, a new table was created with the OL cluster search results, structured as follows: target words containing OL clusters (identified by the regular expression <ptkbdgf(u)l>); corresponding dictionary entry titles and etymological information; and local file links. The information in the table was then manually reviewed, e.g., to discard borrowings, and contrasted with other sources. The criteria for both the OL cluster search and table review are outlined in the following section.

2.3.2. OL clusters and word selection

2.3.2.1. Primary and secondary clusters

Primary OL clusters (etymological OL clusters) could directly be included into the wordlist (cf. Section 2.3.2.2). In contrast, secondary O(V)L clusters originally had an unstressed vowel between C_1 and C_2 and became clusters at a later point due to syncope, e.g., Lat. ŎCŬLUS > OCLUS > OSp. *ojo* 'eye'. The scope of this dissertation does not allow for the search of all secondary O(V)L clusters. For this reason, it is important to consider which unstressed vowels were more likely to undergo syncope, since syncope was influenced not only by stress[5], but also by vowel quality, vowel length, and position within the word.

Previous accounts of syncope revealed the phonological environments where syncope was most likely (Loporcaro 2010; FF; GCLI; Penny 2002; Williams 1962). Specifically, O(V)L clusters needed to be in an unstressed word-medial position, they could not be followed by a consonant, and the unstressed vowel between C_1 and C_2 should be /u/, e.g., Lat. AU'.RĬ.CŬ.LA, Lat. DĬS'.CĬ.PŬ.LUS, Late Lat. GĔ'.NŬ.CŬ.LUM, or Late Lat. 'PĔS.TŬ.LUS. Only OL clusters meeting these conditions were considered for the corpus and extracted from DCECH (Section 2.3.1). The reasons behind these specifications are explained subsequently.

Most importantly, the vowel in O(V)L clusters had to be unstressed since vowels in stressed syllables were not lost, e.g., Lat. AU'.RĬ.CŬ.LA > Late Lat. ORĬCLA (Appendix Probi) but not **ORCULA or **ORCLA. In addition, the vowel in secondary O(V)L clusters needed to be in an open syllable, i.e., a syllable with a short vowel nucleus and without a syllable coda. The syllable coda could come from a following geminate consonant, e.g., Lat. CŬ'.CUL.LUS or CŬ'.CUL.LA, or from a tautosyllabic consonant, e.g., Lat. AUS.CUL'.TĀ.RE (Loporcaro 2010: 60; Weiss 2009: 122-4). If the lateral had been followed by another consonant, i.e., -O(V)LC-, syncope would

[5] Most Latin words had penultimate stress, i.e., they were accented in the second syllable, e.g., Lat. CĂ'.BAL.LUS. If the penultimate syllable was short, i.e., it did not contain a long vowel, a diphthong, or a coda consonant, then the antepenultimate syllable would be stressed: cf. Lat. 'Ŏ.CŬ.LUS (antepenultimate stress) vs. Lat. Ŏ.CŬ'.LĀ.RIS (penultimate stress) (cf. LS).

have produced a syllable or consonant cluster that violated Latin phonotactic constraints (cf. ibid., 67-71; Lloyd 1970). Therefore, syncope did not occur in closed syllables[6], preventing OL clusters from forming.

Word-initial secondary O(V)L clusters were also excluded from the analysis. Word-initial position was one of the prosodic positions that made vowels most resistant to deletion (Loporcaro 2010: 59; FF: 195), e.g., Lat. GŬˈ.LŌ.SUS > Sp. *goloso*, OFr. *gouleus*, It. *goloso* (cf. REW: 3914). For this reason, vowel loss in the first syllable was extremely rare, occurring in few dialects or, in the case of Galician or Asturian, in sequences of occlusive + rhotic, e.g., Late Lat. VERĀNUM > Pt. *verão*, Sp. *verano*, Ast. *branu* (ibid.; GCLI: 68; DCLA: veranu). In contrast, vowels in intertonic syllables were syncopated the most. Intertonic vowels have been differently described in the literature but they generally refer to vowels in word-medial syllables. i.e., word-medial vowels between the initial and stressed syllable or between the stressed and final syllable (cf. Penny 2002: 46; Williams 1962: 51; Loporcaro 2010: 59; FF: 195). The following examples illustrate intertonic vowel syncope : Lat. CĪ.VIˈ.TĀ.TEM (< ˈCĪVITĀS) > Gal. *cidade*, Sp. *ciudad*, Fr. *cité*, It. *città;* Lat. SEP.TĬˈ.MĀ.NA > Gal. Pt. Sp. *semana*, Fr. *semaine*, Prov. *setmana*, It. *settimana*; and Lat. PĔˈ.RĪ.CŬ.LUM > Gal. Pt. *perigo,* Sp. *peligro,* Fr. *péril,* It. *pericolo* (cf. FF: 212-24; REW).

/a/ has been described as the vowel most resistant to syncope (Penny 2002: 59; FF: 207; GCLI: 68). Most secondary O(V)L clusters had an unstressed /u/ due to the frequency of the suffixes -*cul*- and -*bul*-. Consequently, the search focused on O(V)L clusters containing /u/. With regard to the composition of the OL clusters, only OL clusters containing /pfkbgtd/ and /l/ were taken into consideration. A combination between /nmr/ and /l/ would not have triggered OL palatalization, e.g., Lat. CŬMŬLUS > Sp. *colmo*, Pt. *cômoro* or *combro*, Fr. *comble,* or Lat. MĔRŬLUS > Pt. *melro*, Gal. *merlo*, Sp. *mirlo*, Fr. *merle*, It. *merlo* (cf. GCLI: 310-1; REW), and the combination between /svx/ and /l/ was extremely rare.[7] Lastly, words were excluded from the results of the DCECH search if the secondary O(V)L cluster was followed by a palatal glide, e.g., /k(V)lj/. Both Lat. /lj/ and Lat. /k(V)l g(V)l/ resulted in OSp. /ʒ/ > Sp. /x/ and GP /ʎ/. Consequently, it cannot be determined whether the palatal outcome resulted from OL palatalization or from /lj/. This is the case, for example, for Late Lat. GŬRˈGŬLIO (Lat. CŬRCŬLIO, -ŌNIS) > Sp. *gorgojo*, Pt. *gorgulho*, OIt. *gorgoglio* (DCECH: gorgojo; REW: 2414), where the vowel in the secondary O(V)L cluster was also stressed.

2.3.2.2. Borrowings

Many words that do not exhibit OL palatalization are Latin learned words. Penny (2002: 39) defined learned words as words, "[...] which have been borrowed by Spanish from Latin (Classical or Medieval), through the medium of writing". Learned words or borrowings did not undergo regular sound changes that affected inherited or popular words, like in the case of Lat. GLŌRĬA > Sp. *gloria* and Gal. Pt. *gloria* (attested in the compiled corpus as OSp. *glorias*

[6]An exception to the open syllable rule are s-clusters, i.e., /s/ plus stop sequences (cf. Weiss 2009: 123-4).

[7]Nevertheless, one example with an original /s(V)l/ was included in the corpus due to its noteworthy evolution: Lat. ĪNSŬLA > GP *inssoa* (also *ilha*), OSp. *isla* (cf. Appendix A).

and GP *groriosa*) or Lat. DECLARĀRE > Sp. Gal. Pt *declarar*. The absence of glide metathesis in Lat. GLŌRĬA > Sp. *gloria* and the absence of /k/ voicing in Lat. DECLARĀRE > Sp. Gal. Pt *declarar* suggest that these words are borrowings. As a result, the lack of OL palatalization can have two explanations: either the words were borrowed after OL palatalization was an active sound change, or they were borrowed while or before OL palatalization occurred but they were literary words with a restricted usage.

For these reasons, borrowings were generally not included in the wordlist, specially if they were attested later than the 15th century. Older borrowings or literary words, documented for instance in the 13th century, could be included for informational purposes, e.g., Sp. *aplaudir* < Lat. APPLAUDĔRE (see OSp. *aplaudir* in Appendix A), attested in the 15th century. Similarly, words that were borrowed from other Romance varieties were generally disregarded for two reasons: on the one hand, if the inherited word shows OL palatalization, this change probably took place in the original variety prior to borrowing, e.g., Lat. SPECULARIA > Cat. *espillera* -> Sp. *aspillera* (DCECH: aspillera); on the other hand, if the word was borrowed from a Romance variety, it was probably introduced too late to undergo OL palatalization (cf. Section 2.4.3). Nevertheless, Romance borrowings were included in the corpus if they exhibited sound changes such as lenition. If a lexical item underwent lenition, it could also have undergone OL palatalization, since both processes coexisted at some point in time (cf. Section 4.3.2.4).

2.3.2.3. A word on Galician-Portuguese

Galician and Portuguese share a common linguistic stage known as Galician-Portuguese, which was spoken approximately between the 9th and 15th centuries (Mariño Paz 2008; HGP). When gathering information for Galician and Portuguese, it was observed that not only were the inherited words often the same, but the source of the first attestation also matched. For the sake of simplicity and to avoid repeating information, Galician and Portuguese inherited words attested before the year 1500 are considered Galician-Portuguese and valid for both varieties. Consequently, Galician-Portuguese inherited words are counted as both Galician and Portuguese entries.

Debates about when exactly Galician-Portuguese was spoken, when Galician and Portuguese split, and whether Galician-Portuguese can be understood as a unified and homogeneous linguistic variety are outside the scope of this thesis. Undoubtedly, there was variation in Galician-Portuguese, specially from the 12th century onward with the creation of the Kingdom of Portugal. However, written texts tended to reflect a more unified and curated language form than that of the spoken variety (cf. Mariño Paz 2008: 62-72; HGP: 3-5, 883-91). In this regard, the most important Galician-Portuguese literary works are dated between the 13th and 15th centuries and originated not only in the Kingdom of Galicia and Portugal, but also in the Kingdom of Castile.

In a similar manner, texts written in "Romance Latin"[8], i.e., the variety of Latin spoken in a particular region and often influenced by the language spoken at the time, are not differentiated from Galician-Portuguese or Old Spanish. The attested inherited words included in the wordlist should portray specific changes in a linguistic territory. Therefore, whether these attested words belong to Galician-Portuguese or Old Spanish, or to the Latin spoken in those linguistic areas, is not relevant to this study.

2.3.3. Outcome derivation and search in historical corpora

After reviewing the extracted words originally containing OL clusters (from DCECH and other sources), no evidence of OL palatalization was found in some OL clusters. Beyond philological or etymological works, an attempt was then made to find traces of OL palatalization in historical corpora. To this end, the expected form of a word after undergoing OL palatalization - and other relevant sound changes such as dipthongization - was phonologically derived. To simplify and optimize the phonological derivation, the Latin etyma were grouped into word families containing the same root or stem. Therefore, only the root or stem of each word family was derived and searched for in the corpora, rather than phonologically deriving every single etymon. This approach minimized the risk of deriving an inaccurate form. This was not a minor predicament, for many sound changes affected the Ibero-Romance lexicon in an irregular or unexpected way, e.g., voiced stop lenition and deletion, syncope, or vowel raising. By means of simple regular expressions - mainly involving a sequence of characters with quantifiers such as * and ?, - every form containing a specific root or stem can be extracted from the corpora. In the following paragraphs the phonological derivation process is exemplified.

Lat. CLAMĀRE had many derivational forms, such as Lat. CLĀMĬTĀTĬO, ACCLĀMARE, CONCLĀMĀTUS, RĒCLĀMO and DĒCLĀMĀTĬUNCŬLA (cf. LS). By searching for the different possible results of the root -*clam*-, the outcome of these words can be found more effectively. Ample historical evidence shows that /kl/ predominantly became /ʧ/ regardless of its word position in Galician-Portuguese (cf. Table 2.1). In Old Spanish, the results vary between /ʎ/ - word-initially and perhaps with geminate obstruents - and /ʧ/ postconsonantally. Therefore, the root -*clam*- for both Lat. CLĀMĬTĀTĬO and CONCLĀMĀTUS was derived as *-/ʧ/am- for Galician-Portuguese. In contrast, the root -*clam*- was derived as */ʎ/am- for Lat. CLĀMĬTĀTĬO and as *-/ʧ/am- for Lat. CONCLĀMĀTUS in Old Spanish.

When OL palatalization in a particular cluster, e.g., /Vkl Vpl Vfl Vk:l/, is not attested, probable outcomes were derived from other available evidence, e.g., from OL cluster outcomes in other positions or from the results of other palatalization processes. For instance, /pl fl kl/ shared a common evolution and resulted in /ʧ/ - across word positions - in Galician-Portuguese, e.g., Lat. AFFLĀRE > GP *acho*, Lat. *FLŌRĒRE > GP *Chorente*, Lat. AMPLUM > GP *ancho*, Lat. CLĀVIS > GP *chave*. As a result, the phonological derivation of a root for a word like Lat. ACCLĀMĀRE should also be *-/ʧ/am-, although OL palatalization is not attested in /Vk:l/. *-/ʎ/am- could

[8] In addition, no difference is made between Vulgar Latin and Late Latin and both denominations are included under the term Late Latin.

also be possible, given that secondary postvocalic /k(V)l g(V)l/ became /ʎ/ and that postvocalic velars were susceptible to deletion and weakening.

Other possible but less probable outcomes are /ʒ/ and /Oʎ/. *-/ʒ/am-[9] could be a possible derivation if /k/ voicing and /ʎ/ delateralization are assumed, since /ʒ/ was the outcome of Late Lat. /ge gi gj/. */kʎ/am is thought to be the first step of OL palatalization, which is still attested in Ribagorçan Aragonese (cf. Section 2.2).

The phonological derivation in Spanish follows a similar pattern, with one key difference: */ʎ/am represents the most probable root derivation of Lat. ACCLĀMĀRE since /p:l f:l/ resulted in /ʎ/. Additionally, */ʒ/ should also be considered for the derivation of /Vk:l/, since /ʒ/ was the usual outcome of /k(V)l g(V)l/ in Old Spanish.

The next example is Lat. BLANDUS, which had derivational forms like Lat. BLANDICULE, BLANDULUS, EBLANDIOR, PERBLANDUS and SUBBLANDIOR (cf. LS). The phonological derivation of /bl gl/ was more challenging because OL palatalization in these OL clusters is rarely attested, and this evidence comes mainly from secondary postvocalic O(V)L clusters. As pointed previously, /pl fl kl/ shared common diachronic pathways. Therefore, it could be assumed that /gl bl/ also patterned together and evolved similarly. Postvocalic secondary /g(V)l/ resulted in GP /ʎ/ and in OSp. /ʒ/ and postconsonantal secondary /g(V)l/ resulted in GP /ɲ nʎ/ and in OSp. /ɲ/ (cf. Table 2.1). Based on these outcomes, the forms *-/ʒ/and-, *-/ʎ/and-, and *-/ɲ/and- were derived and searched. Further derivations could be */bʎ/and- (intermediate form) */ʧ/and- (common outcome in /pl fl kl/), and */j/and- (result of the /g/ palatalization).[10]

Having reconstructing the most probable outcomes, the next step involved examining how these outcomes were reflected orthographically in Galician-Portuguese and Old Spanish. The most common graphemes used for these sounds - between the 11th and 16th centuries in both Galician-Portuguese and Old Spanish - were the following : /ʧ/ was usually written as <ch>, /ʎ/ as <ll, lj, l, lh>, /ʒ/ as <j, g>, and /j/ as <i, y> (cf. FF; HGP; Echenique Elizondo & Martínez Alcalde 2011: 81-4). Table 2.2 presents the phonologically derived outcomes of OL clusters by word position, their most frequent graphemic representations, and the regular expressions employed for corpus searches.

[9] It should be noted that these outcomes are not the final outcomes seen in Galician, Portuguese and Spanish but intermediate results expected in earlier linguistic stages, e.g., Lat. GĒLU > GP /d͡ʒ/eo > GP /ʒ/eo > Gal. /ʃ/eo or Lat. ŎCŬLUS > OSp. o/ʒ/o > Sp. o/x/o (cf. GCLI: 244-60, 276-80; FF: 324-8, 364-6).

[10] For less common Spanish outcomes of Latin /gj/, see GCLI (244-80).

Table 2.2.: Phonological derivation of the outcomes for /gl/ per position within the word of the original OL cluster. The regular expressions used to search for the outcomes in the corpora are based on how the outcome was commonly written in Galician-Portuguese and Old Spanish.

	Galician-Portuguese			**Old Spanish**		
Derived outcome	**Cluster position**	**Common graphemes**	**RegEx**	**Cluster position**	**Common graphemes**	**RegEx**
/ʧ/	#_, V_	<ch>	*ch*	C_	<ch>	*ch*
/ʎ/	#_, V_	<li ly lj ll lh>	*l?*	#_, V_	<li ly lj ll>	*l?*
/ʒ/	#_, V_	<j y i g>	*?*, *j*, *i*, *y*, *g*	#_, V_	<j y i g>	*?*, *j*, *i*, *y*
/ɲ/, /nʎ/	C_	<nll nlh nli nlj nly nn nh ñ>	*nl?*, *ñ*, *n?*	C_	<nn nh ñ>	*ñ*, *n?*

It should be noted that the required regular expressions depended on the corpora or online resources used: the search engine is more flexible in TMILG than in CORDE, for example, because TMILG allows for grapheme equivalences (<i> = <i j y h>) and CORDE does not. The phonologically derived Galician-Portuguese forms were primarily searched for in TMILG and DDGM, occasionally also in CODOLGA and TILG. For the Old Spanish derivations, CORDE was mainly used. The phonological derivation and search of possible inherited words was a time-intensive endeavour, and, consequently, the OL clusters with the least evidence of OL palatalization were prioritized, i.e., /bl gl Vk:l/ (see for example *blando* (OSp.) in Appendix A).

2.3.4. Corpus structure

The data frame resulting from this study contains the etymological information of inherited words in Galician, Spanish, and Portuguese that come from a primary or secondary OL cluster. A snippet of the data frame is shown in Table 2.3. The statistical analysis was performed on this data frame. For an easier reading experience, an adaptation of this data frame is provided in Appendix A. Some information will be omitted in Appendix A, such as the columns describing the OL cluster configurations or the sound changes that affected the inherited words. Nevertheless, this information can still be ascertained from the etyma and the inherited words themselves.

The etymological information (etymon, etymon origin and root/stem, and etymology status), the information concerning the inherited words (inherited form, other forms, language variety, and date) and the sources and notes are included in Appendix A. Table 2.3 presents the structure of the dataset structure, with column descriptions provided below.

Table 2.3.: Excerpt from the data frame used to generate the wordlist. The column names are separated into two rows and are indicated in bold.

etymon	**root**	**etymon lang.**	**OL cluster**	**OL type**	**OL pos.**	**inherited form**	**other forms**	**lang. var.**	**date**	**SC**	**outcome**	**status**	**OL palat.**	**sources/notes**
AMPLUS	AMPLUS	Lat.	pl	OL	C_	*ancho*	NA	Sp.	12	OLPAL	/ʧ/	NA	1	CRC (270); etc.
NĔBŬLA	NĔBŬLA	Lat.	bl	O(V)L	V_	*névoa*	*nebra*	GP	13	-SINC, LEN	/O/	NA	0	FF (222); etc.

- Etymon: the word from which inherited words originated. It can be an attested or reconstructed word.

- Root: etymon root or stem.

- Etymon origin (etymon lang.): origin language of the etymon, usually Latin or Late Latin.

- OL categorization: the columns “OL cluster”, “OL type”, and “OL pos.” refer to the OL cluster configuration contained in the etymon: which obstruent was contained in the OL cluster, whether it was a primary OL cluster or a secondary O(V)L, and whether it was found in word-initial (#*)*, postconsonantal (C_), or postvocalic (V_) position. The information in these columns was automatically extracted from the etyma and have the sole function of facilitating filtering, categorising and extracting the information in the data frame, both for statistical and visualization purposes.

- Inherited form: inherited form attested in historical sources, which may no longer be in use or exist in the language. The given inherited forms are written as attested in historical corpora, e.g., TMILG, CORDE, PMH, or in etymological sources, e.g., DEHLP, DEM.

- Other forms: further attested forms, which may present a noteworthy evolution of the OL cluster.

- Language variety (lang. var.): language variety of the given inherited forms. Principally Galician-Portuguese (also Galician and Portuguese) and (Old) Spanish but other varieties like Asturian or Ribagorçan Aragonese were occasionally included, especially if OL palatalization in a particular etymon was unattested in the other languages.

- Date: century of attestation. The given century is approximate and represents the earliest found attestation, i.e., the given inherited word was attested at least in that century but may have been attested earlier.

- Sound changes (SC): sound changes that affected the inherited word. Some examples are OLPAL (OL palatalization), -SINC (absence of syncope), and LEN (lenition) (cf. Table 2.3).
- OL Palatalization (OL palat.): used to categorize the inherited forms into absence of OL palatalization (0), presence of OL palatalization (1) or unclear (?).
- Outcome: the outcome of the inherited word. The outcome of the other forms was also occasionally included.
- Status: used to indicate particularities in the etymology:
  - Uncertain origin (u.o.): uncertain etymology
  - Uncertain etymon (u.e.): the specific form of an etymon may be uncertain, although the presence of an OL cluster is assured.
  - No OL cluster (-OL): the etymon does not contain an OL cluster, although previous literature suggested otherwise.
  - Borrowing (BORR.): the inherited word is a borrowing or learned word.
  - potential borrowing (BORR.?): the borrowed nature of the word is suspected but unconfirmed.
- Sources and notes: bibliographical references, commentaries, and further information.

2.3.5. Statistical analysis

Descriptive statistics were used to statistically analyse the historical dataset. The goal of this analysis is to elucidate which OL clusters underwent OL palatalization, which outcomes were the common result of OL palatalization, which sound changes might have interfered with OL palatalization, and how regular was the process of OL palatalization. As a first step, the (possible) borrowings, words with an uncertain origin and words that did not come from an OL cluster were filtered out. The inherited words were subsequently grouped by language (Galician, Spanish, and Portuguese).

The following sections contain percentages, which were calculated using different baselines. In Section 2.4.1, the number of tokens with a palatal or non-palatal outcome is compared to the total number of tokens in a language that did (or did not) undergo OL palatalization. In contrast, the percentages given in Section 2.4.2 reflect the instances of OL palatalization in a particular OL cluster compared to the total number of instances of that OL cluster (without separating the tokens by language).

2.4. Results

The compiled corpus has a total of 659 inherited words, from which 578 are Galician, Portuguese (or Galician-Portuguese) and (Old) Spanish. After excluding inherited words with an unknown or uncertain origin, (possible) borrowings and words that did not come from OL clusters, the total number of inherited words to analyse becomes 473. The dataset includes a comparable number of primary OL clusters (n = 219) and secondary O(V)L clusters (n = 254).

The number of instances of a particular OL cluster can greatly vary due to its frequency in a particular language.[11] Consequently, the wordlist includes 97 lexical items that came from etyma with /pl p:l p:(V)l p(V)l/, 32 with /fl f:l/, 60 with /bl b(V)l/, 194 with /kl k:l k:(V)l k(V)l/, and 54 with /gl g:l g(V)l/ (after excluding borrowings and unclear etymologies).

The counts and percentages shown in the following sections only represent Galician, Portuguese (or Galician-Portuguese) and (Old) Spanish inherited words with a known origin. To report the results of the analysis of the wordlist, the terms Galician and Portuguese and Galician-Portuguese are often used indistinctly to refer to outcomes or evolutions within that Romance sub-family.

2.4.1. The outcomes of OL clusters

OL clusters experienced divergent evolutions in Ibero-Romance and, consequently, resulted in a variety of outcomes. Those outcomes could be palatal if the clusters underwent OL palatalization or non-palatal if they underwent other sound changes. Even within the palatal and non-palatal groups, the outcomes of OL clusters are diverse. Figure 2.1 showcases the outcome variation in Galician-Portuguese and (Old) Spanish. The panel “OL palatalization” only includes inherited words where OL palatalization is certain. In contrast, the panel “Other sound changes” includes inherited words where OL palatalization did not occur or were OL palatalization is possible but unconfirmed.

In general terms, the outcomes of OL palatalization seem to be more varied in (Old) Spanish than in Galician-Portuguese. In addition, non-palatal outcomes are more diverse than palatal outcomes (cf. Figure 2.1).

The proportions and numbers represented in Figure 2.1 are based on the number of instances per outcome in Table B.1 and Table B.2 (Appendix B). These tables provide an overview of the different outcomes of OL clusters in Galician, Portuguese and Spanish. The outcomes are divided into one table with palatal outcomes, which resulted from OL palatalization, and another table with non-palatal outcomes, which were the result of a later introduction of the etymon into the language or of other sound changes. To calculate the number of instances of each outcome, the outcomes were grouped by multiple factors: language family (Galician-Portuguese and descendants, and (Old) Spanish), C_1 voicing (voiceless or voiced) and length

[11] For example, PIE *b was a rare segment and PIE $*b^h$ became Lat. /f/ word-initially (Weiss 2009; cf. footnote 3). Consequently, Lat. /bl/ is much rare than, for instance, /pl/.

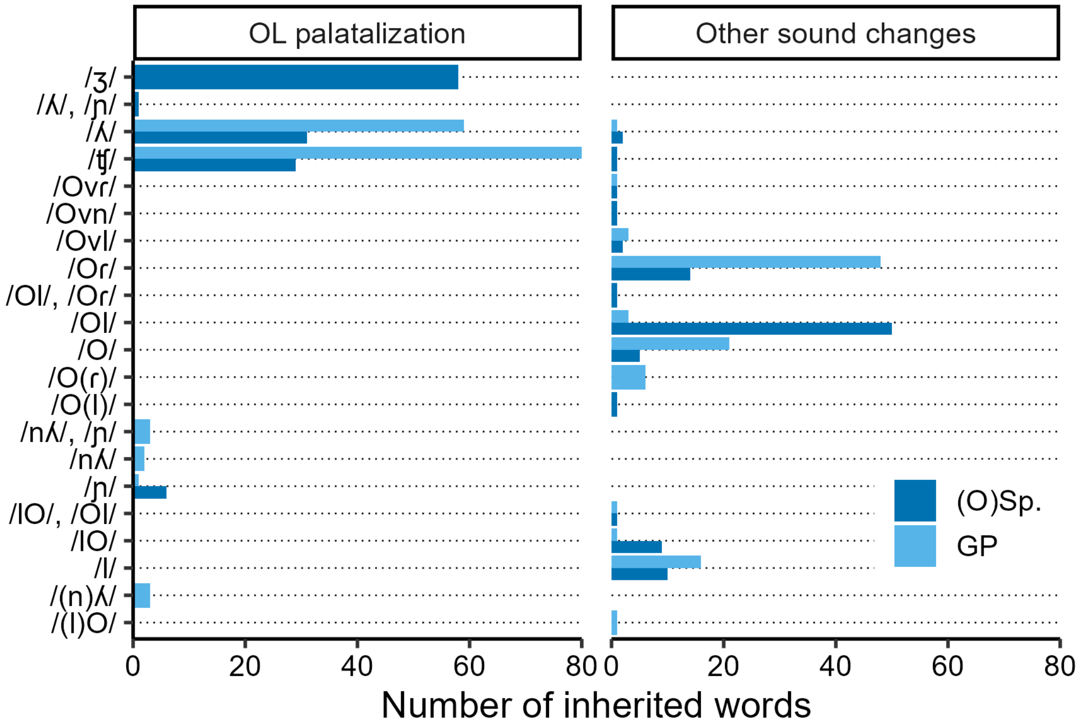


Figure 2.1.: Number of inherited words in Galician-Portuguese (GP) and (Old) Spanish ((O)Sp.) with a particular outcome

(long and short), cluster position within the word (word-initial, postconsonantal, and postvocalic), and OL cluster type (primary OL cluster or secondary O(V)L cluster).

This grouping is based on previous descriptions of Ibero-Romance OL palatalization, where different OL cluster configurations resulted in different outcomes, while others shared the same evolution (cf. Section 2.2). For instance, /pl bl fl/ usually underwent OL palatalization - and resulted in the same outcome - while /gl bl/ rarely did, e.g., Lat. PLĀGA > GP *chagas* but Lat. GLACĬĒS > Gal. *lazo.* Similarly, OL clusters containing long obstruents resulted in different outcomes than OL clusters with short obstruent, e.g., Late Lat. *VŎRŪCLUM > OSp. *burujo* but Lat. ACCLAMĀRE > OSp. *allamare*. Lastly, OL clusters had different evolutionary pathways than O(V)L clusters, e.g., Lat. APPLĬCĀRE > OSp. *allegando* but Late Lat. *CAPPŬLA > OSp. *cachas* (cf. Section 2.2 and the given inherited words in Appendix A).

It should be noted that, while OL clusters may be grouped as /pl fl kl/ or /bl gl/, sometimes there are no examples (of OL palatalization) in a particular OL cluster. For instance, the wordlist includes no inherited words with postvocalic /gl/ that resulted in OL palatalization, even though the first row in Table B.1 seems to indicate so.[12] Similarly, the wordlist does no include any etyma with the OL cluster /fː(V)l/. Whether there is evidence of OL palatalization in specific OL clusters is discussed in Section 2.4.2.

The outcomes indicated in Table B.1 and Table B.2 are the results of the original OL clusters in the inherited words, e.g., Lat. PLĀGA > GP *chagas* has the outcome /ʧ/ while Lat. APPLĬCĀRE

[12]The inherited word with the outcome /ʎ/ from primary postvocalic /bl gl/ is GP *tortulho* (< Lat. TERTUBLO).

> OSp. *allegando* has the outcome /ʎ/. Occasionally, the outcome from alternative forms of the inherited word was also included for two reasons: first, some OL clusters present a wide variety of outcomes; second, some inherited words had multiple forms. This is the case, for instance, of Lat. NĔBŬLA > GP *névoa* (also attested as *nebra*), Lat. ŬNGŬLA > GP *unnas* (also attested as *unlla*), or Lat. CĬNGŬLUM > OSp. *cello, cincho, ceño* and *cejo.* Consequently, the outcome for GP *névoa* is /O(ɾ)/ instead of /O/ to include the outcome of the alternative form *nebra* (see *névoa* (GP) in Appendix A). In a similar way, the given outcome for GP *unnas* is /nʎ/, /ɲ/, which includes the outcome in GP *unnas* and in the alternative form GP *unlla* (see *unnas* (GP) in Appendix A).

The inherited forms given in the wordlist tend to exhibit OL palatalization, in the case that other forms did not, and tend to contain the most common outcome as described by the previous literature. However, the selection of one outcome or inherited word over another remains a subjective process. Hence the occasional inclusion of the outcomes of alternative inherited words. On account of the outcome variation in some OL clusters, this section focus es on the most common palatal and non-palatal outcomes of specific OL clusters. A brief overview of other attested outcomes is provided, but not every single outcome or exception are specifically discussed.

2.4.1.1. Palatal outcomes

Table 2.4 provides multiple examples of inherited words that underwent OL palatalization in Galician-Portuguese and (Old) Spanish. Primary OL clusters and secondary O(V)L clusters are shown separately to facilitate the visualization. In addition, OL clusters are also separated by their position within the word, i.e., word-initial (#_), postconsonantal (C_), and postvocalic (V_), and by C_1 voicing and length, since these factors affected the results of OL palatalization in Ibero-Romance.

Table 2.4.: Examples of the outcomes of OL palatalization in all cluster configurations

ID	OL cluster	OL pos.	(Late) Latin	Inherited words
1.1	/pl kl fl/	#_	PLĬCĀRE	GP *chegou*, OSp. *llegarán*
1.2	/pl kl fl/	#_	CLĀVIS	GP *chave*, OSp. *llave*
2.1	/pl kl fl/	C_	AMPLUS	GP OSp. *ancho*
2.2	/pl kl fl/	C_	ĬNFLĀRE	GP *inchou*, OSp. *yncha*
3.0	/kl/	V_	*(IN)VŎRŪCLUM	GP *envurullar*, OSp. *burujo*
4.0	/bl/	V_	TERTUBLO	GP *tortulho*
5.1	/p:l k:l f:l/	V_	AFFLĀRE	GP *achamus*, OSp. *fallar*
5.2	/p:l k:l f:l/	V_	APPLĬCĀRE	GP *achegar*, OSp. *allegando*
5.3	/p:l k:l f:l/	V_	ACCLĀMĀRE	OSp. *allamare*
6.0	/g:l/	V_	SŬGGLŬTTĬUM	GP *saluçadas*, OSp. *solloços*
7.1	/p:(V)l k:(V)l t:(V)l/	V_	*CAPPŬLA	GP OSp. *cacha(s)*

7.2 /p:(V)l k:(V)l t:(V)l/	V_	*CACCULUS	Gal. Sp. *cacho*
8.1 /p(V)l k(V)l t(V)l/	C_	CŎNCHŬLA	GP OSp. *concha*
8.2 /p(V)l k(V)l t(V)l/	C_	CARBŬNCŬLUS	GP *carbũche*
9.1 /g(V)l/	C_	ŬNGŬLA	GP *unnas, unlla*, OSp. *uña*
9.2 /g(V)l/	C_	CĬNGŬLUM	GP *çinchos, cinho, cenllo*, OSp. *cello, cincho, ceño, cejo*
10.1/p(V)l k(V)l t(V)l/	V_	*MACŬLĀTA	GP *malhada*, OSp. *majada*
10.2/p(V)l k(V)l t(V)l/	V_	VĔTŬLUS, -A	GP *Vellia*, OSp. *viejo*
11.1/b(V)l g(V)l/	V_	COAGŬLUM	GP *quallo*, OSp. *quajo*
11.2/b(V)l g(V)l/	V_	TRĪBŬLĀRE	GP *trilla*

As seen in Figure 2.1, /ʧ/ was the most common outcome of OL palatalization in Galician-Portuguese and the only outcome of word-initial and postconsonantal /pl kl fl/ clusters (examples 1.1, 1.2, 2.1, 2.2 in Table 2.4). Postvocalic /p:l k:l f:l/ also yielded /ʧ/ but the wordlist only includes two examples, e.g., Lat. AFFLĀRE > GP *achamus* and Lat. APPLĬCĀRE > GP *achegar* (examples 5.1, 5.2, cf. Appendix A). Similarly, postconsonantal /p(V)l f(V)l k(V)l t(V)l/ and postvocalic /p:(V)l f:(V)l k:(V)l t:(V)l/ resulted in /ʧ/ (examples 7.1, 7.2, 8.1, 8.2 in Table 2.4). From a total of 148 Galician, Portuguese and Galician-Portuguese lexical items that underwent OL palatalization, 80 resulted in /ʧ/ (54.05%). In the case of (Old) Spanish, /ʧ/ is the only outcome found in postconsonantal /pl kl fl/ (examples 2.1 and 2.2 in Table 2.4), in postvocalic /p:(V)l f:(V)l k:(V)l t:(V)l/ (examples 7.1 and 7.2), and predominantly in postconsonantal /p(V)l f(V)l k(V)l t(V)l/ (examples 8.1 and 8.2 in Table 2.4). In total, 29 (Old) Spanish words resulted in /ʧ/ from 125 inherited words that underwent OL palatalization (23.2%) (cf. Figure 2.1).

The outcome /ʎ/ is found both in Galician-Portuguese and Spanish. In Galician-Portuguese, primary postvocalic /pl kl fl/ seems to have resulted in /ʎ/ but the wordlist includes only one example,[13] e.g., Late Lat. *(IN)VŎRŪCLUM > GP *envurullar* (GP) (example 3 in Table 2.4). Similarly, postvocalic /bl gl/ might have also resulted in /ʎ/ but the wordlist only includes one example of OL palatalization, e.g., Lat. TERTUBLO > GP *tortulho* (example 4). Additionally, all secondary postvocalic OL clusters, i.e., /p(V)l f(V)l k(V)l t(V)l b(V)l g(V)l d(V)l/ predominantly became /ʎ/ in Galician-Portuguese (examples 10.1, 10.2, 11.1 and 11.2 in Table 2.4). From the 148 Galician-Portuguese inherited words that underwent OL palatalization, 59 resulted in /ʎ/ (39.86%).

With regard to Spanish, /ʎ/ was the usual outcome of word-initial /pl kl fl/ (examples 1.1 and 1.2 in Table 2.4) and the only attested outcome of postvocalic /p:l k:l f:l g:l/ (examples 5.1, 5.2, and 5.3.). However, it should be noted that Late Lat. SŬGGLŬTTĬUM > OSp. *solloços* (example 6) is the only example of this evolution in the corpus. From the 125 (Old) Spanish lexical items with OL palatalization, 31 resulted in /ʎ/ (24.8%).

[13] Lat. COCHLEAR, -ĀRIS > GP *culiares* could also be an example, but, given the front vowel after the cluster, it is unclear whether the palatal outcome was the result of OL palatalization or of Lat. /lj/ (Appendix A).

The outcomes of postconsonantal /b(V)l g(V)l d(V)l/ show a lot of variation. Examples 9.1 and 9.2 in Table 2.4 gave a small glimpse of the variety in the outcomes from, concretely, postconsonantal /g(V)l/. Table 2.5 includes all inherited words with OL palatalization in the dataset - together with their alternative forms - that came from an etymon containing postconsonantal /g(V)l/. It is apparent that the outcome variation is particularly large in Galician-Portuguese, where inherited words with the outcomes /nʎ/ and /ɲ/, but also /ʎ/, are common, e.g GP *senllas* ~ *sennas, unnas~ unlla,* and *sinlia~ cilla*. Postconsonantal /g(V)l/ predominantly resulted in /ɲ/ in (Old) Spanish but the outcomes in the given examples are also diverse. In spite of the outcome variation, /nʎ/, /ɲ/, and /ʎ/ can probably be understood as different stages of the diachronic pathway (cf. Section 4.4.2).

Table 2.5.: Outcome variability in the inherited words from etyma containing a postconsonantal /g(V)l/ cluster

Etymon	Inherited word	Other inherited words	Language
ANGŬLA VĔTŬLA	*Añavieja*	NA	Sp.
(RĪVĪ) ANGŬLUS	*Anllada*	*Anllo, Rianxo*	Gal.
ANGŬLĀRIS	*anllar*	*allar, unllar, illar*	Gal.
CĬNGŬLUM	*cello*	*cincho, ceño, cejo*	OSp.
CĬNGŬLUM	*çinchos*	*cinho, cenllo*	GP
CĬNGŬLA	*cincha*	*cencha*	OSp.
CĬNGŬLA	*sinlia*	*cincha, cilla*	GP
SĬNGŬLUS	*seños*	*sendos*	OSp.
SĬNGŬLUS	*senllas*	*sennas, senhos, senlos*	GP
SĬNGŬLĀRĬTĀS, -ĀTIS	*señerdat*	NA	OSp.
SĬNGŬLĀRĬUS	*senlleira*	*senheyra*	GP
SĬNGŬLĀRĬUS	*señeros*	NA	OSp.
PĔDĬS ŬNGŬLA	*pesuña*	NA	OSp.
PĔDĬS ŬNGŬLA	*pesunho*	NA	Pt.
ŬNGŬLA	*uña*	NA	OSp.
ŬNGŬLA	*unnas*	*unlla*	GP

Finally, one rather common outcome in Old Spanish, but not in Galician-Portuguese, was /ʒ/. As can be seen in Figure 2.1, /ʒ/ was the predominant result in all secondary postvocalic O(V)L clusters, i.e., /p(V)l f(V)l k(V)l t(V)l b(V)l g(V)l d(V)l/ (examples 10.1, 10.2, 11.1 and 11.2 in Table 2.4). Likewise, postvocalic /pl fl kl/ also seems to have resulted in /ʒ/ but the wordlist only includes two examples, e.g., Late Lat. VŎRŪCLUM > OSp. *burujo* and Lat. BICLĂRA > OSp. *Béjar* (example 3).[14] From a total of 125 words included in the corpus that underwent OL palatalization in (Old) Spanish, 58 exhibit the outcome /ʒ/ (46.4%).

[14]Cf. *cuchar* (OSp.) in Appendix A.

2.4.1.2. Non-palatal outcomes

Similar to Table 2.4, Table 2.6 gives an overview of the different non-palatal outcomes of OL clusters in Galician-Portuguese and (Old) Spanish. The non-palatal outcomes come from inherited words that did not undergo OL palatalization or where OL palatalization could not be confirmed. The OL clusters are grouped into primary OL clusters and secondary O(V)L clusters and separated by their position within the word, i.e., word-initial (#_), postconsonantal (C_), and postvocalic (V_), and by C_1 voicing and length.

Table 2.6.: Examples of the outcomes of OL palatalization in all cluster configurations

ID	OL cluster	OL pos.	(Late) Latin	Inherited words
1.1	/pl kl fl/	#_	CLĀVUS	GP *cravo*, OSp. *clavos*
1.2	/pl kl fl/	#_	FLĂCCUS	GP *fraco*, OSp. *flaco*
2.1	/bl gl/	#_	GLĪS, -ĪRIS	Gal. *leirón, lirio*, Pt. *leirão*, OSp. *lirón, lir*
2.2	/bl gl/	#_	BLASPHĒMĀRE	GP *lastimado*, OSp. *lastima*
2.3	/bl gl/	#_	BLANDUS	GP *brando*, OSp. *blando*
3.1	/pl kl fl/	C_	EXĔMPLUM	GP *exempro*, OSp. *enssiemplo*
3.2	/pl kl fl/	C_	COMPLĒRE	GP *comprir*, OSp. *cumplir*
4.0	/pl kl fl/	V_	DŬPLĀRE	GP *dobrava*, OSp. *doblado*
5.1	/bl gl/	V_	NEGLĔGENTĬA	GP *negrigença*
5.2	/bl gl/	V_	*ŎBLĪTĀRE	GP *obridar, olvidar*, OSp. *olvidar*
6.0	/p:l k:l f:l/	V_	FĪLIUS E(C)CLĒSIAE	GP *feegres*, OSp. *feligres*
7.0	/p(V)l k(V)l t(V)l/	C_	MŪSCŬLUS	GP *musclo, musgoo*, OSp. *muslo*
8.0	/b(V)l g(V)l/	C_	ANGŬLUS, -A	GP *angra*, OSp. *anglo*
9.1	/p(V)l k(V)l t(V)l/	V_	BACŬLA	Gal. *bágoa*
9.2	/p(V)l k(V)l t(V)l/	V_	MĪRACŬLUM	GP *miragre, milagre*, OSp. *miraclo, milagro*
9.3	/p(V)l k(V)l t(V)l/	V_	CAPĬTŬLUM	GP *cabidoo* (also attested as *cabillo*), OSp. *cabildo*
10.1	/b(V)l g(V)l/	V_	NĔBŬLA	GP *névoa* (but also *nebra*), OSp. *niebla*
10.2	/b(V)l g(V)l/	V_	SIBILĀRE	GP *silvar*, OSp. *silvos*

In Galician-Portuguese, /l/ was the predominant outcome of word-initial /bl gl/. To a lesser extent, this was also true for Spanish word-initial /bl gl/ (examples 2.1 and 2.2 in Table 2.6). Beyond these segments, /l/ was the outcome of other OL clusters (also in other positions within the word), but only as an exceptional evolution or as one of several outcomes, e.g., Late Lat. *BATUĀCŬLUM > GP *badalo*, Lat. FABŬLA > GP *fala*, Late Lat. SŬBLĔVĀRE > OSp. *solieuo*, or Late. Lat. *PLANCŬLA > OSp. *lancha*. Overall, /l/ appears in 15.69% of Galician and Portuguese inherited words that did not undergo OL palatalization and in 10.2% of (Old) Spanish popular words.

The rhotacism of the lateral and the conservation of the obstruent, i.e., /Oɾ/, was the most common non-palatal outcome in Galician-Portuguese, specially in primary OL clusters (see examples in Table 2.6). 52.94% of all Galician-Portuguese lexical items with lack of OL palatalization resulted in /Oɾ/. In some cases, the outcome /Oɾ/ did not only present rhotacism but stop voicing: Lat. *ANĒTHŬLUM > Pt. *emdro*, Lat. CŌPŬLA > GP *cobra*, Lat. DŬPLĀRE > GP *dobrava*, Lat. DŬPLUS > GP *dobro*, Lat. MĪRACŬLUM> GP *miragre*, Lat. SAECŬLĀRIS > GP *segrares*, and Lat. SAECŬLUM > GP *segre*.

/Oɾ/ was occasionally found in Spanish but it was not such a common outcome (cf. Figure 2.1). Only 15.31% of (Old) Spanish inherited words without OL palatalization resulted in /Oɾ/ compared to the 52.94% attested in Galician-Portuguese. In two examples, /Oɾ/ was probably caused by liquid assimilation and dissimilation: OSp. *palabra* < Lat. PARABOLA and OSp. *peligro* < Lat. PERICULUM. This phenomenon was already seen in the later stages of Latin since OL clusters sometimes originated in words that originally did not have them: Lat. (IN)VOLŪCRUM > (IN)VORŪCLUM or (IN)VOLŪCLUM > GP *envurullar*, *embrulho* and OSp. *burujo* or Lat. FRAGRĀRE > Late Lat. FLAGRĀRE > GP *cheyra* (further examples of liquid dissimilation and assimilation in Müller 2013).

In the case of Spanish, the most common outcome in the absence of OL palatalization, in all cluster configurations, was the preservation of the OL cluster, i.e., /Ol/ (see examples in Table 2.6). This result is attested in 54.1% of (Old) Spanish lexical items without traces of OL palatalization. However, the outcome /Ol/ may not represent the original OL cluster since the plosive underwent stop voicing in some examples: Lat. DŬPLĀRE > OSp. *doblado*, Lat. DŬPLUS > OSp. *doblo*, Lat. DŬPLĬCĀRE > OSp. *doblegela*, Late Lat. PŎPŬLĀRE > OSp. *poblar*, Lat. PŎPŬLUS > OSp. *pueblo*, Lat. SAECŬLĀRIS > OSp. *seglar*, Lat. SAECŬLUM > OSp. *sieglo*, Lat. SPĪCŬLUM> OSp. *espligo*, and Lat. TRĬPLUS > OSp. *treble*. As the examples show, /pl/ is the OL cluster where stop voicing was most frequent. /Ol/ is rarely found in Galician and Portuguese.

The preservation of the obstruent and the loss of the lateral, e.g., /O/, was also a common outcome in Galician and Portuguese, specially in secondary O(V)L clusters (see examples 7, 9.1, 9.3, and 10.1 in Table 2.6). This outcome was usually the result of the lack of syncope in Galician-Portuguese (Section 4.3.1): without syncope, /l/ remained in an intervocalic position and intervocalic /l/ was regularly lost in Galician-Portuguese (cf. FF: 367-8). Approximately 27.45% of all Galician and Portuguese lexical items without OL palatalization resulted in /O/. While there were several instances of /O/ in (Old) Spanish, it was not a common evolution because intervocalic /l/ was not lost. However, there are some examples where an OL cluster became /O/ in (Old) Spanish due to the metathesis of the lateral, which changed its position within the word. Some examples include OSp. *blago* < Lat. BACULUM, OSp. *bloca* < OFr. *boucle*, OSp. *floronco* < Lat. FURUNCULUS, and Ast. *blincu* < Lat. VINCULUM.

The metathesis of the obstruent and the lateral is not a common outcome, neither in Galician-Portuguese nor in (Old) Spanish. However, both languages families have instances of it, mainly in postvocalic primary or secondary OL clusters (see examples 5.2, 9.3, and 10.2 in Table 2.6). Overall, this outcome appears in approximately 2.9% of the inherited Galician and Portuguese words that do not exhibit OL palatalization and in 10.2% of the Spanish words. Examples include Lat. CAPĬTŬLUM > OSp. *cabildo*, Lat. SIBILĀRE > OSp. *silvos* and GP *silvar*, Lat. SPATŬLA > OSp. *espalda,* Lat. TŬBŬLA > Sp. *tolva,* Lat. *ANĒTHŬLUM > OSp. *aneldo,* and Late Lat. FŎLĬĀTĬLIS > OSp. *hojalde* (cf. the given inherited words in Appendix A).

2.4.1.3. Summary

Table 2.7 summarizes the most common outcomes of OL clusters in Galician-Portuguese and (Old) Spanish, both as a result of OL palatalization and as a result of other sound changes. Once again, the OL clusters are grouped into primary and secondary clusters and separated by C_1 voicing and length, and by their position within the word.

Table 2.7.: Most common palatal and non-palatal outcomes in Galician-Portuguese and (Old) Spanish per OL cluster configuration

OL cluster	OL pos.	Palatal outcome GP	Palatal outcome (O)Sp.	Non-palatal outcome GP	Non-palatal outcome (O)Sp.
/pl kl fl/	#_	/ʧ/	/ʎ/	/Oɾ/	/Ol/
/gl bl/	#_	NA	NA	/l/	/l/
/pl kl fl/	C_	/ʧ/	/ʧ/	/Oɾ/	/Ol/
/gl bl/	C_	NA	NA	/Oɾ/	/Ol/
/pl kl fl tl/	V_	/ʎ/	/ʒ/	/Oɾ/	/Ol/
/gl bl/	V_	NA	NA	/Oɾ/	/Ol/
/p:l k:l f:l/	V_	/ʧ/	/ʎ/	/Oɾ/	/Ol/
/g:l/	V_	NA	/ʎ/?	/Oɾ/	/Ol/
/p:(V)l k:(V)l t:(V)l/	V_	/ʧ/	/ʧ/	/Oɾ/	/Ol/
/p(V)l k(V)l t(V)l/	C_	/ʧ/	/ʧ/	/Oɾ/	/Ol/
/b(V)l g(V)l d(V)l/	C_	/nʎ/, /ɲ/	/ɲ/	/Oɾ/	/Ol/
/p(V)l k(V)l t(V)l/	V_	/ʎ/	/ʒ/	/Oɾ/, /O/	/Ol/
/b(V)l g(V)l d(V)l/	V_	/ʎ/	/ʒ/	/Oɾ/, /O/	/Ol/

Most OL clusters in Galician and Portuguese became /ʧ/ as a result of OL palatalization, as Table 2.7 shows: this was the case for word-initial and postconsonantal /pl fl kl/, for post-consonantal /p(V)l f(V)l k(V)l/, and for postvocalic /p:l k:l f:l/ and /p:(V)l f:(V)l k:(V)l t:(V)l/. In contrast, only postconsonantal /pl fl kl/ and /p(V)l f(V)l k(V)l/ predominantly became /ʧ/ in Spanish. /ʎ/ was the predominant outcome of all postvocalic OL clusters, i.e., /pl kl fl bl gl/ and /p(V)l f(V)l k(V)l t(V)l b(V)l g(V)l d(V)l/, in Galician and Portuguese. In the case of Spanish, word-initial /pl fl kl/ and post-vocalic /p:l k:l f:l g:l/ predominantly resulted in /ʎ/. There was much variation in secondary postconsonantal /b(V)l g(V)l d(V)l/, but these clusters tended to become /ɲ/ in both language families, also /nʎ/ in Galician-Portuguese. The last palatal outcome discussed is /ʒ/, which was the usual evolution of all postvocalic OL clusters in (Old) Spanish, i.e., /pl fl kl/ and /p(V)l f(V)l k(V)l t(V)l b(V)l g(V)l d(V)l/.

In general, the qualitative and qualitative study of the outcomes, based on the cross-linguistic historical wordlist, support the evolutions described in previous literature. This is true for the most common outcomes of a specific OL cluster, in a particular position within the word, in a given language variety. Furthermore, the compiled wordlist provided new evidence for OL palatalization in primary postvocalic OL clusters. The found inherited words, where the original postvocalic /kl/ underwent OL palatalization, seem to indicate that primary postvocalic OL clusters may have had the same evolution as secondary postvocalic O(V)L clusters. This is an important find, specially since secondary and primary OL clusters are thought to have undergone OL palatalization at different times (Section 1.5).

Regarding non-palatal outcomes, OL clusters underwent very different evolutions in the absence of palatalization. The only outcome typical of a particular OL cluster was /l/, for word-initial /bl gl/ in both Galician-Portuguese and (Old) Spanish. In these OL clusters, the obstruent was usually lost and the lateral was preserved. Most other non-palatal outcomes were not restricted to a particular OL cluster in a specific position but they might have been more usual in some phonological contexts: this is the case, for instance, for the outcome /O/. The preservation of the obstruent and the loss of the lateral was a common evolution of secondary - postvocalic and postconsonantal - O(V)L clusters in Galician and Portuguese. This outcome was the result of the lack of syncope and subsequent lateral lenition and loss. The preservation of the OL clusters (in (Old) Spanish), i.e., /Ol/, and the rhotacism of the lateral (in Galician-Portuguese), i.e., /Oɾ/, were common in all cluster configurations.

In addition, several non-palatal outcomes seem to indicate that /l/ and /ɾ/ occasionally underwent assimilation and dissimilation processes. Several examples of this occurrence were shown, belonging to Late Latin, Galician-Portuguese, and (Old) Spanish. Similarly, the position of /l/ within the word could be misperceived. Several inherited words showed the metathesis of the cluster members, i.e., /Ol/ > /lO/, or the metathesis of /l/ to a different position within the word. Liquid assimilation and dissimilation and metathesis of the lateral might have been more common in secondary O(V)L clusters but are attested, generally, in all OL clusters except for word-initially. This seems to indicate that liquid dissimilation and lateral metathesis were not uncommon occurrences in Ibero-Romance, which could have contributed to the absence of OL palatalization in some lexical items (further information in Section 2.4.3).

2.4.2. The OL clusters that palatalized

In this section, the evidence for OL palatalization in specific OL and O(V)L clusters is reviewed. Each subsection focuses on the traces of OL palatalization in clusters with different C_1, i.e.,

/pl fl kl bl gl tl dl/. Only inherited Galician, Portuguese and Spanish words are taken into consideration, but the number of instances of an OL cluster (with OL palatalization) are not grouped by language family. It should be noted that the counts reported in the following subsections refer to the inherited words, not to the etyma; several inherited words can come from the same etymon since lexical items from several languages are included in the corpus. For reference, the wordlist includes 473 inherited words (excluding uncertain etymologies, possible borrowings and words that did not come from OL clusters).

2.4.2.1. /bl/

Table 2.8 provides the total number of inherited words included in the wordlist that came from etyma containing /bl/ or /b(V)l/. OL cluster configurations that do not appear on the table are not attested in the compiled historical corpus. The total number of instances is compared to the number of inherited words with and without OL palatalization (other sound changes, "other SC"), and to the number of tokens were OL palatalization is uncertain.

Table 2.8.: Number of inherited words included in the wordlist that came from etyma containing /bl/ or /b(V)l/

OL cluster	Total number	Other SC	OL palatalization	Uncertain
/b(V)l/	33	27	5	1
/bl/	27	25	1	1

As can be seen in Table 2.8, the wordlist contains 27 inherited words that came from an etymon with the OL cluster /bl/, from which only one underwent OL palatalization, (GP *tortulho*) and one (OSp. *trillo*) has an uncertain status. In the case of secondary /b(V)l/ (n= 33), only 5 lexical items show traces of OL palatalization and in one OL palatalization is possible but unconfirmed (OSp. *casullas*). The wordlist includes no etyma with /b:l/ or /b:(V)l/. Overall, 10% of the inherited words from etyma with /bl/ or /b(V)l/ underwent OL palatalization.

The evidence for the OL palatalization of /bl/ is very scarce, with only a handful of examples in Galician-Portuguese and (Old) Spanish. Consequently, these words do not actually exhibit OL palatalization of /bl/. Instead, it may be possible to hypothesize that the palatal outcomes in these words were influenced by other factors. Table 2.9 contains all inherited words Appendix A that might have been the result of OL palatalization in /bl/ or /b(V)l/.

Half of the inherited words in Table 2.9 have a Galician-Portuguese origin and these inherited words contain the most common outcome in secondary postvocalic O(V)L clusters, i.e., /ʎ/ (cf. Section 2.4.1.1). The Old Spanish inherited words also have the outcome /ʎ/, which was not the predominant outcome in secondary postvocalic O(V)L clusters. Instead, /ʒ/ would be expected. DCECH (trillo) argued that the evolution Lat. /b(V)l/ > OSp. /ʎ/ was certain. However, it is unclear how Lat. /b(V)l/ became OSp. /ʎ/ when the usual outcome of postvocalic Lat. /g(V)l k(V)l/ was OSp. /ʒ/ > Sp. /x/, e.g., Lat. AURĬCŬLA > OSp. *orejadas* and Lat. TĒGŬLA

Table 2.9.: Etyma with /bl/ that underwent OL palatalization in Ibero-Romance. OL = /bl/, O(V)L = /b(V)l/, V_ = postvocalic, C_ = postconsonantal, OSp. = Old Spanish, GP = Galician-Portuguese, Gal. = Galician.

Etymon	OL type	OL position	Inherited word	Language
CASUBLA	OL	V_	*casullas*	OSp.
ĬNSŪBŬLUM	O(V)L	V_	*ensullo*	OSp.
TRĪBŬLUM	O(V)L	V_	*trillo*	OSp.
TRĪBŬLUM	O(V)L	V_	*trilho*	GP
TERTUBLO	OL	V_	*tortulho*	GP
TRĪBŬLĀRE	O(V)L	V_	*trilla*	GP
TŬRBŬLA	O(V)L	C_	*trulla*	Sp.
*TŬRBŬLĀRE	O(V)L	C_	*trullada*	Gal.

> OSp. *teja*. Even the few examples of postvocalic primary /kl/, e.g., Late Lat. *VŎRŪCLUM > OSp. *burujo* and Lat. BICLĂRA > OSp. *Béjar*, suggest that /ʒ/ was the typical evolution of postvocalic OL clusters with short obstruents in Old Spanish. In addition, it is unusual that one particular OL cluster evolved differently from the others in Ibero-Romance. For instance, /pl fl kl/ shared the same outcome of OL palatalization across positions within the word, e.g., Late Lat. PLĬCĀRE > GP *chegou* and OSp. *llegarán*, *llano*, Lat. FLAMMA > GP *chama* and OSp. *llama*, and Lat. CLĀVIS > GP *chave*, OSp. *llave* (cf. Table 2.7).

Given that /ʎ/ was the usual outcome of secondary postvocalic O(V)L clusters in Galician-Portuguese, Aragonese and Catalan, it is possible that OSp. *trillo*, OSp. *ensullo*, and Sp. *trulla* were either influenced or borrowed from one of those varieties (see Appendix A). In the case of OSp. *casulla*, it is possible that /ʎ/ was due to the influence of Lat. CUCULLA on Late Lat. CASUBLA, and not to the OL palatalization of /bl/. Regarding the Galician-Portuguese tokens, there is no concrete answer as to why these words underwent OL palatalization and not many others. The gathered inherited words contained in the etymological dataset suggest that OL palatalization in /bl b(V)l/ was disfavoured or unlikely. As a result, analogy to /g(V)l/ and /k(V)l/, which were quite common in Latin because -*cul*- and -*gul*- were very productive derivative suffixes, could be hypothesized in some cases.

2.4.2.2. /fl/

The total number of inherited words included in the wordlist that came from etyma containing /fl/ or /fːl/ is shown in Table 2.10. Similar to Table 2.8, the total number of instances is compared to the number of inherited words that did (and did not) undergo OL palatalization. If a specific OL cluster configuration of /fl/ is not indicated in the table, the corpus includes no etyma with that OL cluster; for instance, there are no inherited words in the wordlist that came from etyma containing /fː(V)l/ or /f(V)l/.[15]

[15] It is possible that etyma with /fː(V)l/ or /f(V)l/ did result in inherited words from other varieties, such as Asturian or Aragonese.

Table 2.10.: Number of inherited words included in the wordlist that came from etyma containing /fl/ or /f:l/

OL cluster	Total number	Other SC	OL palatalization
/f:l/	9	5	4
/fl/	23	11	12

As indicated in Table 2.10, the wordlist contains 23 inherited words that came from an etymon containing /fl/. Of these, 12 underwent OL palatalization. However, inherited words with OL palatalization are found only in word-initial and postconsonantal position, not postvocalically. Examples of /f:l/ - and generally of OL clusters with long obstruents - only appear in postvocalic position: of the 9 inherited words that came from etyma containing /f:l/, 4 underwent OL palatalization.

In total, 50% of all lexical items that came from /fl f:l/ shows traces of OL palatalization. Contrary to /bl/, where the examples of OL palatalization were the exception (10%), the tokens comprised in the corpus strongly suggest that /fl/ did undergo OL palatalization. However, this is only true for word-initial and postconsonantal /fl/ and for postvocalic /f:l/ since no evidence of OL palatalization was found for secondary /f(V)l/ and for postvocalic /fl/.

2.4.2.3. /gl/

Table 2.11 provides a summary of the total number of inherited words in Galician-Portuguese and (Old) Spanish that stemmed from etyma containing /gl g:l g(V)l/. In addition to the total number of tokens, the number of inherited words with and without OL palatalization is also given.

Table 2.11.: Number of inherited words included in the wordlist that came from etyma containing /gl/, /g:l/, and /g(V)l/

OL cluster	Total number	Other SC	OL palatalization
/g:l/	2	1	1
/g(V)l/	31	4	27
gl	21	21	0

The wordlist includes 21 inherited words from an etymon containing primary /gl/ and none underwent OL palatalization. In these etyma, /gl/ only appeared in word-initial and postvocalic position. In contrast, of the 31 lexical items from an etymon containing /g(V)l/, 27 exhibit OL palatalization. Consequently, /gl/ and /g(V)l/ underwent very divergent evolutions, as reflected in the number of tokens with OL palatalization (cf. Table 2.11).

Concerning /g:l/, there is only one etymon with this OL cluster in the dataset, i.e., Lat. SŬGGLŬTTĬUM > GP *saluçadas*, OSp. *solloços.* The inherited words show OL palatalization in

Spanish, but not in Galician-Portuguese. One example does not provide enough evidence to confirm or suggest that /g:l/ underwent OL palatalization in Ibero-Romance. The Galician-Portuguese word resulted in /l/, which could have been the result of different processes: one possibility would be the degemination and subsequent loss of /g/ (lenition); another possibility would be an assimilation of /g/ to /l/. After the assimilation process, /l:/ would have regularly undergone degemination in Galician-Portuguese, i.e., Late Lat. /g:l/ > /gl/ > /l:/ > GP /l/. Concerning the Spanish inherited word, /ʎ/ was the typical outcome for OL clusters with long obstruents. This was indicated by the palatal outcomes of /p:l f:l k:l/, e.g., Lat. APPLĬCĀRE > OSp. *allegando* (cf. Section 2.4.1.1). Nevertheless, an assimilation of /g/ to /l/ could also be assumed for the Old Spanish inherited word because OSp. /ʎ/ was also the regular outcome of Lat. /l:/.

The present historical evidence supports the regular OL palatalization of secondary /g(V)l/, both postvocalically and post-consonantally. In contrast, OL palatalization of primary /gl/ and /g:l/ was observed in one isolated case, which can be explained through other phonological processes such as assimilation. As a result, the gathered evidence suggests that /gl/ and /g:l/ did not underwent OL palatalization.

2.4.2.4. /kl/

The number of inherited words included in the wordlist that came from OL clusters with C_1 /k/ is indicated in Table 2.12. The total number of words is compared to the number of tokens that did (and did not) undergo OL palatalization. The number of tokens were OL palatalization is possible but unconfirmed is also given. It is apparent from the data in Table 2.12 that OL palatalization is attested in all cluster configurations, i.e., in both primary and secondary OL clusters with short and long stops.

Table 2.12.: Number of inherited words included in the wordlist that came from etyma containing /kl/, /k:l/, /k:(V)l/, and /k(V)l/

OL cluster	Total number	OL palatalization	Other SC	Uncertain
/k:(V)l/	3	3	0	0
/k:l/	4	1	3	0
/k(V)l/	139	118	21	0
/kl/	48	26	20	2

The wordlist contains 48 inherited words that came from an etymon containing /kl/ in word-initial, postconsonantal, and postvocalic position. Of these 48 words, 26 underwent OL palatalization. Evidence of OL palatalization was also identified in postvocalic position, even though no examples have been reported in the existing literature: Lat. COCHLEAR > GP *culiares* and OSp. *cuchar* (uncertain OL palatalization); Late Lat. *(IN)VORUCLUM > GP *envurullar*, OSp. *burujo*; and Lat. BICLARA > OSp. *Béjar*.

4 inherited words from an etymon containing /k:l/ are included in the wordlist, of which only one exhibits OL palatalization. The available examples are Lat. ACCLAMĀRE > OSp. *allamare*, Late Lat. EC(C)LESĬŎLA > GP *ygreioa* and Late Lat. FĪLIUS E(C)CLĒSIAE > OSp. *feligres* and GP *feegres*. However, it is unclear whether EC(C)LESĬŎLA and FĪLIUS E(C)CLĒSIAE contained the OL cluster /k:l/ or /kl/. Historically, Lat. /p: k: t:/ degeminated in Ibero-Romance but the resulting /p t k/ did not undergo voicing. Both degemination and voicing were part of a pervasive lenition process in Ibero-Romance (FF: 372-3; CRC: 197, 221; Lausberg 1967: 67). Yet, the output of the degemination process did not become the input of the stop voicing process. To my knowledge, there are only two exceptions to this rule and one of them is Late Lat. ECLĒSĬA > GP *egleja*, OSp. *iglesia* (cf. Section 4.3.2.3). /kl/ was attributed to Late Lat. ECLĒSĬA while /k:l/ was attributed to Late Lat. EC(C)LESĬŎLA and Late Lat. FĪLIUS E(C)CLĒSIAE based on previous etymological accounts (cf. Appendix A). As a result, Lat. ACCLAMĀRE > OSp. *allamare* is the only certain instance of OL palatalization of /k:l/. With only one example, there is no conclusive evidence of the OL palatalization of /k:l/.

Regarding secondary O(V)L clusters, the compiled corpus contains 139 lexical items from etyma containing /k(V)l/, of which 118 underwent palatalization (85%). In comparison, the number of examples with /k:(V)l/ is marginal: only 3 inherited words from etyma containing /k:(V)l/ were found but all of them exhibit OL palatalization: Late Lat. *BŬCCŬLA > GP *bochecha* and Late Lat. *CACCŬLUS > Sp. Gal. *cacho*. This finding is noteworthy, as OL palatalization in secondary O(V)L clusters with a long obstruent, i.e., /O:(V)L/, has not been addressed in previous descriptions of OL palatalization.

2.4.2.5. /pl/

Like in the previous subsections, Table 2.13 shows the total number of inherited words from an etyma containing an OL cluster with C_1 /p/. The total number of examples is compared to the number of inherited words that did (and did not) undergo OL palatalization and to the number of inherited words were this sound change is unconfirmed.

Table 2.13.: Number of inherited words included in the wordlist that came from etyma containing /pl/, /p:l/, /p:(V)l/, and /p(V)l/

OL cluster	Total number	Other SC	OL palatalization	Uncertain
/p(V)l/	12	11	1	0
/pl/	81	27	53	1
/p:(V)l/	2	0	2	0
/p:l/	2	0	2	0

Generally, /pl/ tended to undergo OL palatalization but not in all cluster configurations. The corpus features 81 inherited words that came from an etymon containing /pl/, of which 53 underwent OL palatalization (70%). This high percentage indicates that /pl/ regularly palatalized. However, the examples of /pl/ with OL palatalization were in word-initial and postconsonantal position, not in postvocalic position.

Concerning OL clusters with long stops, all 4 inherited words from an etymon containing postvocalic /p:l p:(V)l/ underwent OL palatalization. These inherited words came from two different etyma, one with /p:l/ and one with /p:(V)l/: Late Lat. *CAPPŬLA > GP *cachas*, OSp. *cacha* and Lat. APPLĬCĀRE > GP *achegar*, OSp. *allegando*. Although the evidence is scarce, it suggests that /p:l/ were targeted by OL palatalization. However, it is unclear whether /p:(V)l/ can be assumed to have undergone palatalization: on the one hand, there is evidence of the palatalization of /p:l/; on the other hand, there is practically no traces of palatalization in postvocalic /p(V)l/.

Finally, only one inherited word of the 12 tokens from etyma containing the cluster /p(V)l/ shows traces of OL palatalization, i.e., Lat. CAPŬLUM > GP *cacho*. In this case, it may be possible that Lat. CAPŬLUM was influenced by Late Lat. *CAPPŬLA > GP *cachas* (< Lat. CAPŬLA <- Lat. CAPŬLUM) or that it also developed a geminate stop /p:/. /ʧ/ was the predominant outcome of OL clusters with geminate stops in Galician-Portuguese, e.g., Lat. APPLĬCĀRE > GP *achegar* or Late Lat. *CACCULUS > Gal. *cacho*. In contrast, secondary postvocalic O(V)L clusters mainly resulted in /ʎ/ in Galician-Portuguese, e.g., Lat. CUNĬCŬLUS > GP *cõelio* (cf. Section 2.4.1.1). Consequently, the outcome /ʧ/ in Lat. CAPŬLUM > GP *cacho* can be better explained if /p/ underwent gemination. Another possible explanation for this outcome is analogy or alteration to /k(V)l/, which has been described for several lexical items: Lat. MANĬPŬLUS > Late Lat. MANŬCŬLUS > GP *moolho*, OSp. *manojo* or Lat. STIPULA > STUPULA → *RESTUPULARE → *RESTUPULU > Late Lat. *RESTŬCŬLUM > GP *restroio*, OSp. *restojo* (see Section 2.4.1.1). As a result, there is no evidence of OL palatalization in secondary postvocalic /p(V)l/.

2.4.2.6. Other clusters

Table 2.14 indicates that 26 inherited words that came from an etymon containing /t(V)l/ are included in the corpus. Of these, 14 show traces of OL palatalization. The Appendix Probi features several instances of Lat. /t(u)l/ > Late Lat. /kl/ after syncope of the unstressed vowel: *vetulus non veclus* (> OSp. *viejo*, GP *Vellia*), *vitulus non viclus* or *capitulum non capiclum* (> GP *cabillo*). /tl/ might have been altered in order to avoid an homorganic cluster, which was rare in Latin.

Table 2.14.: Number of inherited words included in the wordlist that came from etyma containing /tl/, /t:(V)l/, /t(V)l/, and /d(V)l/

OL cluster	Total number	Other SC	OL palatalization
/d(V)l/	6	5	1
/t(V)l/	26	12	14
/tl/	2	2	0
/t:(V)l/	2	0	2

Appendix A also contains one etymon containing /t:(V)l/, whose inherited words exhibit OL palatalization: Late Lat. *CATTŬLUS > GP OSp. *cachorro.* Additionally, there is an Arabic etymon containing /tl/ but the lexical items did not palatalize: Arab. *saṭl* > GP *acetres*, OSp. *azetrelio*. Several instances of /d(V)l/ are also featured in the corpus. However, of the 6 inherited words with an etymological /d(V)l/, only one underwent OL palatalization: Lat. SCANDŬLA > OSp. *escaña*. /ɲ/ is the typical outcome of /ng(V)l/ in Old Spanish. For this reason, the alteration or analogical process /d(V)l/ > /gl/ could be hypothesized, similar to change Lat. /t(u)l/ > Late Lat. /kl/. Instances of /d(V)l/ (with OL palatalization) are scarce, which might have also promoted analogy to a more common OL cluster.

2.4.2.7. Summary

This section reviewed the evidence of OL palatalization in the different OL clusters that was gathered in the historical wordlist. Table 2.15 summarizes these findings: strong evidence of OL palatalization is indicated with "+", sparse evidence is indicated with "+?", inconclusive evidence is marked with "?", and lack of evidence is marked by "-". "NA" indicates that an OL cluster in a specific position within the word was not included in the wordlist. Cluster configurations that are not attested in the dataset in Appendix A, such as /f(V)l/, are not included in Table 2.15.

Evidence of OL palatalization was scarce for some OL clusters in some positions within the word. Nevertheless, the data suggests that /pl fl kl/ underwent OL palatalization in practically all OL cluster configurations: the present historical evidence strongly supports OL palatalization in word-initial and postconsonantal /pl fl kl/ and weakly supports, i.e., the number of examples with OL palatalization is scarce, OL palatalization in postvocalic /p:l f:l k:l/ and /p:(V)l k:(V)l/. No examples of an etymon containing /f:(V)l/ were found. However, it could be assumed that /f:(V)l/ would have palatalized like /p:(V)l k:(V)l/ because OL clusters with voiceless obstruents usually patterned together, i.e., they underwent the same evolutions and resulted in the same outcomes. As a result, it could be assumed that /f:(V)l/ also underwent OL palatalization. OL palatalization in /k:l/ could be assumed on similar grounds: the wordlist features one single example of OL palatalization in /k:l/ but several of /p:l f:l/ and /k:(V)l/.

In secondary O(V)L clusters with a short obstruent, both postvocalically and postconsonantally, and in primary postvocalic OL clusters, evidence of OL palatalization was found only in /kl k(V)l/; on the one hand, no etyma containing /f(V)l/ are included in the wordlist and there are no examples of etyma containing postvocalic /fl/ that underwent OL palatalization; on the other hand, only one inherited word was found with OL palatalization in /p(V)l/ and none in postvocalic /pl/. OL palatalization in Lat. CAPŬLUM > GP *cacho* can be explained due to gemination of /p/ or due to analogy to /kl/. Since evidence was found only for postvocalic /kl/ and /k(V)l/, it would be premature to propose that /pl p(V)l fl f(V)l/ underwent OL palatalization in these positions.

Table 2.15.: Evidence of OL palatalization in Galician-Portuguese and Old Spanish for the cluster configurations attested in the compiled historical dataset

	/pl/	/p:l/	/p:(V)l/	/p(V)l/	/fl/	/f:l/	/kl/	/k:l/	/k:(V)l/	/k(V)l/	/bl/	/b(V)l/	/gl/	/g:l/	/g(V)l/
Word-initial	+	NA	NA	NA	+	NA	+	NA	NA	NA	-	NA	-	NA	NA
Postconsonantal	+	NA	NA	-	+	NA	+	NA	NA	+	NA	-	NA	NA	+
Postvocalic	-	+	+?	-	-	+	+	+?	+	+	?	?	-	?	+

Contrary to OL clusters with voiceless obstruents, OL clusters with voiced obstruents rarely underwent OL palatalization. The evidence of OL palatalization in /bl/ is marginal, with one example for /bl/ and five for /b(V)l/. OL palatalization in these examples could be due to several factors: in the case of the (Old) Spanish, the inherited words could be borrowings from neighbouring dialects; in the case of Galician-Portuguese, OL palatalization in /bl b(V)l/ could be due to analogy to /k(V)l g(V)l/, which were more common sequences than /b(V)l/ in Latin.

Appendix A provided evidence of the regular OL palatalization of /g(V)l/. In contrast, no traces of OL palatalization were found in /gl/. The corpus does not include any inherited words with postconsonantal /gl/ or postvocalic /g:(V)l/ and only one etymon with /g:l/: this etymon, Lat. sŭgglŭttĭum, underwent OL palatalization in Spanish but not in Galician-Portuguese. The outcomes in GP *saluçadas* and OSp. *solloços* could also be explained by assuming an assimilation of /g/ to /l/. The resulting /l:/ would have subsequently undergone degemination in Galician-Portuguese (Lat. /l:/ > GP /l/) and palatalization in Old Spanish (Lat. /l:/ > OSp. /ʎ/). Accordingly, OL palatalization in Lat. sŭgglŭttĭum may be an exception, caused by assimilation of the velar stop to the lateral, and not an indication that /g:l/ indeed palatalized. Concerning OL clusters with C_1 /t d/, historical evidence suggests that /t(V)l d(V)l/ changed into /kl gl/ before undergoing OL palatalization. According, it cannot be concluded that /t(V)l d(V)l/ directly palatalized.

The historical corpus confirms earlier descriptions of the distribution of OL palatalization. Additionally, it introduces new evidence for the palatalization of several OL clusters not previously documented in the literature, specifically postvocalic /kl/, /k:(V)l/, and perhaps /p:(V)l/.

2.4.3. The (ir)regularity of OL palatalization

Table 2.16 shows the total number of inherited words in Galician, Portuguese and Spanish included in the dataset, together with the number of words per language that underwent OL palatalization. In addition, the percentage of OL palatalization per language is also provided.[16] In total, 57.72% (n = 273) of the Galician, Portuguese and Spanish native words in

[16]Galician-Portuguese inherited words are included in both the Galician and Portuguese total number of tokens. Consequently, 227+219 is not the total number of Galician-Portuguese, Galician, and Portuguese inherited words contained in the corpus. After excluding inherited words with an uncertain etymology and (possible) borrowings, the number of inherited words analysed in the results section came to 473. Of these, 250 have a Galician-Portuguese, Galician, or Portuguese origin. The structure of Table 2.16 is intended only for visualization purposes.

this wordlist underwent OL palatalization, which also implies that approximately 40% of the tokens (n = 200) did not.

Table 2.16.: Percentage of inherited words with OL palatalization in Galician, Portuguese and Spanish.

Language	OL palatalization tokens	Total tokens	Percentage OL palatalization
Galician	135	227	59.5
Portuguese	125	219	57.1
Spanish	125	223	56.1

This section seeks to explain the lack of OL palatalization in these words by delving into their origin, evolution, and meaning. It should be noted that the absence of OL palatalization may have been influenced by multiple factors. The evidence shown in Section 2.4.2.3 and Section 2.4.2.1 pointed to two facts: on the one hand, the low proportion of native words exhibiting OL palatalization of /bl/ suggests that /bl/ was not targeted by this sound change; on the other hand, evidence of OL palatalization was only found for secondary /g(V)l/, while only one isolated inherited word showed traces of it in primary OL clusters. The few examples showing palatalization of /bl b(V)l g:l/, e.g., Lat. SŬGGLŬTTĬUM > OSp. *solloços or* Lat. TRĪBŬLUM > GP *trilho*, can be explained by assimilation of the stop to the lateral or by analogy to /g(V)l/. Consequently, native words with /gl/ and with /bl b(V)l/ did not undergo this sound change, likely because these OL clusters were not targeted by it. The dataset includes 73 such words. In Section 4.4.1 and Section 4.4.5, I argue that the absence of OL palatalization in primary /gl bl/ is primarily related to the chronology of the sound change.

In a similar manner, the dataset in Appendix A features only one lexical item with traces of OL palatalization in /p(V)l/. Section 2.4.2.5 discussed the possibility that OL palatalization in Lat. CAPŬLUM > GP *cacho* was caused either by gemination of /p/ prior to OL palatalization or by analogy to Late Lat. *CAPPŬLA > GP *cachas*. Additionally, several inherited words with OL palatalization were provided, where an original sequence /p(V)l/ became /kl/, e.g., Lat. MANĬPŬLUS > Late Lat. MANŬCŬLUS > OSp. *manojo.* Since isolated popular words showing traces of OL palatalization of /p(V)l/ can be explained on analogical grounds, the historical evidence suggests that etyma with /p(V)l/ were either resistant to OL palatalization or not targeted by it. The wordlist contains 11 tokens from /p(V)l/ that did not palatalize.

In connection with the lack of OL palatalization in /bl/, the corpus features several native words, in which /pl/ did not undergo OL palatalization but stop voicing: Lat. DŬPLĀRE > GP *dobrava* and OSp. *doblado*, Lat. DŬPLUS > OSp. *doblo* and GP *dobro*, Lat. DŬPLĬCĀRE > OSp. *doblegela*, Lat. TRĬPLUS > OSp. *treble.* I suggested in the previous paragraphs that /bl/ was not targeted by OL palatalization. Consequently, lenition or stop voicing may have prevented OL palatalization from affecting postvocalic /pl/. However, this hypothesis is only possible if lenition affected clusters before OL palatalization did, which would imply that lenition predated or coexisted with OL palatalization. Section 4.3.2 and Chapter 4 discuss the relative chronology of lenition and OL palatalization.

In the case of secondary O(V)L clusters, lack of syncope would have prevented the formation of OL clusters, effectively blocking OL palatalization. The absence of syncope could be influenced by multiple factors: first, an etymon could have been introduced in the language when syncope was no longer an active sound change; second, syncope may not have affected all inherited words or a particular language variety may have had a tendency to preserve unstressed vowels. The historical wordlist includes multiple inherited forms that did not undergo syncope: Lat. CAUPŬLUS > OSp. *cópano,* Late Lat. *EXCAPULĀRE > OSp. *escabollirse*, Late Lat. DIABOLUS > GP *diaboo*, Lat. MESPILUM > GP *nespereyra* and OSp. *nisperos*, Lat. MOBILIS > GP *mouil*, Lat. NEBULA > GP *névoa*, Lat. NUBILUS > Pt. *núvia*, Lat. NUBILĀRE > Pt. *nuveado*, Lat. PARABOLA > GP *paravoa* (see *palavra* (GP) in Appendix A), Late Lat. POPULĀRE > GP *povoar* or *povorar* (see *pobrou* (GP) in Appendix A), Lat. POPULUS > GP *poboo*, Late Lat. *REPULUM > Gal. Pt. *rêbo*, Lat. SIBILĀRE > GP *asubiar* (see *silvar* (GP) in Appendix A), Lat. TABULA > GP *tavoa* or *taboas*, Lat. TABULĀTUM > GP *tauoado*, Lat. AMYGDALA > GP *damendoas*, Lat. BACULA > Gal. *bágoa*, Lat. BACULUM > GP *bagoo*, Lat. GLANDŬLA > GP *landoas*, Lat. MACULĀRE > GP *magoasse*, Lat. PERICULUM > GP *perigo* or *prigoo* (also *perigros*), Lat. PORTULĀCA > Pt. *verdoega* (or *beldroega*), Gal. *verdoaga*, and OSp. *verdolaga*, Lat. SPATULA > GP *spadoam*, Lat. TITULUS > GP *tidoo*, and Lat. VINCULUM > GP *vinqu* (also *brinco*). Most of these examples are of Galician-Portuguese origin, which may indicate this language tended to preserve unstressed vowels. This observation has often appeared in the literature (Williams 1962: 4, 53; Lloyd 1987: 200; Weiss 2009: 511) (cf. Section 4.3.1).

Another explanation for the lack of syncope is a later introduction of the etyma into Galician-Portuguese, at a time when syncope was no longer an active sound change. However, many of the inherited words without syncope must have been borrowed very early because they underwent not only voicing of /p t k/ but also spirantization of /b/, e.g., Lat. PARABOLA > GP *paravoa* or Lat. NEBULA > GP *névoa.* The spirantization of /b/ and the subsequent merge of Lat. [w] and [b] into [β] is attested as early as the 1st century CE. This merge is reflected in the corrections of the *Appendix Probi*: "*vapulo, non baplo*", "*baculus, non vaclus*" (cf. FF: 375-6; CRC: 127-31) (cf. Section 4.3.2.2).

Liquid dissimilation and assimilation and liquid metathesis might have also prevented OL palatalization (cf. Section 2.4.1.2). The examples contained in the compiled wordlist of such a process are: Late. Lat. *AMYNDŬLA < Sp. *almendra*, Lat. *ANĒTHULUM > OSp. *aneldo*, Lat. BACULUM > OSp. *blago* , Ofr. *boucle* > OSp. *bloca* and GP *broca*, Lat. CAPITULUM > OSp. *cabildo*, Late Lat. FOLIĀTILIS > OSp. *hojalde* (or *hojaldre*), Lat. FURUNCULUS > OSp. *floronco,* Lat. MIRACULUM > OSp. *miraclo* or *milagro* and GP *miragre* or *milagre*, Lat. PARABOLA > OSp. *palabra* and GP *palavra* (also *paravras*), Lat. PERICULUM > OSp. *peligro* (also *periglo* or *perigro*), Lat. SIBILĀRE > OSp. *silvos* and GP *silvar*, Lat. SPATULA > OSp. *espalda*, Lat. SPICULUM > OSp. *espligo*, Lat. TĬTŬLUS > OSp. *tilde* (which could also be a Cat. borrowing), Lat. TUBULA > Sp. *tolva*, and Lat. VINCULUM > GP *brinco* (see *vinqu* (GP) in Appendix A) and Ast. *blincu*, Lat. BIBLIA > GP *briuia* (or *Bibria*), Lat. BLITUM > *beldro*, Arab. *díflà* > OSp. Pt. *adelfa*, Late Lat. *OBLITĀRE > OSp. *olvidar*, and Lat. PUBLICUS > GP *puluega* (also *pobligo*) and OSp. *púlvego* (see *publigo* (GP) in Appendix A). Liquid (dis)assimilation could also trigger the formation of OL clusters in (Late) Lat., e.g., Lat. (IN)VOLŪCRUM > (IN)VORŪCLUM or (IN)VOLŪCLUM > GP *envurullar*, *embrulho* and OSp. *burujo* or Lat. FRAGRĀRE > Late Lat. FLAGRĀRE > GP *cheyra*.

The absence of OL palatalization could have also been caused by later introduction of a word into the language. Table 2.17 presents Galician, Portuguese and Spanish[17] inherited words grouped by the etymon's language of origin and by the presence ("+") or absence ("-") of OL palatalization. The majority are of Latin origin and exhibit the presence and absence of OL palatalization. There is also one instance of OL palatalization in a Gaulish etymon, which predates Latin influence, and two inherited words with an unknown origin. In etyma from other (chronologically later) origins, i.e., Arabic, Germanic and Gothic, Old French and Occitan, the wordlist includes no evidence of OL palatalization.

Table 2.17.: Number of Galician- Portuguese and (Old) Spanish inherited words grouped by the language of origin of the etymon and by the status of OL palatalization.

Etymon origin	Palatalization status	Number of tokens
Arab.	-	4
Gaul.	+	1
Germ.	-	2
Got.	-	2
Lat.	-	144
Lat.	+	185
Lat.	?	3
Late Lat.	-	39
Late Lat.	+	85
Late Lat.	?	2
OFr.	-	2
Occ./Prov.	-	2
u.o.	+	2

The inherited words from etyma of Arabic, Germanic and Gothic, Old French and Occitan origin, are the following: OSp. GP *frasca* (< Got. *flâsko*), OSp. *blanco* and GP *branca* (< Germ. *blank*), OSp. GP *brial* (< Occ./Prov. *blial(t)*), OSp. *bloca* and GP *broca* (< OFr. *boucle*), OSp. Pt. *adelfa* (< Arab. *díflà*), and OSp. *azetrelio* and GP *acetres* (< Arab. *saṭl*). With the exception of Pt. *adelfa* (18th century) and GP *frasca* (15th century), all other inherited words are attested between the 11th and the 14th centuries and appear to be relatively old words, despite originating from Arabic, Germanic, or neighbouring Romance varieties. This is confirmed by the attestation date of 69% of the inherited words included in the dataset, which are also attested between these centuries. Although attested in the same centuries as the Latin etyma, the Germanic, Arabic and Romance etyma likely entered the language later, when the initial stages of OL palatalization were no longer productive.

[17]When grouping the inherited words by language, Galician-Portuguese words count for both Galician and Portuguese, i.e., inherited words labelled as Galician-Portuguese (GP) were later labelled as both Galician and Portuguese.

In a similar way, several inherited words of Latin origin might have been late borrowings or (semi-)learned words, which were introduced later into the Ibero-Romance languages. In general terms, learned words are borrowings, i.e., words that were borrowed tipically through writing (Penny 2002: 39). Learned words did not undergo regular sound changes and were only minimally modified, e.g., Lat. GLŌRĬA > OSp. *glorias*, GP *groriosa.* In contrast, semi-learned words were orally transmitted, like inherited words, but were subsequently reshaped under Latin influence, especially in registers such as religion and legal language (ibid. 40).

Examples of possible (semi-)learned words included in the corpus are (cf. the given inherited words in Appendix A): Lat. AFFLIGĔRE > OSp. *afreído* (perhaps also GP *affrigir*) and Lat. AFFLICTIO, -ŌNIS > OSp. *afreícion* (perhaps also GP *affricones*), Lat. ANGŬLUS > OSp. *anglo*, Lat. CLĀRĬTĀS > OSp. *claridad* and GP *craridade*, Lat. CONCLŪDĔRE > OSp. *concluida*, Lat. EXCLŪDĔRE > GP OSp. *excludir*, Lat. INCLŪDĔRE > OSp. *encloír*, Lat. ECLIPSIS > Sp. *cris* and GP *crys*, Lat. *EXPLICITĀRE > GP *espreita* (which could also be a Prov. borrowing, see *espreita* (GP)), Lat. FĬSTŬLA > Sp. *fistra*, Lat. FLĂCCUS > GP *fraco* and OSp. *flaco*, Lat. LĬGŬLA > OSp. GP *legra* (liquid dissimilation may have also played a role), Lat. CLOĀCA > OSp. *cloaga* (/l/ metathesis may have also play a role, as *colaga* is also used in Salamanca and in the Portuguese region of Trás-os-Montes, see *cloaga* (OSp.) and *colaga* (Pt. Trasm.)), Lat. MĪRACŬLUM > OSp. *miraclo* and GP *miragre*, and Lat. TĔMPLUM > OSp. *tiemplo* and GP *tenpro*. These words show regular sound changes in Old Spanish and Galician-Portuguese, such as dipthongization (Lat. TĔMPLUM < OSp. *tiemplo*), stop voicing (Lat. CLOĀCA > OSp. *cloaga*) and voiced stop loss (Lat. INCLŪDĔRE > OSp. *encloír).* In contrast, none exhibit OL palatalization.

Related to (semi-)learned words are inherited words that exhibit a learned or conservative evolution - without regular sound changes - even though they cannot be considered borrowings or learned words. A conservative evolution, or the dominance of a more conservative form over a popular variant, may have reflect the influence of various factors: social, legal, religious or political associations tied to the word's meaning, or contact with neighbouring linguistic varieties where OL palatalization did not occur.

Lexical items included in the etymological corpus that might belong to these categories are the following: Late Lat. CLĒRĬCUS > OSp. *clerigo* and GP *crego* (see *clerigo* (OSp.) and *crego* (GP) for other forms with liquid metathesis), Late Lat. ECLĒSĬA > GP *egleja*, OSp. *eglesia*, perhaps also Lat. EC(C)LESĬŎLA > GP *ygreioa* and Late Lat. FĪLIUS E(C)CLĒSIAE > GP *feegres* and OSp. *feligres*, Lat. PLACĒRE > OSp. *plazer* and GP *prazer*/*prouguer*, Lat. PLACĬTUS > GP *prazo* and OSp. *plazo*, Late Lat. *PLATTĔA > GP *praça* and OSp. *plaza*, Lat. FLŬXUS > GP *froixo* and OSp. *floxo*, Lat. SAECŬLUM > OSp. *sieglo* and GP *segre* (currently *século* in both Galician and Portuguese), and Lat. SAECŬLĀRIS > OSp. *seglar* and GP *segrares*, Lat. CLĀRUS > OSp. *claro* and GP *craro*, Lat. CLĀVUS > OSp. *clavos* and GP *cravo*, perhaps also Late Lat. CLĀVĀRE > GP *crauar* and OSp. *clava*, Lat. EXĔMPLUM > OSp. *enssiemplo* and GP *exempro*, Lat. *FLŌRĒRE > OSp. *florido*, Lat. FLŎCCUS > GP *frocos* and OSp. *flueco*, Late Lat. MĬSCŬLĀRE > OSp. *mezclados* and GP *mezcrar*, Lat. MŪSCŬLUS > GP *musclo* (also *musgoo* and currently *músculo* in both Galician and Portuguese), Lat. COMPLĒRE > GP *comprir* and OSp. *cumplir*, Lat. PLŪMA > GP *prumas* and OSp. *pluma*, and Lat. VĬNCŬLUM > OSp. *vinclo*. In the case of OSp. *playa* and GP *prayas* (< Late Lat. PLAGĬA) and GP *empreita* (< Lat. PLĔCTA), Mozarabic influence is probable.

The prevalence of conservative forms over popular forms is supported by historical evidence. The Galician, Portuguese and Spanish vocabulary comprises words without traces of OL palatalization, even though forms with OL palatalization are attested in previous centuries. Two known examples are Lat. PLANTĀRE > Sp. Gal. *plantar* 'to plant' and Lat. FLŌS > Sp. Gal. *flor* 'flower': while these words have been used since the Middle Ages, there is ample evidence of forms with OL palatalization, such as Gal. Pt. *chatage(m)*, GP *chantou*, OSp. *llantar*, OSp. *llantas*, OSp. *llanten*, GP *Chorente*, and OSp. *llor* (see in Appendix A). These words are semantically related to agriculture, so they would have been expected to have preserved their popular evolution. Instead, they were replaced by more conservative forms. Further examples of the prevalence of conservative forms are Lat. SŬFFLĀRE > OSp. *sollar* but currently Sp. *soplar* and Lat. PLANGĔRE > OSp. *llañer* but currently Sp. *plañir.* In the case of Late Lat. GĔNŬCŬLUM > OSp. *inojos*, the word was still used in the 16th century but was later replaced by Sp. *rodilla,* which came from Late Lat. ROTELLA (cf. DCECH: hinojo II/rueda; DRAE: rodilla; REW: 7389).

Additionally, the wordlist features multiple examples of the coexistence of popular words with and without OL palatalization within the same lexical family. Compare, for instance, Lat. PLŪMA > GP *prumas* and OSp. *pluma* with Lat. PLŪMĀCIUM > GP *chumaços* and OSp. *llumazos,* Lat. CLĀVUS > OSp. *clavos* and GP *cravo* with Lat. *CLĀVARIA > GP *chaveiro*/a, Lat. ANGŬLUS/A > OSp. *anglo* with Lat. ANGŬLA VĔTŬLA > Sp. *Añavieja*, Lat. COMPLĒRE > GP *comprir* and OSp. *cumplir* with Lat. ĬMPLĒRE > GP *encher* and OSp. *inchámoslas.* The same etymon occasionally resulted in forms with and without OL palatalization, e.g., Lat. PLĀNUS > Sp. *llano/plano*, and Lat. ARTĬCŬLUS > Sp. *artejo*/*artículo* (cf. *llano* (OSp.) and *artejo* (OSp.) in Appendix A). The divergent evolution of these cognates may reflect either differing periods of introduction for the etymon, or the coexistence of a conservative and a popular variant of the same lexical item.

Notably, inherited words that do not exhibit OL palatalization in Galician, Portuguese or Spanish, may show traces of it in other Ibero-Romance varieties, such as Asturian or Ribagorçan Aragonese: Lat. INCLŪDĔRE > OSp. *encloír,* Lat. CONCLŪDĔRE > OSp. *concluida*, Lat. EXCLŪDĔRE > OSp. *excludir* but Lat. CLAUDĔRE > Ast. *enlloer* (see also *choyr* (GP) in in Appendix A) and Lat. CLAUSA > Ast. *llosa*, Germ. *blank* > OSp. *blanco* and GP *branca* but Rib. Arag. *bllanco*, Lat. CLĀRUS > OSp. *claro* and GP *craro* but Rib. Arag. *cllaro*, and Lat. COMPLĒRE > GP *comprir* and OSp. *cumplir* but Rib. Arag. *cumpllir.*

The reasons behind the absence of OL palatalization in several inherited words are unclear. For example, there were several instances of the change Lat. /ng(V)l/ > (O)Sp. /nd/, e.g., Late Lat. *CONJŬNGŬLA > OSp. *coyunda*, Lat. SĬNGŬLUS > OSp. *sendos* (but also *seños*, see. *seños* (OSp.)), and Late Lat. *SPONGULA > Sp. *espundia* (cf. *coyunda* (Sp.) in Appendix A). The motivation for this change is unclear but it could be related to a different chronology of change (cf. Gutiérrez 2018: 410-12). Alternately, Lat. /ng(V)l/ > (O)Sp. /nd/ could be the result of the elision of the velar C_2 and the subsequent strengthening of the lateral: Lat. /ng(V)l/

>/ngl/ > /nl/ > (O)Sp. /nd/ (ibid.). Similarly, in OSp. *muslo* (< Lat. MŪSCŬLUS), the deletion of the second member in the three consonant cluster might be attributed to gestural incompatibility and the difficult transition between the production of adjacent heterorganic segments (Recasens 2014: 158). OSp. *cerceta* (< Late Lat. CĔRCĒDŬLA) is thought to have undergone a suffix change and the lack of OL palatalization in GP *badalo* (Late Lat. *BATUĀCŬLUM) could be due to the preservation of the unstressed vowel or to analogy to *batala*. The outcome /l/ in OSp. *lancha* (Late Lat. *PLANCŬLA) has been explained as the result of the dissimilation of /ʎ/ due to the following /t͡ʃ/ (cf. Appendix A) . Therefore, /pl/ in this item might have undergone OL palatalization.

No account of the lack of OL palatalization was found in the literature for several inherited words. /l/ in GP *saluçadas* (< Lat. SŬGGLŬTTĬUM) could be attributed to the assimilation of the velar to the following lateral. The resulting geminate /l:/ would have regularly undergone degemination (cf. Section 2.4.2.3). Lastly, the following inherited words without traces of OL palatalization may have been later borrowings or conservative forms: Pt. *emdro* (< Lat. *ANĒTHŬLUM) (cf. OSp. *aneldo* < Lat. *ANĒTHŬLUM) , GP *simpriz* (< Lat. SĬMPLEX-ĬCIS) (cf. OSp. *simple* < Lat. SĬMPLUS), GP *soprar* (< Lat. SŬFFLĀRE) (cf. OSp. *sollar* < Lat. SŬFFLĀRE) and GP *enpregar* (< Lat. ĬMPLĬCĀRE) (cf. GP *achegar* < Lat. APPLĬCĀRE or GP *chegou* < Late Lat. PLĬCĀRE).

In conclusion, the lack of OL palatalization in Galician, Portuguese and Spanish word could be the result of multiple factors, which are summarized in Table 2.18. A particular OL cluster, such as /bl gl p(V)l/, might not have been targeted by OL palatalization. The preservation of the unstressed vowels would have prevented the formation of OL clusters, effectively blocking OL palatalization. Irregular sound change processes such as liquid (dis)assimilation and lateral metathesis might have also promoted the absence of OL palatalization in some lexical items. Further factors are the later introduction of etyma of Latin and non-Latin origin into the language, the prevalence of a more conservative variant of a word, and the influence from Latin or from neighbouring language varieties.

Table 2.18.: Overview of the possible factors for the absence of OL palatalization in Galician-Portuguese and (Old) Spanish inherited words

Factors lack OL palatalization	Examples
Chronology	Lat. GLACĬĒS > GP *lazo*, Lat. GLATTĪRE > OSp. *latidos*, Lat. GLĪS, -ĪRIS > Gal. *leirón* and OSp. *lirón*
/bl/ (etymological or result of stop voicing)	Lat. BLANDUS > GP *brando* and OSp. *blando*, Lat. DŬPLĀRE > GP *dobrava* and OSp. *doblado*, Lat. DŬPLĬCĀRE > OSp. *doblegela*
Lack of syncope	Lat. POPULUS > GP *poboo*, Lat. TABULA > GP *tavoa* or *taboas*, Lat. GLANDŬLA > GP *landoas*, Lat. BACULA > Gal. *bágoa*
Metathesis	Lat. SIBILĀRE > OSp. *silvos* and GP *silvar*, Lat. CAPITULUM > OSp. *cabildo*, Lat. SPATULA > OSp. *espalda*

Liquid (dis)assimilation	Lat. PARABOLA > OSp. *palabra* and GP *palabra*, Lat. PERICULUM > OSp. *peligro* (also attested as *periglo* or *perigro*)
Etyma of non-Latin origin	Got. *flâsko* > OSp. GP *frasca*, OFr. *boucle* > Sp. *bloca* and GP *broca*
(Semi)-learned words	Lat. INCLŪDĔRE > Sp. *encloír*, Lat. CLĀRĬTĀS > Sp. *claridad* and GP *craridade*, Lat. ANGŬLUS > OSp. *anglo*
Prevalence of a conservative form	Lat. PLANTĀRE > Sp. *plantar* and Gal. *prantar* (attested as GP *chantou* and OSp. *llantar*), Lat. SŬFFLĀRE > Sp. *soplar* (attested as OSp. *sollar*), Lat. PLANGĔRE > Sp. *plañir* (attested as OSp. *llañer*)
Other/unclear	Late Lat. *CONJŬNGŬLA > OSp. *coyunda*, Lat. SŬGGLŬTTĬUM > GP *saluçadas*, Late Lat. CĔRCĒDŬLA > OSp. *cerceta*

In summary, the absence of OL palatalization can be generally accounted for, even though the specific reasons for its absence in some words remain unclear. This indicates that OL palatalization in Ibero-Romance may have not been an irregular process (at least in the OL clusters it targeted), even if it appears so from a synchronic perspective.

2.5. Discussion

The goal of this chapter was to go beyond traditional descriptions of OL palatalization, which are usually based on exemplary wordlists, by means of extensive diachronic corpus research. The compiled wordlist, which includes over 600 inherited Ibero-Romance words containing etymological OL clusters, gathers historical evidence on the conditions and outcomes of OL palatalization. Consequently, it provides a thorough description of the distribution and outcomes of OL palatalization in Ibero-Romance and allows the quantitative study of the irregularity of OL palatalization and the factors that might have contributed to it.

The previous sections reviewed common palatal and non-palatal outcomes of OL clusters (Section 2.4.1), the distribution of OL palatalization in Ibero-Romance (for which OL clusters there is evidence of OL palatalization) (Section 2.4.2), and the irregularity of OL palatalization and the factors that might have contributed to it (Section 2.4.3). This corpus-based analysis revealed several key findings. First, it provided new historical evidence of OL palatalization for postvocalic /kl/ and /pː(V)l fː(V)l kː(V)l/ clusters, which previous accounts had not described as undergoing OL palatalization. The new evidence for postvocalic /kl/ palatalization is particularly relevant, since it suggests a similar evolution between postvocalic /kl/ and /k(V)l/: both clusters resulted in Galician-Portuguese /ʎ/ and Old Spanish /ʒ/.

Second, further evidence of OL palatalization in postvocalic /pːl fːl kːl/ clusters was found. Third, the analysis identified that /kl/ is the only OL cluster that underwent palatalization in all cluster configurations, while palatalization in /pl fl/ was primarily found in primary clusters (word-initial and postconsonantal /pl fl/, and postvocalic /pːl fːl/), and palatalization

Table 2.19.: Update: The distribution and outcomes of OL palatalization in Old Spanish and Galician-Portuguese. New evidence is given in bold.

OSp.	/pl fl kl/	/gl/	/bl/	GP	/pl fl kl/	/gl/	/bl/
#OL-	/ʎ/	/l/	/bl/	#OL-	/ʧ/	/l/	/bɾ/
-COL-	/ʧ/	NA	NA	-COL-	/ʧ/	NA	NA
-VOL-	**/ʒ/ (/kl/)**	NA	NA	-VOL-	**/ʎ/ (/kl/)**	NA	**-**
-VO:L-	**/ʎ/**	**-**	NA	-VO:L-	**/ʧ/ (/pl fl/)**	**-**	NA
-VO:(V)L-	**/ʧ/ (/pl? kl/)**	NA	NA	**-VO:(V)L-**	**/ʧ/ (/pl? kl/)**	NA	NA
-CO(V)L-	/ʧ/ (/kl/)	/ɲ/	NA	-CO(V)L-	/ʧ/ (/kl/)	/nʎ/, /ɲ/	NA
-VO(V)L-	/ʒ/ (/kl/)	/ʎ/	-	-VO(V)L-	/ʎ/ (/kl/)	/ʎ/	-

in /gl/ proved even rarer (only found in secondary /g(V)l/ clusters). Fourth, the few words exhibiting palatalization of /bl b(V)l/ appear to be exceptions explicable by assimilation or analogy, suggesting clusters containing /b/ were not systematically targeted by palatalization. Table 2.19[18] updates the distribution and outcomes of OL palatalization shown in Table in 2.1 with the newly-found historical evidence.

These findings enabled a comprehensive account of the absence of OL palatalization in many Galician, Portuguese, and Spanish inherited words. Of 473 lexical items comprised in the corpus, approximately 58% exhibit OL palatalization. The discussion in Section 2.4.3 demonstrated that the absence of palatalization could be explained in the majority of cases through sound change processes such as labial stop voicing or lenition, liquid (dis)assimilation or lateral metathesis, or preservation of unstressed vowels, which prevented cluster formation. Additionally, it was argued that some OL clusters might not have met the conditions for triggering OL palatalization, such as /bl b(V)l/, /gl/ and /p(V)l/. A later introduction of the etymon into the language and the prevalence of a more conservative form over a popular variant are further factors that contributed to some words not exhibiting OL palatalization.

While this diachronic corpus research provides comprehensive historical evidence, an expansion of the corpus to include further Galician, Portuguese, and Spanish inherited words, would be beneficial. Additionally, the analysis of further Ibero-Romance varieties, such as Asturian, might provide further insights into the mechanism and development of OL palatalization. Similarly, a comparative analysis with other Romance varieties could further illuminate the pathways of this process.

Therefore, this chapter concludes that OL palatalization appears to have been a regular process in Ibero-Romance, although its absence in certain lexical items remains unclear. The

[18] # = a word-boundary, C = consonant; V = vowel; O: = long obstruent, - = insufficient or unclear evidence of OL palatalization or lack thereof, NA = unavailable historical evidence of the OL cluster or of OL palatalization.

possible factors behind the distribution of OL palatalization, the possible effects of lenition in the coarticulatory dynamics potentially leading to this sound change, and why it is rare in clusters such as /gl bl b(V)l p(V)/, are explored in Chapter 3 and Chapter 4.

3. Spanish OL clusters: an articulatory study

3.1. Introduction

In Section 1.3, the theories about the origin of OL palatalization were reviewed. The most widespread hypothesis proposes that this sound change began with the palatalization of the lateral segment, triggered by coarticulation or articulatory blending between the members of the clusters: the velar (C_1) and the lateral (C_2). Articulatory blending would not be possible between /p f b/ and /l/ because they involve different articulators; specifically, /p f b/ are articulated with the lips and /l/ with the tongue, making lingual coarticulation impossible.

Historical evidence supports these two claims: first, the outcome /Oʎ/ appears in several geographically independent Romance varieties; second, when a Romance variety exhibits OL palatalization, then evidence consistently appears in /kl gl/, but not necessarily in /pl fl bl/ (cf. Section 1.5). Yet, it remains unclear what this coarticulatory process entailed and whether it affected both consonants or only one of them. A deeper understanding of the production of C_1 and C_2 will shed light on the possible articulatory origin of OL palatalization, which will in turn inform the reconstruction of its diachronic pathways in Chapter 4.

The distribution and results of OL palatalization in Romance and, particularly, in Ibero-Romance were briefly reviewed in Section 1.2. Compared to other Romance varieties, Ibero-Romance shows irregular OL palatalization and diverse outcomes. Specifically, Ibero-Romance historical evidence suggests that OL palatalization was more likely to occur in clusters with voiceless C_1 (/pl fl kl/), than in clusters with voiced C_1 (/gl bl/). The analysis of the historico-etymological dataset compiled for this dissertation corroborated these results (cf. Section 2.4; Table 2.19). In addition, the corpus results suggested that the absence of OL palatalization in several OL clusters, such as primary post-vocalic /pl/ and word-initial /gl/, could have resulted from lenition processes.

Historically, lenition triggered /p t k/ voicing and /b d g/ spirantization, which sometimes resulted in deletion (cf. Section 4.3.2). Lenition processes regularly occurred postvocalically but not postconsonantally. However, word-initial position is not entirely impervious to lenition, since word-initial segments can also occupy postvocalic environments (cf. Hualde et al. 2011). Consequently, /g/ lenition would cause constriction loss postvocalically (and to a lesser extent word-initially), but not postconsonantally.

Based on previous work on this topic, García-Covelo (2020) suggested that cluster position within the word combined with C_1 voicing, which interact to cause lenition of the initial stop to an approximant, played a role in OL palatalization by potentially blocking it. Whether such an effect could have existed and its precise nature, however, have not been empirically studied. Therefore, better understanding the possible effects of C_1 voicing and position within the word on the production of OL clusters will provide information on the outcome diversity and the distribution of OL palatalization in Ibero-Romance. Both these factors are also crucial for reconstructing the evolutionary pathways that led to the outcomes of historical OL clusters in contemporary Romance languages (cf. Chapter 4).

Therefore, this chapter aims to study the articulatory synergies involved in OL cluster production and test whether the aforementioned theories have phonetic grounding. By means of Electromagnetic Articulography (EMA), this study seeks to answer the following questions:

1. Do the coarticulatory patterns between /k g/ and /l/ proceed in the direction of palatalization?
2. Do these coarticulatory patterns affect both C_1 and $C_{2,}$ or only one of them?
3. Are these coarticulatory patterns in the production of C_1 and C_2 affected by the voicing of C_1 and by the cluster position within the word?

3.1.1. A word on palatalization

As Bateman (2007) stated, many different processes are included under the cover term "palatalization" and there have been many different attempts to theoretically formalize this process. This is beyond the scope of this dissertation. This study works with a general definition of palatalization, which will provide information about the articulatory changes a segment must undergo to become palatalized.

Kochetov (2011: 1) defined palatalization as "[...] a phonological process by which consonants acquire secondary palatal articulation or shift their primary place towards or close to the palatal region." The palatal region can be defined as the region between the end of the alveolar ridge and the end of the hard palate (cf. Bateman 2007: 5). Palatalization can be generally separated into two categories, as the definition given by Kochetov (2011): full palatalization, where the original place of articulation changes to the palatal area, sometimes accompanied by a change in manner; and secondary palatalization, where the original place of articulation does not change but a secondary constriction in the palatal area is gained.

The changes needed for a segment to palatalize depend on the place of articulation of that segment or target: velar palatalization involves fronting of the closure location, while palatalization of dentoalveolar segments primarily involves backing (cf. Bateman 2007: 6-8; Recasens 2020b: 8, 22). In an EMA study comparing Russian non-palatal and palatalized laterals and rhotics, Kochetov (2005) showed that, at the time point of release of the tongue tip constriction, the tongue blade posterior sensor[1] was significantly higher in /l^j/ than in /l/. The differences in the horizontal dimension were speaker-specific: at tongue tip constriction release,

[1]The EMA experiment conducted by Kochetov (2005) also employed four tongue sensors. Kochetov's third sensor from the tongue tip, termed the "tongue body" sensor, corresponds to what this dissertation calls the "tongue blade posterior" sensor (cf. Figure 3.1). To maintain terminological consistency, this dissertation uses "tongue blade posterior" when referring to Kochetov's "tongue body" sensor.

the tongue blade posterior for /l^j/ was more backed in some participants and more fronted in others compared to its position in /l/. At the point of maximum constriction, the tongue tip gesture for /l^j/ was higher and more backed than for /l/, which Kochetov (ibid., 6-9) explained as the result of the tongue blade posterior raising.

In summary, secondary palatalization in dentoalveolar laterals is characterized by a higher tongue blade posterior, perhaps also a more backed and higher tongue tip in clusters compared to singleton /l/. Full lateral palatalization results in a more posterior closure, involving the tongue blade posterior (perhaps also the tongue blade anterior), rather than the tongue tip (cf. Ladefoged & Maddieson 1996: 188-9; Zampaulo 2019a: 31). For velar palatalization, a more anterior closure is expected, involving both the tongue blade posterior and tongue back since these regions cannot move independently of each other (cf. ibid., 11).

3.1.2. The articulation of velars, laterals, and OL clusters

Articulatory studies on Spanish are scarce overall, including research on the articulation of velars and laterals both as singletons and as members of OL clusters.

Proctor (2009: 84-108) described the phonetic properties of liquids using experimental data from Spanish and Russian. For Spanish, he provided ultrasound data from five Spanish speakers and TADA (TAsk Dynamic Application) simulations based on the recorded data. The recordings included words containing singleton /l d n r ɾ t/ in different onset and coda positions across five different vocalic environments. Results showed that /l/ was more resistant to vocalic coarticulation than /d/; although there was variation in the dorsal movement of the lateral, the tongue tip movement remained stable across all vowel environments. Additionally, the dorsal gesture at the midpoint of the lateral appeared to be higher in the vocalic context [ele] than in [ala], but not more fronted (ibid., 92).

Gibbon, Hardcastle, and Nicolaidis (1993) investigated the temporal and spatial aspects of lingual coarticulation in /kl k l/ using Electropalatography across six languages: English, German, French, Italian, Catalan, and Swedish. The target consonants were embedded in real words and non-words within four vocalic environments: /i_a/, /a_i/, /i_i/, and /a_a/. Across all languages, results showed that tongue placement was significantly more anterior in /k/ than in /kl/, which contradicts the expectations for velar palatalization (cf. Section 3.1.1). The more posterior production of the velar in /kl/ could be accompanied by a more anterior tongue placement of the lateral.

Despite the growing body of research on the nature of temporal overlap in consonant clusters, these studies do not shed much light on the possible causes of OL palatalization. Research has revealed that articulatory overlap in OL clusters varies by language, voicing and place of articulation of C_1, and, depending on the language, lexical stress. For instance, overlap increases when C_1 is voiced in Spanish (Gibson et al. 2019) but not in French (Bombien & Hoole 2013). In addition, overlap increases when C_1 is velar in German and French (ibid.), while it increases when C_1 is labial in Spanish (Gibson et al. 2019).

Bombien and Hoole (2013) compared the timing of word-initial /pl bl kl gl/ in German and French, without vowel or stress variation. Results showed that all French clusters exhibited a lag between both consonant plateaus, that is, the plateaus did not overlap. For German, it was found that the articulatory plateaus for /pl kl/ did not overlap, but the plateaus for /bl gl/ did. Furthermore, OL clusters with labials appeared to overlap less than clusters with velars in both languages.

Cunha (2015) compared the timing aspects of word-initial /pl kl pɾ kɾ/ in European and Brazilian Portuguese. /pl kl/ showed a high degree of temporal overlap in European Portuguese, and a much lower overlap in Brazilian Portuguese. The degree of temporal coordination between /kl/ and /pl/ was roughly equivalent, so place of articulation of C_1 did not affect overlap (nor did stress).

Gibson et al. (2019) examined the timing patterns of Spanish word-initial /p b k g/ + /l ɾ/ clusters. They concluded that all clusters showed a lag between the gestural plateaus of C_1 and C_2. Their data showed that Spanish labial clusters exhibit greater overlap than velar clusters and that voiced /gl bl/ overlap more than mixed-voiced /pl kl/. Thus, place of articulation and VOT affect overlap in Spanish. In contrast, vowel context and word frequency did not significantly affect overlap. It should be noted that voiced plosives in Spanish are subject to lenition in postvocalic position, even across word-boundaries (Hualde et al. 2011), and are therefore produced as fricatives or approximants. Gibson et al. (2019) did not mention voiced stop spirantization and how it affected the observed patterns, but Stiropoulou et al. (2020: 18) concluded that timing interval stability in OL clusters was not significantly affected by voiced stop lenition.

The above-mentioned studies are, however, restricted to temporal measures - the temporal lag between the achievement of each articulatory target - and they do not consider how the consonants in a cluster affect each other spatially, for instance in terms of a blended place of articulation. Similarly, these experiments were restricted to word-initial clusters, overlooking word-medial clusters, which are largely under-researched in the scientific literature. Given the possible role of cluster position within the word in the development of Ibero-Romance OL palatalization, it is important not only study word-initial clusters, but also to compare their articulatory dynamics word-initially and word-medially (after a consonant and after a vowel). Moreover, measurement heuristics and, thus, the definition of overlap may differ between these studies, making results difficult to compare (for a cross-linguistic comparison - not including Spanish - of the timing dynamics of word-initial (OL) clusters using previously recorded EMA data, see Pouplier et al. 2022).

Though less numerous, acoustic and perceptual accounts of OL palatalization are also found in the scientific literature. Müller and Mota (2009) compared word-initial /pl bl kl gl/ with word-initial /pj bj kj gj/ acoustically in Occitan and Catalan. Results showed that only /kl, gl/ and /kj gj/ resembled one another acoustically during the first few milliseconds of the sound, which would potentially lead to listeners confounding both sets of sounds. In addition, Müller (2011) proposed that OL palatalization in /kl, gl/ was rooted in perception, not in articulation. She suggested that the portion of the stop burst between the stop and the lateral was responsible for the perception of palatalization: the burst of voiceless stops, which requires substantial air pressure, would create turbulence or frication in the lateral. Since a part of the lateral would be devoiced - due to assimilation to the preceding voiceless stop - a lateral fricative would arise, which appears to have close acoustic resemblance to palatal, alveolo-palatal and (inter)dental fricatives.

This theory has not been empirically tested yet and recent studies have found conflicting evidence. For instance, Colantoni and Steele (2011) showed scarce lateral devoicing in Spanish and French, while Pouplier et al. (2022) showed that the articulatory plateau of the lateral was partially devoiced in /pl kl/. Furthermore, Müller's proposal suggests that the first step of the palatalization process was not the palatalization of /l/, which is still preserved in some Romance dialects (cf. Recasens 2020b and Section 1.5) and it is unclear how a lateral fricative or sibilant could become /ʎ/.

3.1.3. Working hypotheses

Given the historical evolutionary patterns, the previous literature on the production of OL clusters, the definition of palatalization, and the formulated questions, this study tests several hypotheses concerning three factors: complexity (cluster vs. singleton), voicing (voiceless stop vs. voiced stop) and the interaction between voicing and word position (word-initial, postconsonantal, and postvocalic). Complexity effects determine whether articulatory changes potentially causing velar and lateral palatalization occur in C_1 (/k g/) and/or C_2 (/l/). Voicing effects and their interaction with cluster position can modify these observed patterns.

1. Complexity effects

OL palatalization has traditionally been attributed to coarticulation. However, whether coarticulatory dynamics affected both consonants or only the lateral remains unclear. Secondary lateral palatalization involves tongue blade posterior raising (cf. Kochetov 2005), while full lateral palatalization involves backing of the closure location. This closure location backing could be achieved by the tongue blade anterior and/or tongue blade posterior (Section 3.1.1). In contrast, velar palatalization is characterized by tongue blade posterior and tongue back fronting. If coarticulation indeed triggers OL palatalization, then:

- A higher tongue blade anterior and posterior position is expected during C_2 production in OL clusters compared to singleton /l/.
- A more fronted tongue back and tongue blade posterior position is expected during C_1 production in OL clusters compared to singleton /k g/.

2. Voicing effects

The distribution of OL palatalization in Ibero-Romance suggests that cluster palatalization was favoured when C_1 was voiceless. This pattern likely reflects the fact that voiceless stops, unlike voiced stops, did not undergo spirantization, which reduces the degree of constriction and could potentially have blocked OL palatalization (García-Covelo 2020).

If voicelessness indeed favoured palatalization, then the lateral should show a higher tongue blade anterior and posterior position in /kl/ than in /gl/, and the velar should show a more fronted tongue back and tongue blade position in /kl/ than in /gl/.

3. Interaction between cluster position and voicing

Historical evidence shows that /gl/ rarely underwent palatalization in Ibero-Romance. Word-initial /gl/ typically became /l/, again suggesting that lenition blocked palatalization. However, lenition varies across phonological contexts: postconsonantal position blocks lenition, while postvocalic position promotes it. Word-initial position generally disfavours lenition but can also be subject to it when preceded by a vowel.

If lenition affected the coarticulatory dynamics between C_1 and $C_{2,}$ this should manifest as a higher tongue blade anterior and posterior position during C_2 in postconsonantal /gl/ versus lower tongue blade sensors position in postvocalic /gl/. Similarly, a more fronted tongue back and tongue blade posterior position is expected during C_1 in postconsonantal /gl/ versus a more backed tongue blade position in postvocalic /gl/.

The effects of complexity should apply to the general process of OL palatalization in Romance, not only in Ibero-Romance. Given that the general trigger of OL palatalization was likely a Romance-wide event, understanding the role of coarticulation in this sound change and whether it affects C_1 and/or C_2 broadens our understanding of the process at a Romance level. The effects of cluster position within the word and of C_1 voicing, however, seem to play a special role in Ibero-Romance, as evidenced by the distribution of OL palatalization in these languages (cf. Table 1.1 and Table 2.19).

3.2. Experimental design

A Carstens AG501 3D electromagnetic articulograph (EMA) was used to record the movement of the articulators. To this end, sensors were adhered to different points in and outside the mouth. The EMA has nine transmitters that produce an alternating magnetic field. This magnetic field induces an alternating current in each of the sensors, which allows us to register the position of the sensors (Carstens Medizinelektronik GmbH). To register the movement of the articulators, on the one hand, and to correct head movement and to rotate the data to the occlusal plane in the post-processing, on the other hand, 13 sensors were used: four sensors in the tongue, one behind each ear, upper and low lips, maxilla and jaw, nose and two for the palate trace and occlusal plane.

The tongue sensors were placed equidistantly on the midsagittal plane of the tongue: the tongue back sensor (TB) was placed at the back of the tongue, where the tongue texture changes; then, the two sensors in the tongue blade followed, which will be referred to as anterior (closer to the tip, TM1) and posterior (closer to the back, TM2); the tongue tip sensor (TT) was placed a bit before the tongue tip, as not to impede the articulation of dental or alveolar segments. Figure 3.1 exemplifies the position of the mobile sensors (sensors placed on body parts that move, e.g., the tongue or lips).

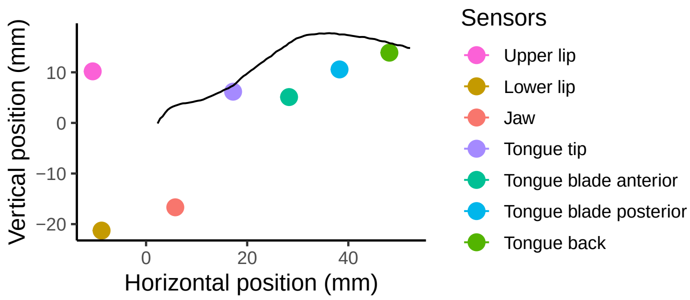


Figure 3.1.: Position of the sensors on mobile articulators compared to the palate contour. Speaker 2, second repetition of the word 'clava'. The sensor positions correspond to the point of maximum constriction of /k/.

The articulatory data were sampled at 1250 Hz and synchronized audio signal was recorded at the sampling rate of 25.6 kHz. Standard calibration and position recovery methods were used and, as part of position recovery, the signal of the sensors placed in the tongue back, tongue blade anterior and posterior, jaw, and upper and lower lip was low-pass filtered with a cut-off frequency of 20 Hz. The TT sensor was filtered at 40 Hz and the reference sensors (maxilla, nose, head left, head right, and the occlusal plane sensors) were filtered at 5 Hz. The velocity signals of all time series were smoothed at 24 Hz with a moving average filter.

To filter out the head movements of the participants from the articulatory data, the head correction was performed using several static sensors as references: for this experiment, the sensors in the occusal plane together with the nose sensor were used. As the nose sensors allows for a more variable positioning than the maxilla sensor, some variation in the data was not filtered out. For this reason, the distribution of the raw data is often multimodal, i.e., it is not normally distributed and shows several peaks, especially in the horizontal axis.

Standardizing the data or performing a statistical analysis with speaker as random factor, eliminates those articulatory differences. Consequently, the standardized data and the model residuals are normally distributed (cf. Section D.4). Figure 3.2 gives one example comparing the distribution of the raw, standardized and centred data. However, the multimodal distribution not only reflects the anatomical differences between speakers, which can be seen across all sensors; multimodality may also reflect the changes in the height of the sensors during the production of/g/ due to the effect of lenition.

Articulography data were collected for ten native speakers of Peninsular Spanish. Participants were selected according to the following criteria: (1) In case of bilingualism, the dominant language must be Spanish; (2) Absence of non-standard productions such as velarized /l/ or consonant lenition in syllable final position; (3) Spanish must be regularly (daily) used; (4) They must not have been living in Germany for longer than 1.5 years; (5). Knowledge of German should not surpass the C1 level. The participants were asked to fill a questionnaire

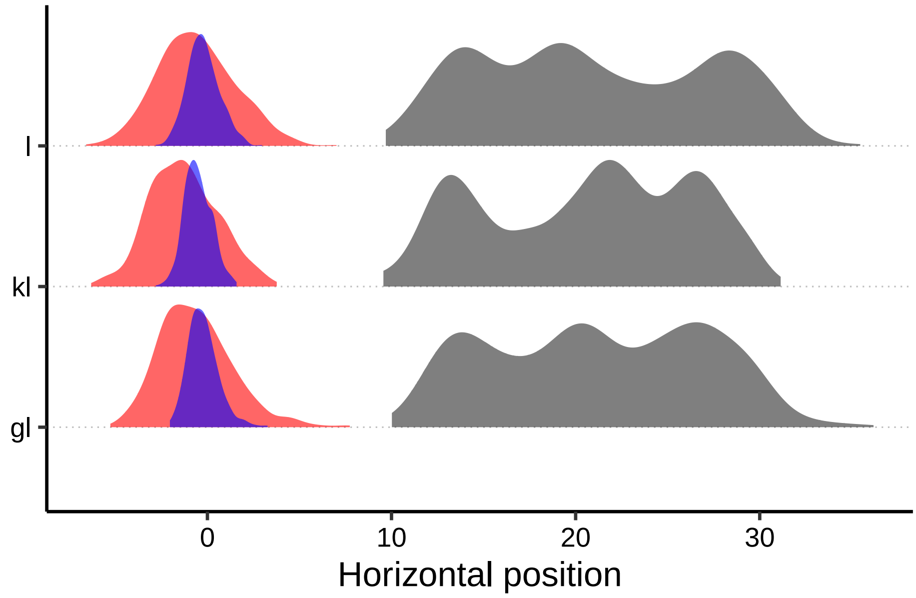


Figure 3.2.: Distribution of the raw data (grey) compared to z-scored (blue) and centered data (red) of the tongue tip sensor during lateral production (horizontal position).

prior to the experiment to check these criteria. The participants came originally from Northern and Central Spain and, at the point of the experiment, their age ranged between 21 and 28 years old (mean = 25) and they had been between 2 and 24 months in Germany (mean = 8 months).

The experiment consisted of an elicitation task with the target stimuli embedded in the carrier phrase *Ahora diga X, por favor* 'Now say X, please'. The stimuli were presented using Matlab and the participants were asked to read the sentence with the embedded token as displayed on the screen. Each token was repeated five times in a randomized order.

The stimuli (cf. Appendix C for the full list) mainly consisted of real Spanish words with complex onsets involving /pl fl bl kl gl/[2] in three positions within the word, i.e., word-initial, postvocalic and postconsonantal. In addition, these tokens had different lexical stress patterns: stressed, pretonic (the cluster syllable precedes the stressed syllable), and post-tonic (the cluster syllable follows the stressed syllable). To compare the effects of a cluster structure on both the obstruent and the lateral, simplex onsets in stressed position were also included in the experiment. Table 3.1 exemplifies the structure of the stimuli:

Several criteria were used for the selection of the stimuli to ensure homogeneity and reduce the risk of neighbouring segments, such as /i/ or /ɾ/, affecting the target cluster through coarticulation: (1) The vowel directly following and preceding the cluster should be /a/; (2) In postconsonantal position, the cluster should always be preceded by a nasal stop, which is homorganic with the following consonant in Spanish; (3) If possible, the syllables preceding and following the cluster should contain an /a/ and a labial obstruent to reduce coarticulation with the velar obstruents and the lateral.

[2]Stimuli containing all OL clusters (/pl fl bl kl gl/) were recorded. However, the analysis presented in this dissertation focuses on the clusters /kl gl/ and singleton segments /l k g/.

Table 3.1.: Example of stimuli structure for /kl/. Non-words are marked with asterisks, stressed syllables are marked with ('), and dashes indicate non-existent words.

	stressed	**pretonic**	**post-tonic**
word-initial	'clava	cla'vaba	-
	'cava		
	'lava		
postvocalic	a'clama	acla'maba	'macla
	a'caba		
	a'laba		
postconsonantal	en'clava/an'claba	encla'vaba/ancla'dero	**'pencla/'ancla

While the goal was to avoid using non-words, common words fitting these constraints were sometimes unavailable, especially for /gl/. Instead of including a rare word in the stimuli, which the participants may never have heard, several non-words were devised, which mimic real Spanish words and in which the phonological context could be easily controlled. The mixing of real and non-words should not affect the production of C_1 and C_2 since word frequency did not have a significant effect on timing variables in articulatory data on OL clusters in several languages, Spanish among them (Gibbon, Hardcastle, and Nicolaidis 1993; Gibson et al. 2019: 456). Note that in Table 3.1, there are two words per stress category in postconsonantal position: one with the low vowel /a/ and one with a non-low vowel /i e/. This is only the case for /kl/ and /gl/, so that clusters in different positions could be directly compared without /i e/ coarticulating with the velar. Postconsonantal words with a non-low vowel environment were initially chosen due to lexical availability reasons.

3.3. Methods

3.3.1. Data segmentation

The articulatory data were segmented using the Matlab analysis program Mview, which was provided by Mark Tiede (Haskins Laboratories). The Mview semi-automatic algorithms enable the computation of the time points of articulatory landmarks using the velocity profiles of the relevant sensors. For each sensor, several landmarks are determined based on absolute velocity values. The peak velocities of the constriction formation (maximum velocity during onset) and release (maximum velocity during offset) movements are calculated algorithmically. Using a 20% threshold of those velocity peaks, the onset of gesture, the target achievement and release, and the gesture offset are identified. The point of maximum constriction is defined as the point of minimum velocity (cf. Pouplier et al., 2022). Figure 3.3 illustrates the performed articulatory segmentation.

Following standard measurements in previous research (Pouplier et al., 2022; Bombien 2011; Chitoran, Goldstein, and Byrd 2002), two different methods were used to measure the

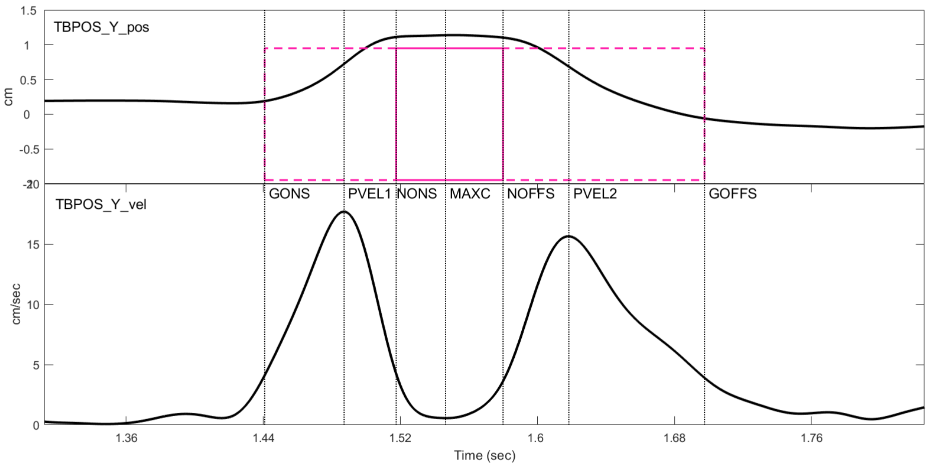


Figure 3.3.: Example of landmark segmentation. Top panel: tongue back vertical position; bottom panel: vertical velocity. Landmarks: onset of gesture (gons), constriction formation velocity peak (pvel1), target achievement (nons), point of maximum constriction (maxc), target release (noffs), constriction release velocity peak (pvel2), and offset of gesture (goffs). The solid pink box marks the articulatory plateau.

constrictions in the relevant segments: lateral sounds were segmented using the tangential velocity of the tongue tip sensor, i.e., the velocity components of both vertical and horizontal axes; and velar sounds were segmented using the vertical velocity of the tongue back sensor, i.e., the velocity signal from the vertical axis.

The effects of lenition hindered the segmentation of the velars, especially for /g/ in clusters.[3] While /k/ was minimally affected by voicing, /g/ was generally produced as an approximant or fricative in postvocalic position, including across word-boundaries. Since lenition caused a considerable reduction in velar constriction in postvocalic and word-initial /g/, the expected tongue back raising movement towards the velar region was often very small. Moreover, this small vertical movement was often accompanied by a prominent horizontal movement. The combination of these dynamics resulted in inaccurate velocity peaks that did not align with the acoustic signal. Consequently, neither the tangential nor the vertical velocity yielded meaningful articulatory landmarks for more than half of the /gl/ tokens.[4]

Due to the segmentation difficulties with lenited /g/, the first velocity peak of TT (during C_2)

[3] Interestingly, the segmentation of /g/ using the vertical velocity was not as problematic. While the word-initial /g/ tokens of two speakers could not be used, the semi-automatic landmark segmentation usually matched the acoustic signal. Even though the tongue back movement for /g/ was often tiny, the horizontal component present in /gl/ was mostly absent, which probably enabled a meaningful segmentation.

[4] Additionally, an epenthetic vowel was commonly found between C_1 and C_2 in /gl/. Whether this epenthetic vowel should be analysed as part of C_1, C_2, or as an independent element is beyond the scope of this dissertation. However, the epenthetic vowel was not segmented together with the velar for several reasons. First, the articulatory data suggested that /g/ and the epenthetic vowel involve different movements - horizontal for the vowel and vertical for /g/. Second, segmenting both sounds together was not always possible. Finally, the articulatory plateau (the duration between target achievement and release) of fricatives or approximants should roughly correspond to their acoustic signal, but often corresponded only to the epenthetic vowel rather than the velar approximant.

was used as a reference point to determine the position of TB, TM2, and TM1 during C_1 in /gl/. However, to ensure accurate timing, it was necessary to verify that this first velocity peak of TT during C_2 aligned with the acoustic signal of /g/. To establish this alignment, the approximate midpoint of the acoustic signal for /g/ was visually identified as a second reference point. Although the boundaries between /a/, /g/, the epenthetic vowel, and the following /l/ were often unclear, it was usually possible to detect either frication or a slight drop in intensity during /g/. This enabled the identification of the approximate midpoint of the acoustic signal for /g/.

The temporal relationship between these two reference points was then quantified. The difference between the acoustic midpoint of /g/ and the first velocity peak of TT during C_2 was calculated for all word-initial and postvocalic tokens.[5] These differences were averaged by speaker, and the mean (23.59 ms) and median (23.28 ms) across speakers were calculated. Based on these measurements, the reference point for the segmentation of the velar segment in /gl/ was established as the first velocity peak of TT minus 25 ms, which corresponds to the approximate middle of the acoustic signal for /g/. For all other segments, the time point used for data visualization and analysis was the point of maximum constriction of the articulatory plateau since it was the most stable of all articulatory landmarks.

Some tokens (n = 62) were completely excluded from the analysis due to various factors: data loss, speech errors and mispronunciations, non-homorganic nasals before the target segment, and impossible or incorrect landmark identification. Other tokens, while not entirely excluded, included only one of the labels: for example, if the tongue back segmentation (for the velar) in *glas* was not accurate but the tongue tip segmentation (for the lateral) was, then the tongue back label was discarded while the tongue tip label was kept.

3.3.2. Statistical analysis

The main goal of this experiment was to evaluate whether the coarticulatory changes in /l/ preceded by a dorsal stop and in /k g/ followed by a lateral, would be in the direction expected for palatalization, i.e., whether the respective tongue part would be higher and/or more fronted in clusters compared to singleton segments. To that end, several sensors were studied: for the lateral analysis, the tongue tip (TT), the tongue blade anterior (TM1) and the tongue blade posterior (TM2) sensors; and for the velar analysis, the tongue back (TB) and tongue blade sensors (TM1, TM2). The tongue tip and tongue back should show possible changes in the primary articulator of each of the segments, while the tongue blade sensors should show the degree of the palatalization of each segment (cf. Kochetov 2005).

Two models were fitted for each sensor, one for the vertical and one for the horizontal axis, and these models usually had the same fixed and random effects structure. The data used for the models were the raw positional values, vertical and horizontal, at the time point of maximum constriction. For the C_1 analysis in /gl/, the positional values of the tongue sensors

[5] Postconsonantal /gl/ tokens were not taken into account because of the difficulty of identifying the acoustic midpoint of /g/, given that it assimilates, often completely, to the previous homorganic nasal.

during velar production were extracted at the first velocity peak of TT during /l/ minus 25 ms (cf. Section 3.3.1).

Since a further goal was to study the effect of C_1 voicing and of cluster position within the word on the production of C_1 and $C_{2,}$ the models included both "phone" and "position within the word" together with "token repetition" as fixed effects. The predictor "phone" had three levels - /l/ /kl/ /gl/ - in the models studying the changes in the production of C_2, and four levels - /k/ /g/ /kl/ /gl/ - in the models studying the changes in the production of C_1 (cf. Section D.1). "Position within the word" was included in interaction with "phone" due to the patterns observed in data visualization. "Token repetition" was also included in the models to account for speech rate differences across the five different repetition rounds. It was specified as a fixed effect because it sometimes caused convergence or singularity issues when specified as a random effect.

As random effects, "speaker" with a slope for "phone", and "token", which accounts for the lexical stress and vowel differences in postconsonantal position, were specified. While a slope for "phone" interacting with "position" would have been preferable, it often caused singularity. In some models, "speaker" with a slope for "phone" also resulted in singularity and, as a result, some models have an intercept-only random effect for "speaker" (cf. Section D.2).

As the predictors are categorical variables with more than two levels, (pairwise) post-hoc t-tests are reported (R package emmeans, Lenth 2004). Due to multiple testing, the significance threshold was corrected with a Tukey p-value adjustment (alpha = 0.001). Given the uncertainty and variability of the data, a more conservative p-value should ensure more accurate significance measures.

The p-values are indicated in the pairwise comparisons tables (Section D.3) and are often given in the text together with more informative coefficients: the estimates - the mean of all predicted values; the pairwise contrasts - differences between two estimates; the confidence intervals (CI) - the range within which we can be 95% confident the population mean lies; the standard error (SE) of both the estimates (in the predictions plots) and the pairwise contrasts (elsewhere) - the margin of error or uncertainty in the predictions; and the t-ratio - an effect-size coefficient that measures the magnitude of a contrast compared to the standard error of that contrast.

The specifications for each model are summarized in Section D.2; models with "a" had height (vertical position) as the dependent variable, while models with "b" had backness (horizontal position) as the dependent variable. The pairwise comparisons are provided in Section D.3. For the pairwise post-hoc tests (emmeans), only the predictors "phone" and "position within the word" were taken into consideration. This means that the estimates, CIs, and contrasts were averaged over "repetition".[6] The residuals in all models were checked and, unless otherwise indicated, the residuals showed a normal and homoscedastic distribution.

[6]Averaging over "repetition" should have no effect if it was not a significant predictor, but sometimes it was. However, it was rarely significant overall. Rather, significant differences occasionally appeared between specific repetitions (e.g., 1 (default) vs. 5 but not 1 vs. 3), and these patterns varied across models. Since the effect was not relevant to the research questions but still needed to be accounted for, averaging over "repetition" should give accurate predictions.

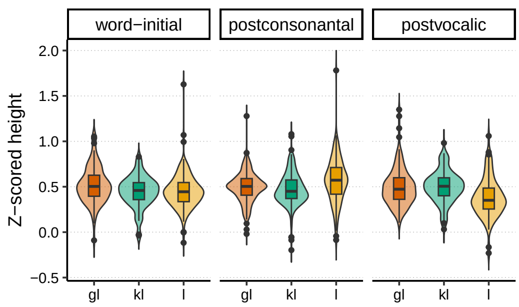
3.4. Results

3.4.1. Position changes during the lateral

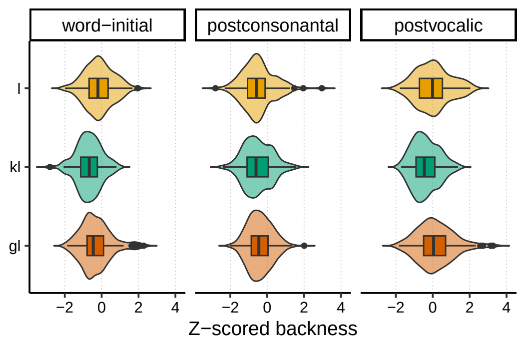
3.4.1.1. Tongue tip during the lateral

Kochetov (2005) found that, at the point of maximum constriction, the tongue tip gesture for Russian /l^j/ was more raised and more posterior than for /l/. Given the hypotheses formulated in Section 3.1.3, the data should show a more raised and posterior tongue tip position during lateral production in clusters compared to singleton /l/, in /kl/ compared to /gl/, and in postconsonantal /gl/ compared to postvocalic and word-initial /gl/. However, Proctor's articulatory description of Spanish laterals (Proctor 2009, cf. Section 3.1.2) showed that the tongue tip movement remained stable across all vowel environments. Consequently, no significant variation between phone type or cluster position categories is expected.

Data visualization showed that the tongue tip sensor during lateral production roughly maintained the same height across /l/, /kl/ and /gl/ (Figure 3.4a). The only noticeable differences were the slight tongue tip lowering in singleton /l/ compared to velar clusters postvocalically, and the tongue tip raising in /l/ compared to the clusters postconsonantally. However, the higher position of the tongue tip in postconsonantal /l/ might be conditioned by the vowel environment: postconsonantal /l/ was consistently preceded by /e/, while postconsonantal /kl/ and /gl/ were preceded by /e a/ and /i a/ respectively (cf. Appendix C). The differences in the horizontal position were minimal between /l/ in singleton and clusters (Figure 3.4b), but there might be a tendency for the tongue tip to be slightly more anterior in /kl/ word-initially and postvocalically.



(a) Vertical position



(b) Horizontal position

Figure 3.4.: Per speaker normalized values for the tongue tip sensor during C_2. Larger horizontal position values reflect a backness increase, larger vertical position values reflect a height increase.

To quantify these patterns, models 1a and 1b evaluated these observations. Model 1a tested tongue tip height during lateral production in /l/, /kl/, /gl/ as a function of the interaction between phone type and cluster position within the word, plus token repetition. The random effects accounted for speaker and token variability (cf. Section D.2). As the predictions in Figure 3.5 show, all confidence intervals overlap to a great extent and the estimates are very similar. Consequently, none of the contrasts were significant ($p > 0.001$). The biggest difference was between /l/ and the velar clusters in postvocalic position: the tongue tip during lateral production was approximately 0.6 mm higher in the velar clusters compared to /l/ postvocalically.

It should be noted that, despite these small differences, the t-ratios (measure of effect size) were quite large (t-ratio = 3.43 and p-value = 0.0041 for the contrast kl~l, and t-ratio = 3.02 and p-value = 0.0127 for the contrast gl~l). Therefore, although the contrasts were non-significant at the $\alpha = 0.001$ level, the magnitude of these contrasts was large relative to the variability in the data (cf. Table D.2).

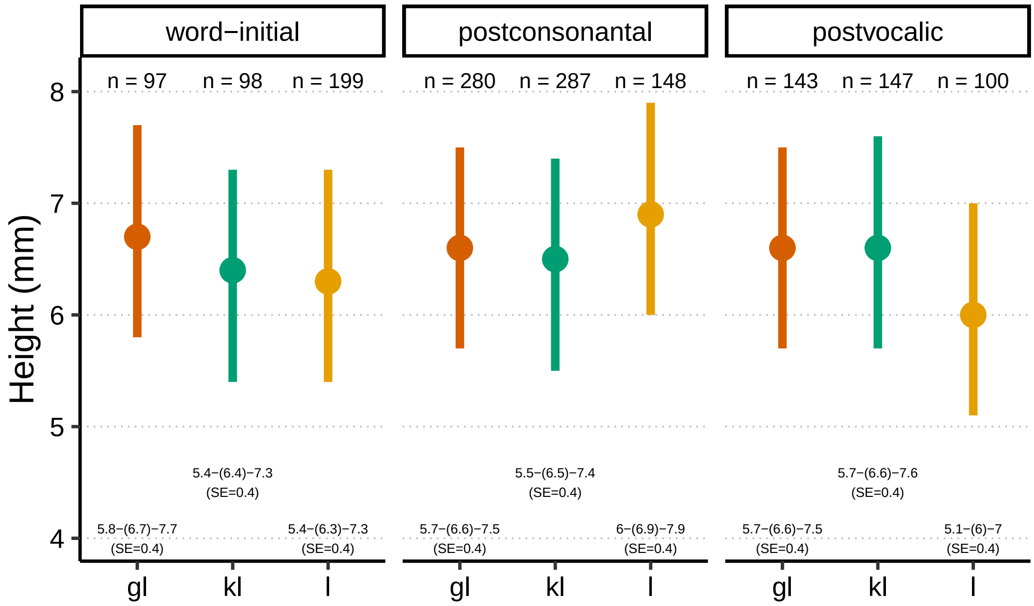


Figure 3.5.: Predictions for model 1a comparing the tongue tip height during the lateral in /l kl gl/ at the point of maximum constriction. The predicted confidence intervals, together with their standard errors (SE), and estimates are ploted underneath with their numeric values. Larger values represent a higher tongue tip sensor.

Nevertheless, the fixed effects of model 1a accounted for practically none of the data variation: the marginal R^2 (variance explained by the model predictors) was only 2% (R^2m = 0.02) in model 1a. The combination of fixed and random effects (conditional R^2 or R^2c) accounted for 74% (R2c = 0.74) of the variance. In consequence, the variation in the tongue tip position was a result of inter-speaker differences and token selection (random effects), and not from the interaction between phone and position within the word (fixed effects). In addition, the residuals in model 1a had slightly elevated kurtosis - the data had frequent outliers - but the distribution seemed homoscedastic (cf. Figure D.1). For a full view of the pairwise contrasts as well as the SE, p-values and t-ratios, cf. Table D.2.

Model 1b examined tongue tip backness during lateral production in /l/, /kl/, /gl/ as a function of the interaction between phone type and cluster position within the word, plus token repetition. The random effects accounted for speaker and token variability (cf. Section D.2). As seen in the Figure 3.6, the smallest estimates (more fronted position) correspond to /kl/, which tended to be more fronted word-initially and postvocalically. However, these differences were all non-significant ($p > 0.001$). The largest contrast was between /gl/ and /kl/ in postvocalic position, where the tongue tip during lateral production was 1.28 mm more posterior in /gl/ than in /kl/ (t-ratio = 3.4, p-value = 0.0044).

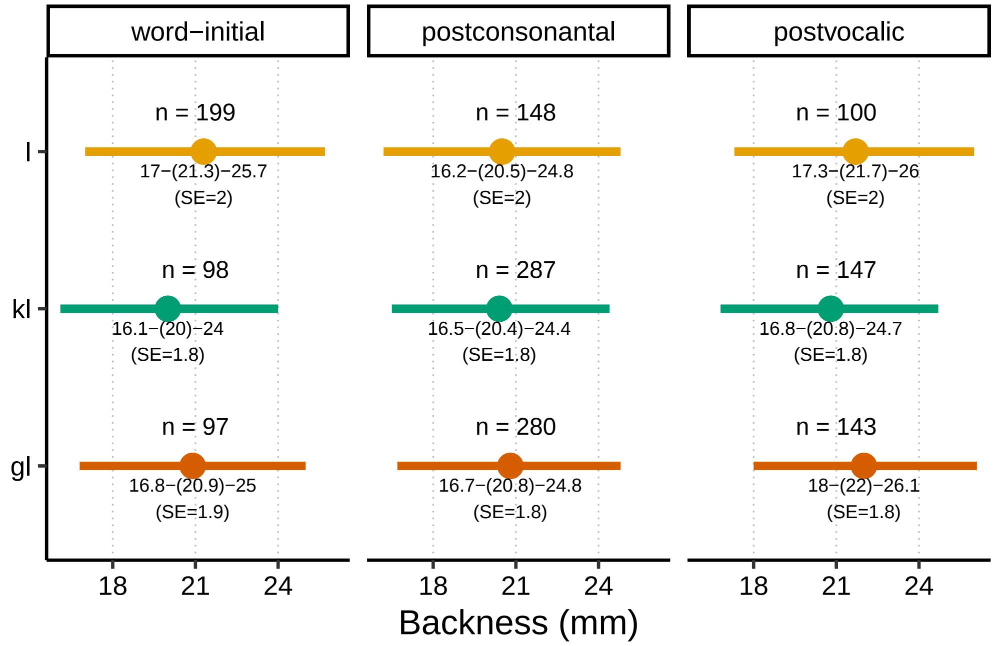


Figure 3.6.: Predictions for model 1b comparing the tongue tip backness during the lateral in /l kl gl/ at the point of maximum constriction. Larger values represent a more posterior position of the tongue tip sensor.

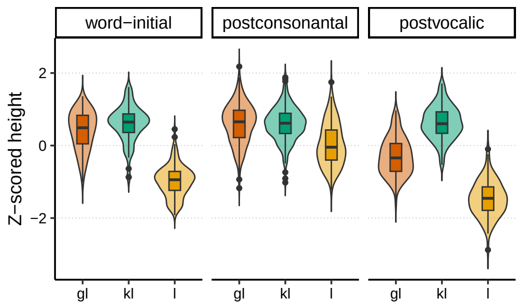
Similar to model 1a, the marginal R^2 and conditional R^2 of model 1b showed that the variance in the data was accounted for by the random effects, and not by the fixed effects: phone and cluster position (and token repetition) only explained 1% ($R^2m = 0.01$) of the variation, while speaker and token variability explained 92% ($R^2c = 0.92$).

In short, the variation in the tongue tip position during lateral production was minimal and non-significant. These minimal changes are consistent with the evidence shown by Proctor (2009). Some non-significant patterns were observed, mostly linked to postvocalic position. However, the marginal R^2 and conditional R^2 of models 1a and 1b indicated that these patterns result from inter-speaker differences and token selection, and not from phone or position within the word.

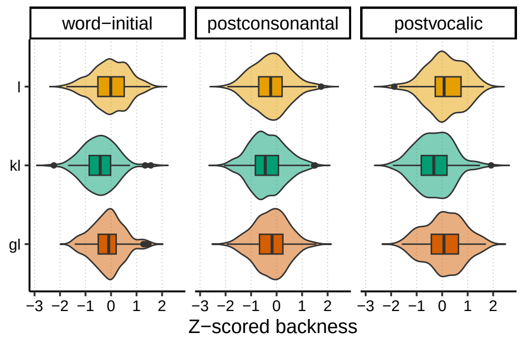
3.4.1.2. Tongue blade posterior during the lateral

If the trigger for palatalization is in coarticulatory effects induced by a preceding velar consonant, the constriction of the lateral should be higher and more anterior in clusters than in singleton /l/. In addition, historical evidence on Ibero-Romance palatalization suggests that voicelessness in C_1 favoured OL palatalization: this should be reflected in a higher tongue blade posterior position, perhaps also more anterior, in /kl/ than in /gl/. Lastly, lenition seems to have had an effect in the development of OL palatalization: for example, the most common outcome of word-initial /gl/ is /l/ in both Old Spanish and Galician-Portuguese (cf. Section 2.4.1.2). Consequently, it is expected that the velar constriction in /g/ is reduced in lenition-inducing positions - postvocalically and to a lesser extent word-initially (due to the presence of word and prosodic boundaries). A reduced velar constriction should be reflected in tongue blade posterior lowering during lateral production.

Data visualization supported most hypotheses regarding height changes, but not regarding fronting changes. Figure 3.7b illustrates the horizontal position changes during lateral production at the point of maximum constriction between velar clusters and singleton /l/. No clear differences could be observed in tongue blade posterior backness between /l/ and the velar clusters. However, a faint tendency for the lateral to be slightly more fronted in /kl/ than in /gl/ and /l/ was observed, but no effect of cluster position was obvious.



(a) Vertical position



(b) Horizontal position

Figure 3.7.: Per speaker normalized values for the tongue blade posterior sensor during C_2. Larger horizontal position values indicate a increase in backness, larger vertical position values indicate a increase in height.

Figure 3.7a illustrates the vertical changes during lateral production at the point of maximum constriction for velar clusters compared to singleton /l/. It is apparent that the tongue blade posterior was considerably higher in clusters than in singleton /l/ across all positions within the word. These differences appear larger postvocalically. C_1 voicing affected this pattern: while the tongue blade posterior during the lateral maintained a constant height in /kl/ across positions, the lateral in postvocalic /gl/ was produced with a considerably lower tongue blade posterior than in all other cluster configurations. These dynamics show that the velar in /kl/ did not undergo spirantization and loss of constriction as a result of lenition. In contrast, the velar in /gl/ was affected by spirantization postvocalically, where the conditions for /g/ lenition were always met, but not postconsonantally, where lenition was unlikely to occur. The effects of /g/ spirantization are reflected in tongue blade posterior lowering during the articulation of the lateral.

However, the expected tongue blade posterior lowering in word-initial /g/ was not found. Since all tokens were technically postvocalic - the word before the token in the carrier phrase ended in /a/ - a greater difference between word-initial /kl/ and /gl/ was expected due to lenition. However, the tongue blade posterior during the lateral was only slightly higher in

/kl/. A deeper look into the raw data may help in understanding how word and prosodic boundaries affect word-initial lenition.

Figure 3.8 shows the standardized height of the tongue blade posterior during C_2 in /gl kl/. It is important to remember that this plot shows the effect of lenition on the tongue blade posterior height during the lateral (C_2), although lenition itself affects the velar segments (C_1).

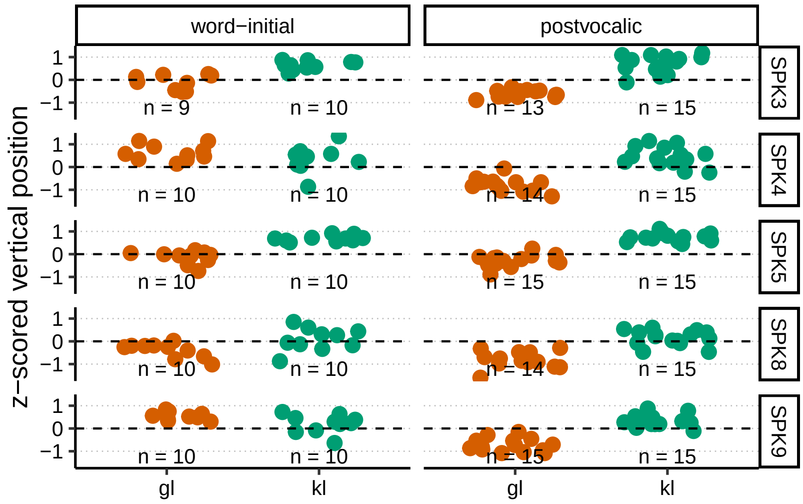


Figure 3.8.: Standardized tongue blade posterior height during C_2 in /gl kl/. Only word-initial and postvocalic position, five speakers. Each dot represents one token repetition and the number of observations is given below. Larger z-scored values indicate a higher tongue blade posterior position.

Each data point represents one token repetition (from word-initial and postvocalic clusters) from five different speakers[7]. Postvocalically, where the velar was always preceded by a vowel within word boundaries, the pattern is very clear: for all speakers, the tongue blade posterior during the lateral was in a lower position in /gl/ than in /kl/, with /gl/ tokens falling mostly below the 0 line and /kl/ tokens above. In postvocalic position, the conditions for /g/ lenition were always met and the velar segment was produced as an approximant or fricative. As a result, the velar was produced with less constriction, which is also reflected in tongue blade posterior lowering during the following lateral.

This pattern is less clear word-initially. In this experiment, all word-initial tokens were postvocalic, since the preceding word ended with /a/. However, the preceding vowel and the word-initial velar are separated by a word boundary. As seen in Figure 3.8, /g/ underwent lenition only in some speakers: while the tongue blade posterior during the lateral was lower in /gl/ than in /kl/ for SPK3 and SPK5 (presence of lenition), it was similarly high for both /kl/ and /gl/ in SPK4 and SPK9 (absence of lenition).

These speaker differences probably resulted from the placement of a prosodic boundary before or after the token: if a prosodic pause was placed before the token, word-initial clusters

[7]These five speakers represent different patterns in the tongue blade posterior height differences during C_2 in word-initial /kl gl/.

would not be considered postvocalic, as they occur after a pause, and they would undergo little lenition if at all; in contrast, if a prosodic pause was placed after the token, word-initial clusters would have been postvocalic, enabling lenition to occur. As word-initial voiced stop lenition was a speaker-specific phenomenon, it cannot be observed when the data from all speakers are pooled together for visualisation.

The visualization patterns described above demonstrate considerable height changes in tongue blade posterior position during lateral production, consistent with predictions, though backness changes remained minimal. To assess the statistical significance of these patterns, models 2a and 2b tested these observations.

Model 2a examined tongue blade posterior height during the lateral C_2 in /l/, /kl/, /gl/ as a function of phone type interacting with cluster position within the word, with token repetition as a control variable and random effects accounting for speaker and token variability (cf. Section D.2). Figure 3.9 shows the predictions of model 2a.

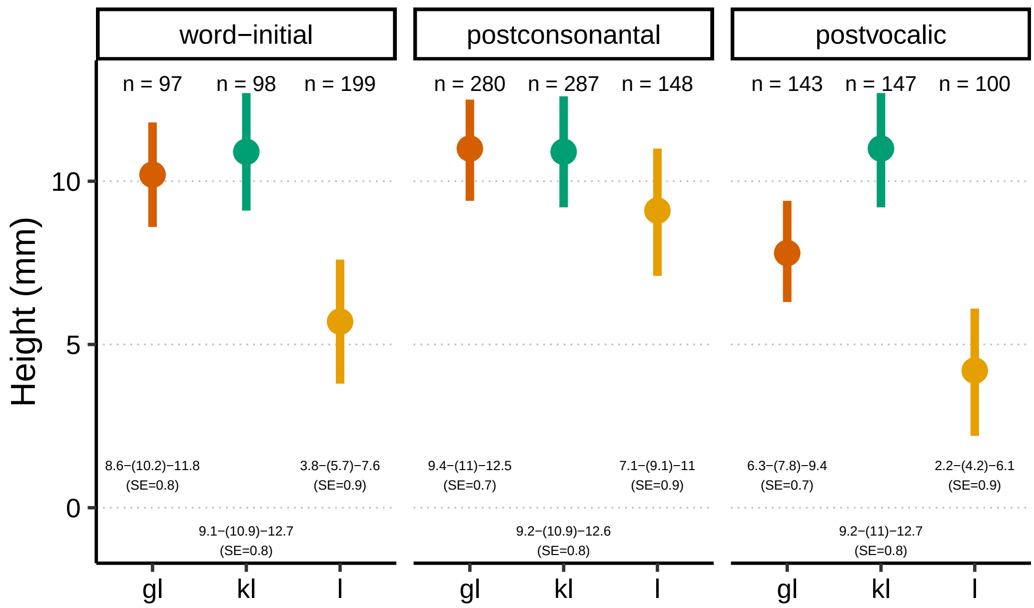


Figure 3.9.: Predictions for model 2a comparing the tongue blade posterior height during the lateral in /l kl gl/ at the point of maximum constriction. The predicted confidence intervals, together with their standard errors (SE), and estimates are ploted underneath with their numeric values. Larger values represent a higher tongue blade posterior sensor.

There is a clear tendency for the tongue blade posterior during the lateral to be higher in the velar clusters than in /l/: all contrasts were significant, but the differences were much greater word-initially and postvocalically, where the CIs for /l/ and the velar clusters did not overlap, than postconsonantally. Concretely, the lateral was produced 5.1 mm higher in /kl/ than in /l/ word-initially (t-ratio =11.2, p-value < 0.001), 6.8 mm higher postvocalically (t-ratio = 14.35, p-value < 0.001), and 1.8 mm higher postconsonantally (t-ratio = 4.56, p-value < 0.001). Similarly, the lateral was also produced with a higher tongue blade posterior in /gl/ than in /l/, but the differences were smaller than those between /kl/ and /l/: 4.5 mm higher in /gl/ than in singleton /l/ word-initially (t-ratio = 9.02, p-value < 0.001), 3.7 mm higher postvocalically (t-ratio = 7.17, p-value < 0.001), and 1.9 mm higher postconsonantally (t-ratio = 4.24, p-value < 0.001).

T-ratios describe the magnitude of a difference between two intercepts (contrast) compared to the standard error (variance in the data). In the contrasts above, the smallest t-ratio was around 4.2, which means that the contrast was 4.2. times larger than the standard error of that contrast. These t-ratios indicated very large effect sizes, which means that the tongue blade posterior during the lateral was significantly higher in velar clusters than in singleton /l/. These differences and effect sizes were affected by C_1 voicing, since they are larger between /kl/ and /l/ than between /gl/ and /l/, and by the interaction between C_1 voicing and position within the word, since the differences between /gl/ and /l/ were larger word-initially and postvocalically than postconsonantally (cf. Table D.2).

These pairwise comparisons also showed that the height differences in /kl/∼/l/ were greater than those for /gl/∼/l/. This showed the influence of C_1 voicing on the observed coarticulatory patterns since the tongue blade posterior during C_2 was consistently higher in /kl/ than in /gl/. Yet, this difference was only significant postvocalically, where the tongue blade posterior was 3.15 mm higher in /kl/ than /gl/ (t-ratio = 7.54, p-value < 0.001). There is almost no difference postconsonantally and the expected difference word-initially was not observed, as the tongue blade posterior during the lateral was only 0.7 mm higher in /kl/ than /gl/ (p-value = 0.3756). As previously mentioned, lenition in word-initial /gl/ was speaker-specific and depended on the prosodic boundary. Since lenition was not a predictor, the variation in tongue blade posterior height during C_2 in word-initial /gl/ was probably interpreted by the model as inter-speaker variation.

For model 2a, the marginal R^2 (variance explained by fixed effects) accounted for 41% of all variance (R^2m = 0.41). Together with the variance explained by the random effects, model 2a accounted for 85% of all variation (R^2c = 0.85).

Model 2b tested tongue blade posterior backness during lateral production in /l/, /kl/, /gl/ as a function of the interaction between phone type and cluster position within the word, plus token repetition. The random effects accounted for speaker and token variability (cf. Section D.2). Figure 3.10 shows the predictions of model 2b.

The overlapping confidence intervals and similar estimates show minimal and non-significant changes in backness. The tongue blade posterior during lateral production was slightly more fronted in velar clusters than in /l/, but the differences were small and non-significant, with the largest difference being between postvocalic /kl/ and /l/ at 1.3 mm (t-ratio = 1.72, p-value = 0.22). Position did not seem to play a clear role. Similarly, the tongue blade posterior during lateral production was non-significantly more fronted in /kl/ than in /gl/ (cf. Table D.2).

The fixed effects of model 2b only explained 1% of all variance, while the combination of fixed and random effects accounted for 93% (marginal R2 = 0.01, conditional R2 = 0.93). Conse-

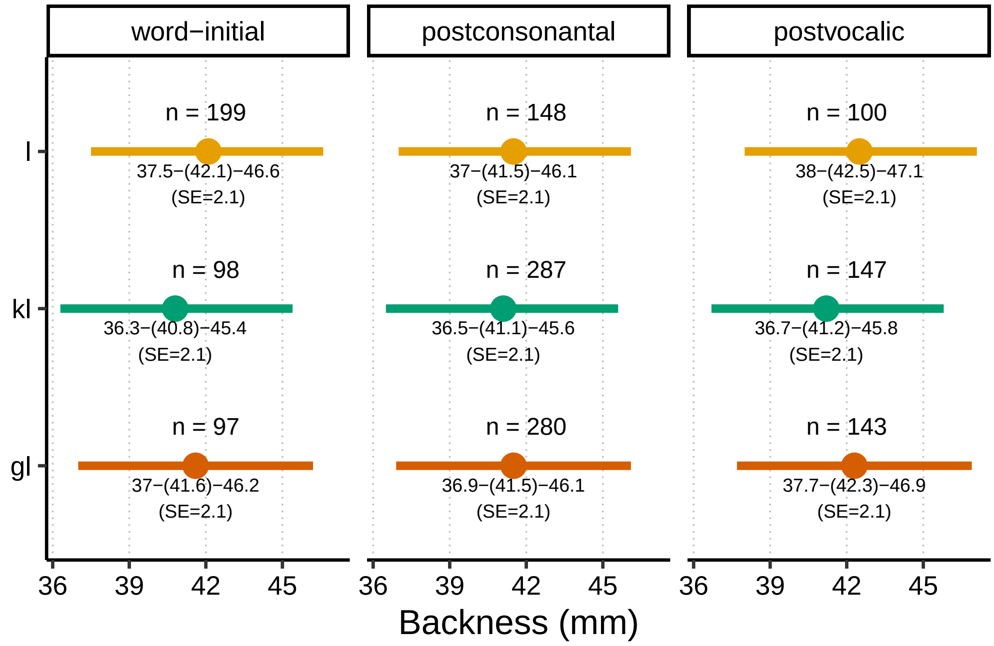


Figure 3.10.: Predictions for model 2b comparing the tongue blade posterior backness during the lateral in /l kl gl/ at the point of maximum constriction. Larger values indicate a more backed position of the tongue blade posterior sensor.

quently, the random effects for speaker and token accounted for the variation in the data, rather than the predictors phone and position within the word.

In short, the differences in the tongue blade posterior height during lateral production were often quite large and significant, while the differences in tongue blade posterior backness were not (and were likely caused by token and inter-speaker variation): the tongue blade posterior during C_2 was significantly lower in singleton /l/ than in the velar clusters, especially word-initially and postvocalically. Consequently, these patterns are consistent with the hypothesis that laterals may be more likely to undergo palatalization in clusters.

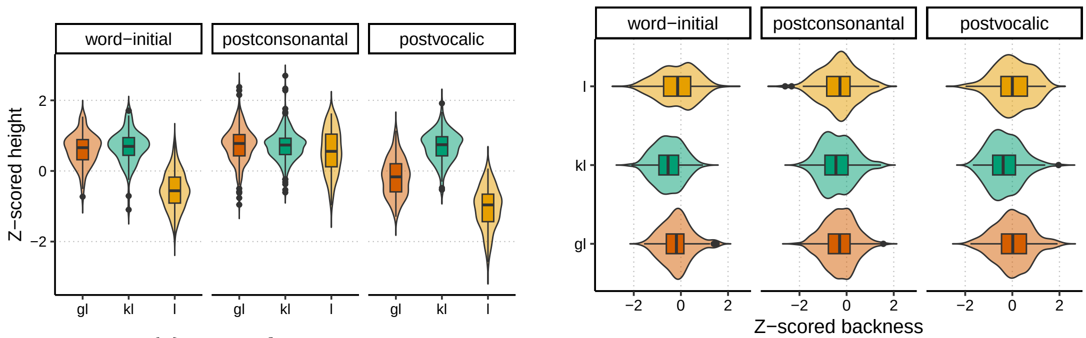
Within the clusters, the tongue blade posterior was significantly lower in /gl/ than in /kl/ in postvocalic position, where /g/ lenition was obligatory. In word-initial position, where lenition depended on the prosodic boundaries or speech rate of the speaker, the differences were small and speaker-specific. In postconsonantal position, there were no differences in the tongue blade posterior height between /kl/ and /gl/: as the conditions for lenition are not met postconsonantally, the tongue blade posterior height was similar in both clusters.

The interaction between position within the word and phone is clear, as the tongue blade posterior height during the lateral changed dramatically in /g/ depending on the position within the word, while position did not affect tongue blade posterior height in /kl/. These patterns align with the hypothesis that lenition disfavoured OL palatalization.

3.4.1.3. Tongue blade anterior during the lateral

Romance OL palatalization is hypothesized to have been triggered by coarticulatory effects between the lateral and preceding velar consonants. These coarticulatory effects appeared to have been affected by C_1 voicing and cluster position within the word in Ibero-Romance. Given these hypotheses, three main patterns are expected in the tongue blade anterior position during lateral production (Section 3.1.3): (1) higher and more anterior tongue blade anterior in clusters than in singleton /l/; (2) higher tongue blade anterior position, perhaps also more anterior, in /kl/ than /gl/; and (3) lower tongue blade anterior due to reduced velar constriction in /g/ in lenition-inducing positions (postvocalically and word-initially).

Similarly to the patterns seen for the tongue blade posterior (cf. Section 3.4.1.2), data visualization supports most hypotheses regarding height changes, but not regarding fronting changes: the tongue blade anterior during lateral production was lower in singleton /l/ than in clusters, both word-initially and postvocalically (cf. Figure 3.11a). The only noteworthy difference between /gl/ and /kl/ was also postvocalically (see Section 3.4.1.2 for an explanation of the absence of word-initial differences between /kl/ and /gl/). The horizontal position of the tongue blade anterior was similar in all segments, but there was a slight tendency for the tongue blade anterior during lateral production to be more fronted in /kl/ compared to both /gl/ and /l/ (cf. Figure 3.11b).



(a) Vertical position

(b) Horizontal position

Figure 3.11.: Per speaker normalized values for the tongue blade anterior sensor during C_2. Larger horizontal position values indicate a backness increase, larger vertical position values indicate height increase.

Models 3a and 3b evaluated the statistical significance of these patterns. Model 3a tested tongue blade anterior height during lateral production in /l/, /kl/, /gl/ as a function of phone type interacting with cluster position within the word, plus token repetition. The random effects accounted for speaker and token variability (cf. Section D.2).

The predictions in Figure 3.12 show a clear tendency for the tongue blade anterior during lateral production to be higher in clusters than in singleton /l/: word-initially, the tongue blade posterior was 3.4 mm significantly higher in /gl/ than in singleton /l/ (t-ratio = 5.19, p-value < 0.001) and 3.5 mm in /kl/ than in singleton /l/ (t-ratio = 4.79, p-value < 0.001). While the confidence intervals overlap somewhat, the t-ratios showed large effect sizes.

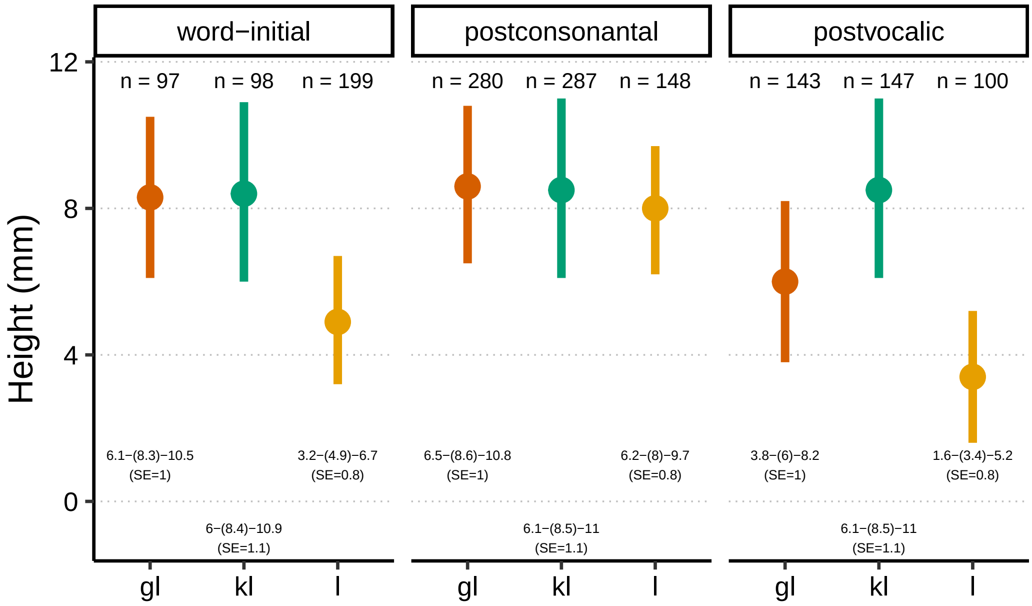


Figure 3.12.: Predictions for model 3a comparing the tongue blade anterior height during the lateral in /l kl gl/ at the point of maximum constriction. The predicted confidence intervals, together with their standard errors (SE), and estimates are ploted underneath with their numeric values. Larger values represent a higher tongue blade anterior sensor.

Postvocalically, the tongue blade anterior during lateral production was 5.1 mm higher in /kl/ than in /l/ (t-ratio = 6.93, p-value < 0.001) and 2.6 mm higher in /gl/ than in /l/ (t-ratio = 3.94, p-value = 0.003), which did not quite reach significance. The differences postconsonantally were much smaller and not significant.

The interaction between C_1 voicing and cluster position is apparent: the position of the tongue blade anterior during lateral production only showed significant differences between /kl/ and /gl/ postvocalically. Although the confidence intervals overlap to a great extent (much more than in the tongue blade posterior, cf. Figure 3.9), the tongue blade anterior during lateral production was 2.5 mm significantly higher in /kl/ than in /gl/ (t-ratio = 7.65, p-value < 0.001). While this contrast was smaller than other mentioned contrasts, it had the largest effect size (cf. Table D.2).[8]

In model 3a, the fixed effects accounted for 22% of the data variation and the combination of fixed and random effects for 87% (R^2m = 0.22, R^2c = 0.87). The residuals had a bit of high kurtosis and appeared to show some heteroscedasticity (cf. Figure D.2).

Figure 3.13 showcases the minimal and non-significant differences in the backness of the

[8]The t-ratios from similar contrasts vary as a function of the standard error: the t-ratio is calculated by dividing the difference between two estimates (contrast) by the SE (uncertainty in the data). As a result, the larger the SE, the smaller the t-ratio will be (cf. Winter 2020: 157- 69). For example, the contrasts /kl/~/gl/ (postvocalic) and /gl/~/l/ (postvocalic) had similar values (-2.5 and 2.6 , respectively. However, their t-ratios were quite different (7.65 and 3.94, respectively). This is caused by differences in the standard error of the contrasts: while /kl/~/gl/ (postvocalic) had a SE of 0.33, /gl/~/l/ (postvocalic) has a SE of 0.66. Consequently, the t-ratio was almost twice larger in /kl/~/gl/ than in /gl/~/l/, even though the absolute contrasts were similar.

tongue blade anterior during lateral production.[9] While /kl/ showed a slight tendency toward more fronted positioning (smaller estimates), all contrasts were non-significant (cf. Table D.2).[10]

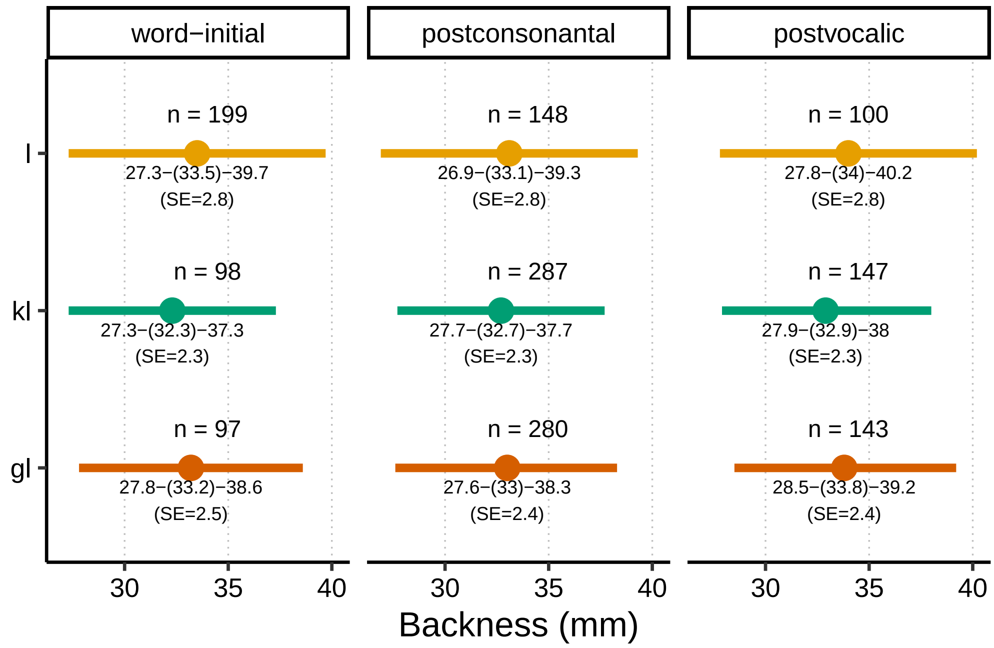


Figure 3.13.: Predictions for model 3b comparing the tongue blade anterior backness during the lateral in /l kl gl/ at the point of maximum constriction. Larger values represent a more posterior position of the tongue blade anterior sensor.

Compared to the predictors of model 3a (which explained 22% of the variation), the predictors of model 3b accounted for 0% of the variation in the data, while fixed and random effects accounted for 96% (R^2m = 0, R^2c = 0.96). This indicates that the horizontal position of the tongue blade anterior was entirely unaffected by phone and position within the word than the vertical position, with all variation due to inter-speaker and token variability alone.

In short, the changes in the tongue blade anterior during lateral production paralleled those in the tongue blade posterior but the patterns were weaker: the tongue blade anterior was higher in velar clusters than in singleton /l/ word-initially and postvocalically, and the tongue blade anterior in /kl/ was higher than in /gl/ postvocalically. These patterns align with the hypothesis that laterals may be more likely to undergo palatalization in clusters. The interaction between position within the word and phone was observed, since the tongue blade anterior during lateral production was significantly lower in postvocalic /gl/, while position did not affect tongue blade anterior height in /kl/. These patterns are consistent with the hypothesis that lenition disfavoured OL palatalization. There was minimal backness variation, which was caused by the random effects rather than by the predictors.

[9] The SEs of the predictions of model 3b (mean = 2.52) were quite high when compared to models 1b (mean = 1.87) and 2b (mean = 2.09), which means more uncertainty in the predicted values.

[10] The largest contrast was 1.2 mm (t-ratio = 1.49, p-value = 0.32) in word-initial kl~l and the largest t-ratio was 1.83 (contrast = 0.9 , p-value = 0.2) in postvocalic kl~gl (cf. Table D.2).

3.4.1.4. Summary

Section 3.4.1.1, Section 3.4.1.2 and Section 3.4.1.3 showcased the changes in lateral production between singleton /l/ and clusters containing a velar C_1. The largest differences were in tongue blade posterior height: the tongue blade posterior was consistently higher in velar clusters compared to singleton /l/. In addition, the tongue blade posterior was significantly higher in /kl/ than in /gl/ postvocalically.

For the tongue blade anterior, the tendencies were similar but weaker: the tongue blade anterior during lateral production was higher in velar clusters word-initially and postvocalically (but the difference between /gl/ and /l/ postvocalically was non-significant), and higher in /kl/ compared to /gl/ postvocalically.

Changes in the horizontal position of both the tongue blade sensors were minimal, non-significant, and caused by the random effects rather than by the fixed effects. Similarly, height and backness changes in the tongue tip sensor were minimal, non-significant, and caused by inter-speaker and token variability.

In short, only height changes were present, but not in the primary articulator. These results are consistent with the hypothesis that laterals are more likely to palatalize in OL clusters: a major indicator of lateral secondary palatalization is tongue blade posterior raising (Kochetov 2005; cf. Section 3.1.1) and it has been observed that the height of both tongue blade sensors increases during lateral production in OL clusters.

In addition, lenition appears to play a role in this pattern: the lateral was produced with a higher tongue blade posterior and anterior in /kl/ than in /gl/ postvocalically, which is the position where the conditions for /g/ lenition are met.[11] /g/ spirantization caused a reduction in the constriction degree of the velar segment, which is reflected in lower positions of the tongue blade sensors during lateral production. Word-initial lenition was also observed but it was a speaker-specific phenomenon linked to the placement of the prosodic pause. Since neither lenition nor prosodic pause placement were predictors in the models, it is not possible to quantitatively assess the effect of word-initial /g/ spirantization on the observed coarticulatory patterns.

3.4.2. Horizontal position changes during the velar

As discussed in Section 3.1.1, the main indicator of velar palatalization is fronting of the closure. If the coarticulatory patterns potentially leading to OL palatalization also affected the velar C_1, this should be reflected in a more anterior position of the tongue back and tongue blade posterior, perhaps also of the tongue blade anterior, during velar production in clusters compared to singleton /k g/.

[11] Interestingly, both tongue blade sensors showed their lowest positions during lateral production in postvocalic singleton /l/.

OL palatalization appeared to have been affected by C_1 voicing and cluster position within the word in Ibero-Romance. Therefore, the relevant tongue sensors during velar production are expected to be in a more fronted position in /kl/ than in /gl/, and in postconsonantal /gl/ than in word-initial and postvocalic /gl/ (Section 3.1.3).

Vertical changes do not play a role in velar palatalization because velar segments are already produced with a high tongue dorsum. Therefore, only changes in the horizontal position of the tongue are discussed in the following sections.

3.4.2.1. Tongue back during the velar

The expected tendencies established in Section 3.4.2 are generally not observed in the data visualization. Figure 3.14 illustrates that the differences between velars in singleton and clusters (k~kl, g~gl) and between clusters (kl~gl) were rather small. A few patterns can be observed, which appear to be inconsistent with velar palatalization: the tongue back during velar production tended to be slightly more posterior in /kl/ compared to /k/, especially in postconsonantal position. For the voiced velars, the tongue back was more anterior in /g/ than in /gl/ postconsonantally, but this pattern was reversed postvocalically, where the tongue back showed a more anterior position in /gl/ than in /g/. The positional differences between clusters and singleton velars seem larger when C_1 is voiced. The cluster comparison showed that the tongue back tended to be a bit more posterior in /gl/ than in /kl/.

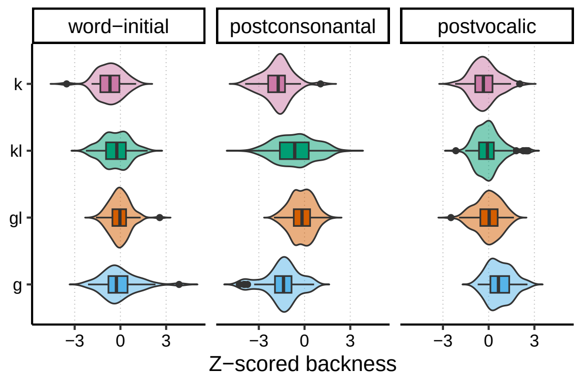


Figure 3.14.: Per speaker normalized horizontal values for the tongue back sensor during C_1. Larger horizontal position values reflect a backness increase.

More anterior tongue back positions postconsonantally were probably due to the phonological context of the tokens: while word-initial and postvocalic clusters were consistently preceded by /a/, postconsonantal clusters were mostly preceded by front vowels: /ankl enkl/ and /angl ingl/ compared to /enk/, /ing/ (cf. Appendix C). Consequently, the more anterior position of the tongue back in singleton compared to clusters may be a by-product of the token selection (cf. Section 3.2).

The statistical significance of the observed patterns was evaluated using model 4b, which tested horizontal tongue back position changes during velar production in /k/, /kl/, /gl/, and /g/ as a function of phone type interacting with cluster position within the word, plus token repetition. Random effects accounted for speaker and token variability (cf. Section D.2). The predictions of model 4b are illustrated in Figure 3.15.

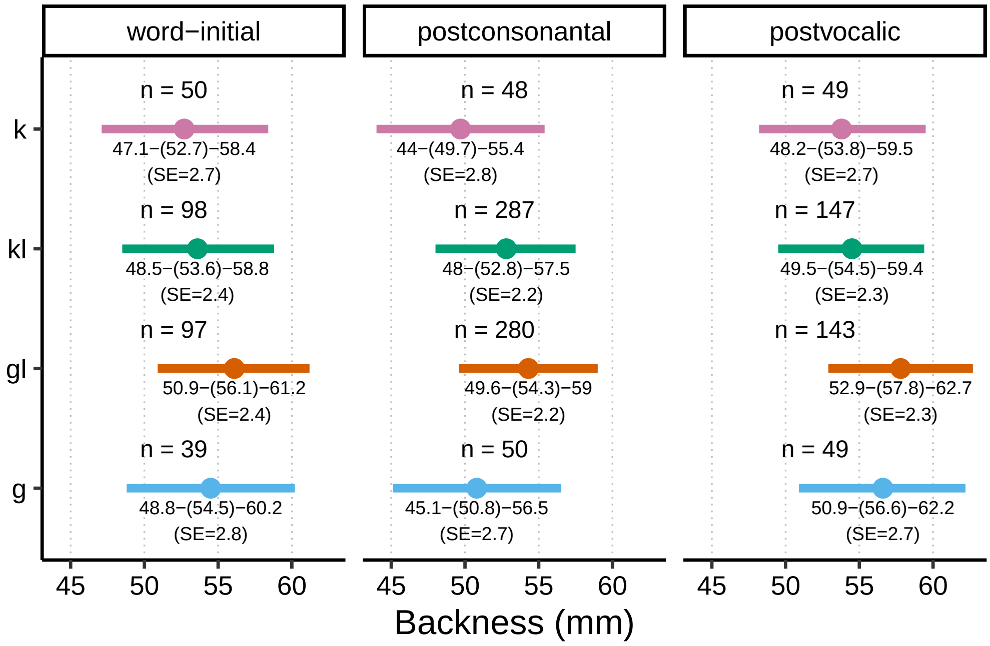


Figure 3.15.: Predictions for model 4b comparing the tongue back backness during the velar in /g k kl gl/ at the point of maximum constriction. Larger values represent a more posterior position of the tongue back sensor.

The combination of overlapping confidence intervals and high standard errors[12] resulted in all contrasts being non-significant. As can be seen in Section D.3 (model 4b), the p-values of all contrasts were not only larger than the alpha = 0.001 used in this dissertation, but also larger than 0.05.

The fixed effects of model 4b only accounted for 7% of the variation in the data (R^2m = 0.07), while the entire model explained 89 % (R^2m = 0.89). As a result, the variation in the data is primarily explained by the random effects rather than by the predictors.

In summary, the observed horizontal changes in the tongue back during velar production were small and non-significant, although some patterns could be identified. This implies that horizontal changes in this tongue sensor are not consistent with the articulatory dynamics leading to velar palatalization in OL clusters.

3.4.2.2. Tongue blade posterior during the velar

Just like in Section 3.4.2.1, the expected tendencies established in Section 3.4.2 are generally not observed in the data visualization. Figure 3.16 shows the normalized data on the backness of the tongue blade posterior during velar production in the relevant singletons and

[12]The SEs of the estimates, like the SEs of the contrasts, were quite large, which also translated into weak effect sizes. Compared to the lateral models (1a-3b), the SEs of the contrasts were quite large, which means that there was more uncertainty in the predictions of model 4b (cf. Section D.3).

clusters. Several patterns can be discerned, which seem not to align with velar palatalization in OL clusters: on the one hand, the tongue blade posterior during velar production tended to be in a more posterior position in clusters than in their singleton counterparts, and these differences were greater when C_1 is voiced; on the other hand, the tongue blade posterior was more backed in /gl/ than in /kl/.

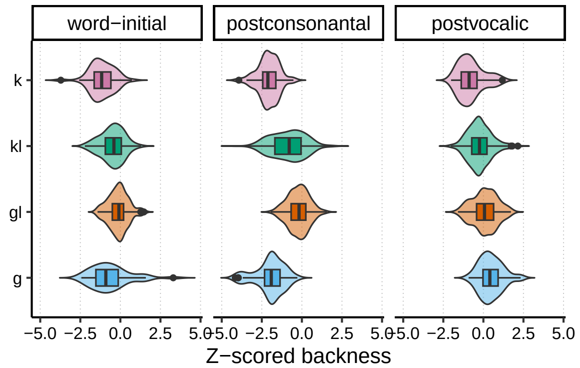


Figure 3.16.: Per speaker normalized horizontal values for the tongue blade posterior sensor during C_1. Larger horizontal position values reflect a backness increase.

Model 5b evaluated the statistical significance of these patterns by testing tongue blade posterior backness during velar production in /g/, /gl/, /kl/, and /k/ as a function of phone type interacting with cluster position within the word, plus token repetition. The random effects accounted for speaker and token variability (cf. Section D.2).

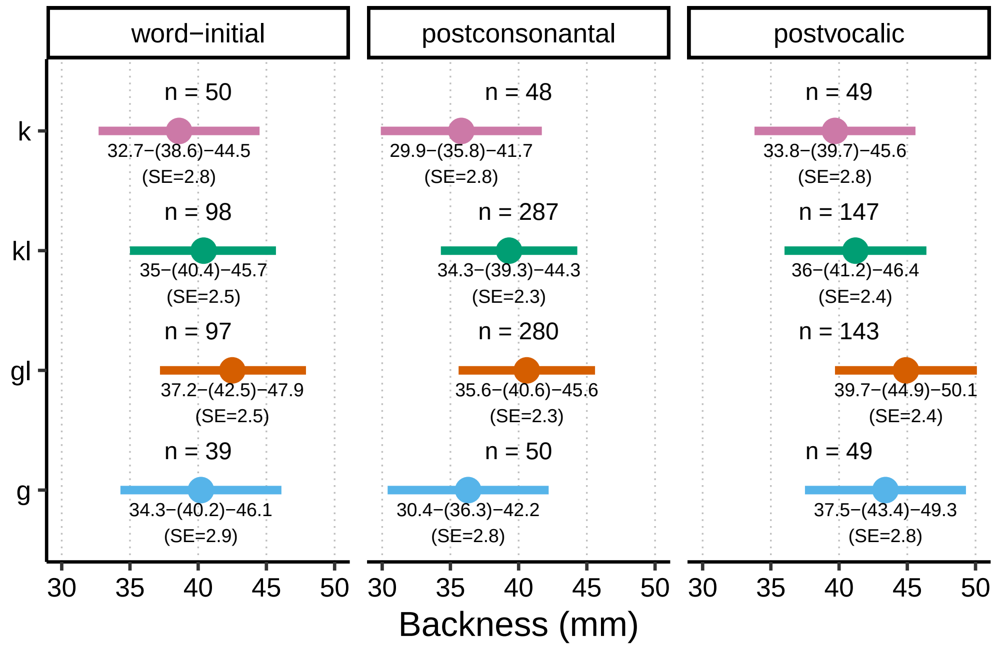


Figure 3.17.: Predictions for model 5b comparing the tongue blade backness posterior during the velar in /g k kl gl/ at the point of maximum constriction. Larger values represent a more posterior position of the tongue blade posterior sensor.

The patterns observed in Figure 3.16 are reflected in Figure 3.17: the tongue blade posterior during velar production was more anterior in singleton /k g/ than in /kl gl/; this tongue sensor was also consistently more anterior in /kl/ than in /gl/ but the differences were larger postvocalically. However, none of the contrasts were significant. As in model 4b, the p-values of all contrasts were not only larger than the alpha = 0.001 used in this study, but also larger than 0.05 (see Section D.3, model 5b).

In some cases, the contrasts were noteworthy but, due to the large SEs, the contrasts were non-significant and tended to have weak effect sizes: for instance, the tongue blade posterior was 4.3 mm more posterior in /gl/ than in /g/ but the t-ratio only amounted to 2.19 (SE = 1.97 mm, p-value = 0.141).

These non-significant results are reflected in the model's overall performance: the fixed effects only explained 9% of the variation (R^2m = 0.09), while the entire model accounted for 90% of the variance (R^2c = 0.9). This shows, yet again, that the variation in the data was mainly explained by the random effects (inter-speaker and token variability) and not by the predictors.

3.4.2.3. Tongue blade anterior during the velar

If the coarticulatory dynamics between C_1 and C_2 in /kl gl/ triggered OL palatalization, a more anterior tongue blade position should be observed during velar production in clusters compared to that observed in singleton /k g/. In addition, more fronted tongue blade anterior positions should be expected in /kl/ (compared to /gl/) and in postconsonantal /gl/ (compared to word-initial and postvocalic /gl/) if C_1 voicing and cluster position within the word affected these coarticulatory dynamics (cf. Section 3.4.2 and Section 3.1.3).

Nevertheless, just like in Section 3.4.2.1 and Section 3.4.2.2, the expected tendencies are not observed in the data. Figure 3.18 shows that the tongue blade anterior position during velar production tended to be more posterior in clusters than in singleton /k g/ across all positions (except in postvocalic gl~g). This pattern is not consistent with velar palatalization dynamics. The position of this tongue sensor appeared similar in /kl/ and /gl/, so no effect of C_1 voicing was observed in this regard.

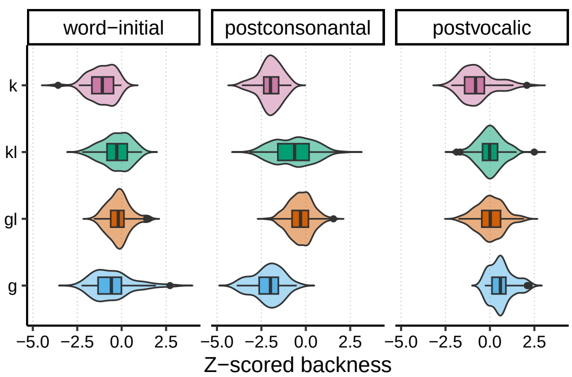


Figure 3.18.: Per speaker normalized horizontal values for the tongue blade anterior sensor during C_1. Larger horizontal values reflect a backness increase.

To quantify the observed patterns, model 6b tested these observations statistically. Model 6b examined tongue blade anterior backness during velar production in /g/, /gl/, /kl/, and /k/ as a function of phone type interacting with cluster position within the word, plus token repetition, and random effects accounting for speaker and token variability (cf. Section D.2). Figure 3.19 presents the estimates and confidence intervals for model 6b, together with their numeric values.

The predictions indicate that the tongue blade anterior was more retracted in clusters than in singleton /k g/ across all positions, and that this tongue sensor was in a more anterior position in /kl/ than in /gl/ (largest differences postvocalically). However, none of the contrasts of model 6b were significant (all p-values were greater than 0.05) and the effect sizes tended to be rather weak (due to large standard errors).

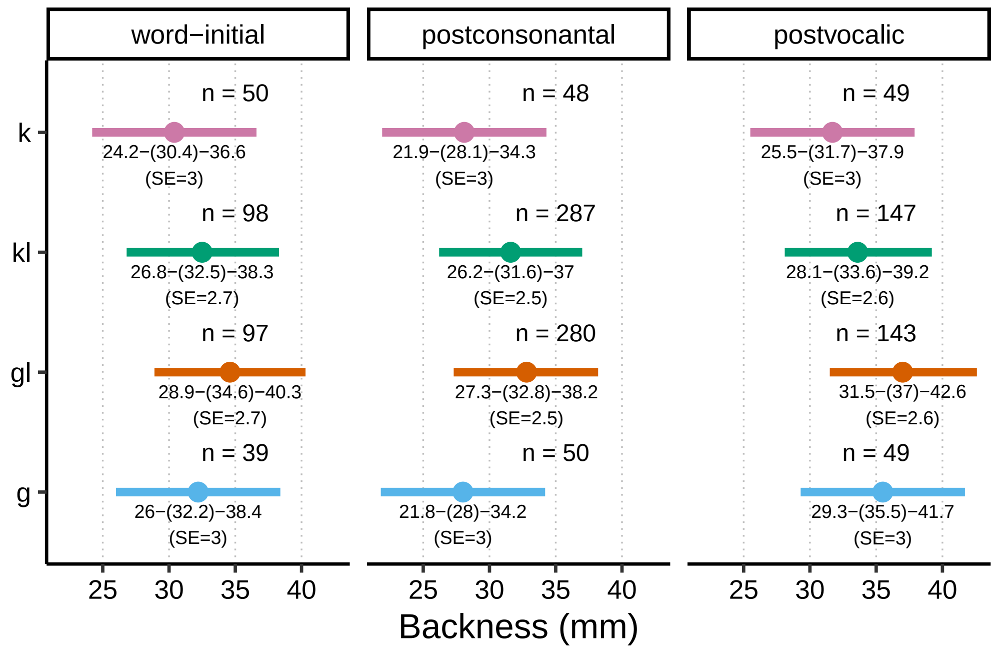


Figure 3.19.: Predictions for model 6b comparing the tongue blade anterior backness during the velar in /g k kl gl/ at the point of maximum constriction. Larger values represent a more posterior position of the tongue blade anterior sensor.

As in model 4b and 5b, the predictors of model 6b explained little variation in the horizontal axis. Concretely, the fixed effects accounted for 8% of the variation ($R^2m = 0.08$), while the whole model accounted for 93% ($R^2c = 0.93$).

Similarly to the tongue back and the tongue blade posterior, the tongue blade anterior during C_2 tended to be more backed in clusters than in singleton, and in /gl/ than in /kl/. However, the contrasts were small and not significant and the effect sizes weak. The variation in the data was explained by the random effects, and not by the predictors.

3.4.2.4. Summary

Section 3.4.2.1, Section 3.4.2.2 and Section 3.4.2.3 presented the changes in velar production in /k g/ compared to /kl gl/. While some patterns could be identified, all contrasts were minor and non-significant. Moreover, the predictors of all three models barely explained any of the variation in the data, which indicates that the variation was primarily caused by interspeaker differences and token variability. This contrasts markedly with models 2a and 3a, where the predictors were highly informative (R^2m between 41% and 22% respectively). As a result, the predictions do not align with the hypothesis that velars are more prone to palatalize, involving closure fronting, when followed by /l/, compared to in singleton position.

3.5. Discussion

The goal of this experiment was to gain better insight into the articulatory dynamics in OL clusters in order to broaden our understanding of the triggering mechanisms of OL palatalization and to assess the role of C_1 voicing and position within the word in these articulatory dynamics. To this end, articulography data were collected, which included tokens containing the clusters /kl gl/ and singleton /k g l/ in word-initial, postconsonantal, and postvocalic positions.

Traditionally, it has been thought that Romance OL palatalization had an articulatory trigger, arising from coarticulation between velars and laterals in OL clusters (cf. Section 1.3; Tuttle 1985; Recasens 2018). However, whether these coarticulatory dynamics affected both consonants or only the lateral was unclear. In Ibero-Romance, these coarticulatory effects appeared to have been influenced by C_1 voicing and cluster position within the word. Specifically, clusters containing voiceless obstruents (/pl fl kl/) appeared to have favoured OL palatalization more than OL clusters containing voiced obstruents (/bl gl/) and voiced stop spirantization might have prevented OL palatalization from occurring (cf. Section 1.2 and Section 2.2), as the outcome /l/ from word-initial /gl/ suggests.

If these historical patterns were caused by coarticulatory dynamics potentially dependent on the phonological context of OL clusters, the following patterns, consistent with velar and lateral palatalization, should be reflected in the articulatory data (cf. Section 3.1.1 and Section 3.1.3). Concerning lateral production, clusters should show higher and perhaps more fronted tongue blade posterior and anterior positions compared to singleton /l/. The same articulatory dynamics in the relevant tongue sensors should be found in /kl/ compared to /gl/ (voicing effect) and in postconsonantal /gl/ compared to postvocalic and word-initial /gl/ (cluster position effects due to voiced stop spirantization). For velar production, similar patterns should emerge: clusters should show more fronted tongue back and tongue blade posterior and anterior positions than singleton /k g/ and these dynamics should also be found in /kl/ compared to /gl/, and in postconsonantal /gl/ compared to postvocalic and word-initial /gl/.

The hypotheses regarding height changes during lateral production found support in the articulatory data. However, the hypotheses concerning horizontal position changes during velar and lateral production did not.

The articulatory data revealed significant patterns consistent with lateral secondary palatalization in OL clusters. Generally, the tongue blade posterior and anterior during lateral production were significantly higher in clusters than in singleton /l/, with larger differences between kl~l than between gl~l. Additionally, the tongue blade sensors were significantly higher in /kl/ than in /gl/ postvocalically. These findings align with the main indicator of lateral secondary palatalization - a raised tongue blade posterior (and possibly anterior; cf. Kochetov 2005 and Section 3.1.1) - supporting the hypothesis that coarticulation might have triggered lateral palatalization as the initial step in OL palatalization (cf. Section 1.5).

The differences arising from C_1 voicing and cluster position within the word can be explained by the effect of lenition: lenition did not affect /k/ by decreasing the constriction degree of the stop, and, consequently, the tongue blade sensors during velar production remained at a constant height in /k/ across all positions; in contrast, /g/ was affected by lenition, such that the velar constriction was significantly reduced postvocalically and partially word-initially, where the conditions for lenition were met, and /g/ was produced as an approximant or fricative. The reduced constriction of the voiced velar stop was reflected in lowered tongue blade sensors during lateral production. In contrast, the height of all sensors was similar in /kl/ and /gl/ in postconsonantal position, where the conditions for lenition were not met. These results align with the hypothesis that lenition reduced the observed articulatory dynamics potentially leading to lateral palatalization.

The backness differences in the tongue blade sensors during lateral production were minimal and non-significant, as were the changes in the tongue tip height or backness. Consequently, the primary articulator (the tongue tip) of the lateral did not vary its place of articulation, but the tongue blade sensors underwent significant raising in clusters, particularly in /kl/. Similarly, no significant differences were found in the backness of the tongue back, tongue blade posterior and anterior during velar production. In this regard, the articulatory data do not support the hypothesis that velars would be more likely to palatalize in OL clusters, or that C_1 voicing and cluster position within the word played a role in OL cluster coarticulation.

In summary, the observed articulatory dynamics are consistent with an articulatory origin of OL palatalization. Given that tongue blade posterior raising constitutes a main feature of secondary palatalization in laterals (cf. Section 3.1.1), the evidence for tongue blade posterior and anterior raising during lateral production aligns with the hypothesis that coarticulation with the preceding velar may have contributed to triggering OL palatalization. This effect appears to have been particularly pronounced when C_1 was voiceless.

These patterns also appear to support the hypothesis that lenition minimized the coarticulatory dynamics leading to OL palatalization: the differential effects across positions directly reflect the distribution of lenition processes, with stable dynamics where lenition was absent (/kl/, postconsonantal /gl/) and reduced dynamics where lenition occurred (postvocalic /gl/). Conversely, when C_1 was voiced, lateral palatalization appears to have been least likely postvocalically, where the height of the tongue blade sensors during lateral production was significantly reduced. How the found articulatory dynamics, including lenition effects, relate to the reconstruction of the diachronic pathways of OL palatalization is discussed in Chapter 4.

While these articulatory patterns provide evidence for the proposed mechanisms of OL palatalization, synchronic variation does not automatically translate into diachronic change. As Ohala's "experimental historical phonology" approach argues, synchronic variation reflects diachronic variation (Ohala 1993, 2003; cf. Chapter 1). For this reason, experimental phonetics is essential for understanding the triggering mechanisms of sound changes. However, not all synchronic variation becomes diachronic change since speech variation is usually filtered out by listeners. Rather, the coarticulatory effects found here support the possibility of such potential pathways for historical change rather than providing direct evidence of past processes.

The mechanisms behind the phonologization of synchronic variation are complex and still not well-understood. What is particularly noteworthy is that OL palatalization is attested in very few languages, although OL clusters are cross-linguistically common (Section 1.3). It is possible that not only coarticulation, but also acoustics or perception, facilitated the triggering of OL palatalization. However, it is also possible that the coarticulatory dynamics potentially triggering OL palatalization were enhanced by language-specific factors such as the phonological inventory or phonotactics, which might have contributed to the phonologization of this sound change. In my view, this might explain why OL palatalization was pervasive in Romance despite being a rare sound change overall.

Multiple post-alveolar and palatal sounds emerged in Late Latin and Proto-Romance, contrary to Latin, whose phonological inventory only included one palatal sound (cf. Repetti 2016: 658; Weiss 2009: 58, 512-3; Section 1.3). This emergence of palatal and post-alveolar sounds might have enhanced the way in which a possibly not-too-salient coarticulation between the velar C_1 and lateral C_2 in OL clusters was perceived. In this manner, the perception of the coarticulatory patterns leading to OL palatalization might have interacted with the presence of other palatal sounds in the phonological inventory, making speakers more responsive to the changes produced by coarticulation.

Future research should focus on studying the acoustic properties of OL clusters and how they differ compared to singleton laterals and velars. Acoustic changes in OL clusters produced by coarticulation could provide further insights into triggering mechanisms of OL palatalization (cf. Müller 2011). Additionally, such research may provide a deeper understanding of the factors behind the merger of the evolutionary pathways of /pl fl kl/ in Ibero-Romance, which resulted in the same outcomes across positions. Whether the observed articulatory dynamics, together with potential acoustic patterns, may alter the perception of OL clusters and how, also warrants investigation.

Concerning articulation, a more thorough examination of word-initial lenition and how it affects coarticulation between the members of OL clusters should be undertaken. Including prosodic position or lenition as variables in the statistical models would provide such insights. The difficulties arising from the landmark segmentation of the articulatory data might be avoided by considering the changes in the tongue sensors dynamically - as a function of time - rather than at static time points. Finally, it would be valuable to replicate this experiment in other Romance languages determine whether the observed articulatory dynamics are also present.

4. The reconstruction of OL palatalization

4.1. Introduction

In comparison to the outcomes and distribution patterns of OL palatalization in other Romance languages, the diachronic pathways of OL clusters in Galician, Portuguese, and Spanish seem less regular. The distribution of OL palatalization in other Romance varieties followed three patterns: /1) all OL clusters palatalized, e.g., in Tuscan Italian or Ribagorçan Aragonese; (2) only /kl gl/ palatalized, e.g., in Romanian or Northern Abruzzo Italian; and (3) only secondary postvocalic O(V)L clusters palatalized, e.g., in Catalan and French. In contrast, the distribution of OL palatalization was quite unusual in Ibero-Romance since mainly /pl fl kl/, i.e., OL clusters with a voiceless C_1, underwent OL palatalization.

The phonological outcomes of OL palatalization also tended to be uniform across word positions in other Romance varieties, e.g., Lat. PLANTA > Rib. Arag. [pʎ]*anta* and It. [pj]*anta*, Lat. COMPLĒRE > Rib. Arag. *cum*[pʎ]*ir* and It. *com*[pj]*ere*, and Lat. DŬPLĀRE > Rib. Arag. *do*[bʎ]*ar* and It. *do*[p:j]*are* (cf. Table 1.1). However, the Ibero-Romance languages exhibit diverse outcomes depending on the cluster configuration - specifically, the position of the OL cluster within the word (word-initial, postconsonantal, and postvocalic), C_1 length (short or long), and cluster type (primary OL clusters or secondary O(V)L clusters) (cf. Table 2.19). The outcome variation can be illustrated with the following examples: Lat. CLĀMĀRE > OSp. [ʎʝ]*ama*, Lat. CONCLAVĀRI > OSp. *con*[t͡ʃ]*avarse*, Lat. ACCLĀMĀRE > OSp. a[ʎʝ]*amare,* and Lat. ŎCŬLUS > OSp. *o*[ʒ]*o.*

A further issue relates to the regularity of OL palatalization in Ibero-Romance; compared to other Romance languages, the absence of OL palatalization is apparent in many Galician, Portuguese and Spanish inherited words, e.g., Lat. CLĀVIS > GP *chave*, OSp. *llave* vs. Lat. CLĀVUS > GP *cravo*, OSp. *clavo* or Lat. CUNĬCŬLUS > GP *cõelio*, OSp. *coneio* vs. Lat. PĔRĪCŬLUM > GP *perigo,* OSp. *peligro.* This observation has led scholars to question the status of OL palatalization as a regular sound change in Ibero-Romance. The historical and corpus-based research in Chapter 2 shed some light into these questions.

The compiled wordlist included inherited words from several Ibero-Romance varieties that were thought to come from an etymon containing an OL cluster. The corpus in Appendix A served as the basis for analysing the most common palatal and non-palatal outcomes of OL clusters in Ibero-Romance. In Galician-Portuguese, more than half of the lexical items exhibiting OL palatalization resulted in /ʧ/, which was the predominant outcome for all OL clusters.

By contrast, postvocalic /kl/ and /k(V)l/, and postvocalic and postconsonantal /g(V)l/ predominantly resulted in /ʎ/. Old Spanish words show more diverse outcomes: only postconsonantal /pl fl kl/ and /p(V)l f(V)l k(V)l t(V)l/ and post-vocalic /pː(V)l kː(V)l tː(V)l/ resulted in /ʧ/, whereas word-initial /pl fl kl/ and post-vocalic /pːl kːl fːl/ became /ʎ/, and postvocalic /kl k(V)l g(V)l/ resulted in /ʒ/. The outcomes of postconsonantal /g(V)l/ formed an special category and usually became /nʎ/ or /ɲ/ in both Galician-Portuguese and Old Spanish. Where OL palatalization did not occur, the attested non-palatal outcomes indicate the effect of obstruent lenition, liquid (dis)assimilation, liquid metathesis, and lack of syncope. In addition, it was confirmed that /pl fl kl/ were the OL clusters that regularly underwent OL palatalization. In contrast, OL palatalization in /gl/ could only be proven for secondary O(V)L clusters and OL palatalization in /bl/ could not be confirmed due to example scarcity.

Concerning the irregularity of OL palatalization, the analysis of Galician-Portuguese (and Galician and Portuguese) and (Old) Spanish inherited words showed that approximately 58% of the lexical items contained in the corpus exhibit this sound change. As discussed in Section 2.4.3, the absence of OL palatalization in the majority of words can be explained by multiple factors: competing sound changes, such as lenition or liquid dissimilation and assimilation, lack of syncope, a later introduction of the etymon in the language, influence from neighbouring linguistic varieties, or the prevalence of the conservative form of an inherited word over a popular variant (cf. Section 2.4.3). Since the absence of OL palatalization can be generally accounted for, it was concluded that OL palatalization in Ibero-Romance may have been a regular process, even though it appears irregular from a synchronic perspective.

Traditionally, OL palatalization has been thought to result from articulatory blending between C_1 and C_2 (e.g., Tuttle 1975; Recasens 2018; cf. Section 1.3). Articulatory blending, however, could only be possible in OL clusters containing a velar, since both velars and laterals are lingual segments while labials involve an independent articulator. In this regard, Chapter 3 provided valuable insights into the articulatory origin of OL palatalization.The experiment results revealed that the tongue blade anterior and posterior during the production of the lateral were significantly higher in /kl gl/ than in /l/. Since an increase in tongue blade posterior height is the main indication for secondary lateral palatalization, the results are in line with an articulatory origin of OL palatalization. Furthermore, the differences in the height of the tongue blade sensors during the production of the lateral were always largest postvocalically. This was observed between OL clusters and singleton /l/, on the one hand, and between /kl/ and /gl/, on the other hand.

Largest differences postvocalically suggest that the loss of constriction in /g/ was reflected in the significant reduction of tongue blade (both sensors) height during lateral production. The differences were largest postvocalically because the conditions for lenition or stop spirantization were always met in postvocalic position. In contrast, tongue blade height during the lateral did not vary between /gl/ and /l/ postconsonantally, where lenition is not expected. Word-initially, the differences were small but two patterns were observed in the production of word-initial /g/: whereas some speakers produced /g/ as an approximant because the prosodic pause was made after the token, other speakers produced /g/ primarily as a stop because the prosodic pause was made just before the token. These dynamics can help elucidate why word-initial /gl/ did not undergo OL palatalization. In the case of the velars, fronting of the tongue blade posterior and back are the main indicators of palatalization. The data showed no significant horizontal shift in the place of articulation of the relevant sensors during the production of the velar. As a result, the articulatory data does not support a change in the place of articulation of the velar in the initial stages of OL palatalization.

For the palatalization of /pl fl/, which are articulated with the lips and not subjected to lingual coarticulation, the role of analogy is usually called into place: OL palatalization would have been originally triggered in /kl gl/, specifically in secondary postvocalic O(V)L clusters, from which it would have spread to /kl gl/ and to /pl fl/ in other positions. There are two main reasons to assume that secondary postvocalic O(V)L clusters were the first OL clusters to palatalize: on the one hand, OL palatalization in secondary postvocalic O(V)L clusters is the most extended, reaching varieties that did not exhibit OL palatalization such as Catalan and French; on the other hand, OL palatalization in secondary postvocalic O(V)L clusters is attested at an earlier time than in primary OL clusters (cf. Section 1.5).

However, it is unclear how the OL palatalization of secondary postvocalic O(V)L clusters was triggered (cf. Section 1.4): some authors hypothesized one unique phonetic origin for the entire process of OL palatalization (Repetti & Tuttle 1987), while others assumed two different stages of OL palatalization with two different triggers, especially for Ibero-Romance (Zampaulo 2019a). In this regard, OL palatalization in primary OL clusters would have been the result of gestural blending or coarticulation between both members of the OL cluster. In contrast, OL palatalization in secondary postvocalic O(V)L clusters would have been caused by the weakening of the velar obstruent into a glide, which would have then palatalized the following lateral.

Despite numerous proposals for the palatalization of postvocalic O(V)L clusters in Ibero-Romance, their diachronic paths are still disputed, especially due to the lack of vowel raising next to /j/. In a similar manner, the evolutionary pathways of some OL clusters, such as primary postvocalic OL clusters (both with short and long obstruents), are unaccounted for by the scientific literature (Repetti & Tuttle 1987; Baker 2004; Zampaulo 2019a). Consequently, an exhaustive study of the sound changes that might have coexisted with OL palatalization is needed to accurately describe the diachronic developments of OL palatalization and to account for the lack of OL palatalization in some OL clusters.

The main goal of this chapter is, therefore, to seek an explanation for the development of OL palatalization in Ibero-Romance and for its diachronic pathways in Galician, Portuguese and Spanish. These goals and the following questions are addressed by integrating previous historical and typological research with the results from Chapter 2 and Chapter 3. This research overview includes information on the quality of the Latin lateral, previous proposals for evolutionary pathways, and sound change typology in Ibero-Romance, focusing on syncope, lenition, vowel raising, and syllabification. Sound change typology is especially important, since competing sound changes might have played a role in the phonological development of OL palatalization (cf. Section 2.4.1 and Section 2.4.3).

- How can the distribution of OL palatalization and its outcomes be explained under a single theory?
- What are the most typologically, historically, and phonetically likely evolutionary pathways for the outcomes of OL palatalization in Galician, Portuguese, and Spanish?
- How are the outcomes of postvocalic secondary O(V)L clusters better accounted for?

4.2. Previous historical research

This section provides an overview of the previous literature concerning the diachronic pathways of OL palatalization. In Section 4.2.1, the evidence for the quality of the Latin lateral is reviewed. This evidence is crucial for reconstructing the lateral in OL clusters, as it may have been alveolar or produced at a different (secondary) place of articulation. In Section 4.2.2, various proposals for the evolutionary paths of OL clusters in Galician, Portuguese, and Spanish are presented, which serve as a basis for the reconstruction of OL palatalization in Chapter 4.

4.2.1. The Latin lateral

Information about the quality of the Latin lateral comes from two main sources: (1) written testimonies of ancient scholars and grammarians; and (2) sound change. From these sources, Latin has been thought to have two, possibly three, allophones of /l/: a dark (velarized) lateral, an alveolar lateral, and a palatal(ized) lateral. While it is reasonably clear that there was a dark lateral allophone in Latin (see below), there is little evidence about the existence of a palatal(ized) lateral. In addition, it is unclear in which phonological contexts a lateral would have been dark or clear. The testimonies of ancient scholars regarding the pronunciation of /l/ (the full original Latin texts and their English translations) are found in Appendix E. These written testimonies are discussed and a summary of the descriptions about the nature of the lateral is provided below. Subsequently, several sound changes that support (or disfavour) the existence of dark and palatal lateral allophones are reviewed.

Different nomenclatures were used to describe the quality of /l/ in the various sources: *exilis/tenuis* may have described an alveolar/clear lateral or a palatal(ised) lateral; *pinguis/plenus* may have referred to a dark or velarised /l/; and *medius* may have described an alveolar /l/ (cf. Müller 2013: 187-96; Parker 1986: 27-43). Not all grammarians employed the term *medius* in their descriptions and there seems to be some disagreement in the phonological contexts motivating the different allophones. Following Parker (ibid., 35), Table 4.1 schematically summarizes the phonological context for the lateral allophones as described by the ancient sources.[1]

[1]The symbols used on Table 4.1. represent: "_" = position of the lateral being described, "#" = word-boundary, "$" = syllable-boundary, "C" = any consonant, "V" = any vowel, and "NA" = not available.

Table 4.1.: Summary of the quality of the allophones of Latin /l/ according to ancient descriptions.

	exilis/tenuis	*pinguis/plenus*	*medius*
Plinius (1th CE)	/l/_	_$C; _#; $C_;	#_; $_
Diomedes (4th CE)	_$C; #_(u)	NA	NA
Martianus (4th CE)	_/l/; _V	/pkgf/_	_#
Servius (4-5th CE)	/l/_	#_(/u/)	NA
Pompeius (5th CE)	/l/_	#_(/a, e/)	NA
Cosentius (5th CE)	/l/_; #_	_$C	NA

As Table 4.1 shows, the allophonic descriptions - often extrapolated from reported pronunciation errors - correspond to different phonological contexts, especially for *pinguis* /l/: while Plinius described a *pinguis* /l/ in syllable codas, word-finally and in OL clusters, Diomedes seems to have thought that syllable-final and word-initial /l/ (maybe only before /u/) had a *tenuis* pronunciation. Similarly, Martianus described a *pinguis* /l/ only for OL clusters, while Pompeius did it word-initially and Cosentius only syllable-finally.

Only Plinius and Martianus, who made a three-way distinction of the lateral allophones, mentioned OL clusters as containing a *pinguis* or dark /l/. However, they disagreed on the context of *medius* /l/, which has been traditionally understood as an alveolar /l/: while Plinius argued that *medius* /l/ appeared in simple syllable onsets or word-initially (preceding any vowel), Martianus claimed that *medius* /l/ appeared word-finally, i.e., in the syllable coda. Additionally, laterals in OL clusters and syllable-codas were *pinguis,* according to Plinius' descriptions, and should have been more velarized than in /l:/ or in syllable onsets. In contrast, the descriptions given by Martianus suggest that the lateral allophone in OL clusters (*pinguis*) was more velarized than in syllable codas (*medius*).

Exilis /l/ was almost unanimously depicted in the context of a geminate /l/.[2] It should be noted that the accounts given by Servius, Pompeius, and Cosentius might have referred to differences in the length of the Latin lateral, i.e., /l/ versus /l:/, and not necessarily to differences in its place of articulation. In their descriptions, lambdacism might have (partially) referred to the confusion between a long or *tenuis* /l:/ and a short or *pinguis* /l/ (cf. Parker 1986: 34-6).

Based on ancient scholarly testimonies, some phonological contexts attributed to a velarized /l/ versus a clear or palatalized /l/ appear acoustically unusual or even contradictory. For instance, it is unclear why /l:/ should have had a more fronted place of articulation than word-initial /li/ or why /Ol/ would have been more velarized than word-final /l/. However, it is essential to consider that these descriptions came from different geographical places and historical periods (cf. Torreblanca 1990); for example, Plinius' and Cosentius' accounts

[2]While the other grammarians did not specify whether /l/ would have been *exilis* in the first, the second or both parts of the geminate, Plinius clearly stated that only the second part of the geminate, i.e., the part of the geminate in the syllable onset, would have been *exilis* (cf. Parker 1986: 32).

are separated by 400 years of linguistic change. Another fact to bear in mind is that Latin was spoken over a vast empire, where (potential) dialectal differences were not just likely, but certain to have existed. For example, Müller (2011: 190) suggested that the accounts of Diomedes and Servius referred to different regional varieties of Latin.

Instances of vowel backing before /l/ confirm the dark quality of /l/ in at least Proto-Latin (cf. Parker 1986: 27-8; Weiss 2009: 62, 112, 139). The examples below show that /a e/ became /o/ and then /u/ before an apparently dark /l/, i.e., when /l/ was followed by a consonant (not /l/) or by a vowel (not /i/) (examples 1-7). Similarly, /l/ vocalization was a common occurrence in Romance when the lateral preceded a consonant (FF: 140-2, 416-7) (examples 8-11).[3]

Table 4.2.: Examples of the velarized nature of /l/

1. **elaiu̯a* 'olive'> **olaiu̯a* > **olēu̯a* > Lat. OLĪVA
2. **Sicelos* 'an inhabitant of Sicily' > **Sicolos* > SICULUS vs. **sikelia* 'Sicily' > SICILIA
3. **ad-al-ēscēns* 'growing up, young'> **adelēscēns* > *adolēscens* > Lat. ADULĒSCĒNS
4. *Hercles* > *Herceles* > *Hercoles* > HERCULES
5. **elōr* 'swan' > Lat. OLOR
6. **u̯elō* 'I want' > Lat. VOLŌ
7. **en-salsos* 'tasteless, stupid' > **insolsos* > Lat. ĪNSULSUS
8. Lat. AUSCULTĀRE 'to listen' > Gal. *esco*/jt/*ar*, Pt. *escu*/t/*ar*, Sp. *escu*/t͡ʃ/*ar*, Arag. *escu*/jt/*ar*, Cat. *esco*/lt/*ar*, Fr. *écouter*, It. *ascoltare*, Rom. *asculta.*
9. Lat. CULTELLUS 'small knife' > Gal. *co*/jt/*ello*, Pt. *cu*/t/*elo* and *cu*/jt/*elo*, Sp. *cu*/t͡ʃ/*illo*, Arag. *cu*/it/*ello*, Cat. *co*/lt/*ell*, Fr. *couteau*, It. *coltello*
10. Lat. MULTUS 'much, plenty, many' > Gal. *mo*/jt/*o*, Pt. *mu*/jt/*o*, Sp. *mu*/t͡ʃ/*o*, Arag. *mu*/jt/*o*, Cat. *mo*/lt/, Afr. *mout*, It. *molto*, Rom. *mult.*
11. Lat. ALTER, -RUM 'other' > Gal. *o*/wt/*ro*, Pt. *otro*, Sp. *otro*, Fr. *autre.*

The only evidence for a palatalized allophone of /l/ seems to be Warren Cowgill's derivation of Lat. VĪS: **u̯elsi* > **u̯ell* -> **u̯ells* > **u̯els* > **u̯eis* > **u̯ēs* > Lat. VĪS. The weakening of /l/ into a palatal glide might be considered as evidence of the palatal quality of /l/ (Parker 1986: 30).[4] A powerful piece of evidence against the existence of a palatal(ized) /l/ in, at least, Late Latin or the regional Latin spoken in the Iberian Peninsula, is that Lat. /lː/ usually became /l/ and not /ʎ/ in Romance, e.g., Lat. CAVALLUS > Gal. Pt. *cava*/l/*o*, Fr. *cheva*/l/, Rom. *ca*/l/. In contrast, Lat. /lj/ became /ʎ/ in most, if not all, Romance varieties, e.g., Lat. FILIUS > Gal. Pt. Arag. *fi*/ʎ/*o,* It. *fi*/ʎː/*o*. Since Lat. /lː/ > /ʎ/ is only attested in Astur-Leonese, Castillian, Catalan and Aragonese (Zampaulo 2019a: 49-51, 75; Parker 1986: 36-7), this change must have been an innovation. Furthermore, Parker (ibid.) pointed out that OSp. /ʎ/ (< Lat. /lj

[3] Historical evidence such as Lat. VŬLTU, -ŬRIS > GP *voutre* and the position of the lateral in the syllable coda support the following evolution: Lat. /ult/ < /owt/ > /ojt/ or /ujt/ (cf. FF: 141, 417; cf. Penny 2002: 50).

[4] "However, note that all that is required is that bright *l* be allophonically distinct from dark *ɫ*, and Cowgill who uses the term palatal in his discussion of the change (32-33) is himself careful to point out that bright *l* is best considered 'non-velar' [...]" (Parker 1986: 30).

k(V)l g(V)l/) underwent a delateralization and backing process, which did not occur in the outcome of Lat. /lː/, which remained /ʎ/. Compare: Lat. FILIUS > Sp. *hi*/x/*o* vs. Lat. ŎCŬLUS > Sp. *o*/x/*o* vs. Lat. CAVALLUS > Sp. *caba*/ʎʝ/*o*.[5]

All this evidence for the quality of the Latin lateral has been interpreted in different ways. Thus, Weiss (2009: 62) argued that Latin only had two allophones: a velarized alveolar lateral [ɫ] "[i]f a back vowel, *e* or a consonant other than *l* follows [...]" (ibid.); and an apical (alveolar) lateral, when followed by a high front vowel or in /lː/. Similarly, McCullagh (2011: 88) argued that a velarized lateral was found in syllable codas and an alveolar lateral elsewhere. Sen (2015: 15-41) described three allophones for the lateral: a velarized lateral in syllable codas, a palatalized lateral before /i/ or in /lː/, and a lateral with underspecified body tongue position in syllable onsets, which would presumably have be an alveolar lateral. Depending on the vowel following it, this alveolar lateral would be darker or lighter, but never completely velarized or palatalized.

This review suggests that there is little evidence to support the existence of a palatal(ized) lateral, specially in OL clusters, although it is certain that the Latin lateral had different allophones. In a similar way, the presence of a velarized lateral allophone in OL clusters, as it was described by some ancient scholars, is also questionable.

4.2.2. The evolutionary pathways of OL palatalization in Ibero-Romance

Various diachronic pathways have been proposed for OL palatalization in Galician, Portuguese, and Spanish, particularly for primary OL clusters. According to Williams (1962: 62-3), the phonological steps from Latin word-initial OL clusters to the Galician and Portuguese outcomes were the following: [pl] > *[plː] > *[pʎ] > *[pj] < *[pt͡ʃ] < [t͡ʃ] < [ʃ]. For Spanish, the changes until the palatalization of the lateral would be the same. From that point, the labial stop was lenited, and eventually lost, instead of the lateral. The spread of [ʎ] from one OL cluster to others is not discussed; Williams only mentioned that the development of /kl/ and /fl/ was similar to that of /pl/ (ibid.).

Torreblanca (1990: 317-27) argued that /pl fl kl/ merged in Old Spanish. He based his account on hypercorrections and confusions of OL clusters found in texts between the 11th and 13th centuries from Castile: e.g., Lat. CLAUSA 'closed, enclosed, inaccessible' was written as OSp. *flausa, plosa* and *flosa*, Lat. ADCLĀMĀRE/ACCLĀMĀRE 'to shout, applaud' as OSp. *aflamasen, afflamaront* and *adflamauit*, Lat. APPLĬCĀRE (< ADPLĬCĀRE) 'to bring nearer, attach' as *Apleca, Afleca* and *Afflega* (toponym), and Lat. PLĀNAS (> Lat. PLĀNUS 'flat, ground level') as OSp. *Planes, Flanes, Flanez, Llanes* (toponym) (ibid., 319-20). In the reviewed documents, Torreblanca found two instances of <cl> written as <pl> and 19 instances of <cl, pl> written as <fl>, but no examples of <pl, fl> written as <cl> or <fl> written as <pl>. Since etymological

[5]"Finally, the developments in S. Italian (Calabrian, Sicilian, Sardinian, etc) argue against a palatal pronunciation, as [ll] > [ɖɖ], e.g., *stēlla* > Sic. *stiɖɖa*, while VLat. -*li̯*- > Sic. [g'g'], Sard. [dz]: *folia* > Sic. *foggya*, Sard. *fodza*. Such retroflex outcomes argue for a plain rather than a palatal pronunciation of [ll], since it has a different outcome from the palatal [l'l'] < -*li̯*-." (Parker 1986: 37). The phonetic notation of the voiced dental retroflex in the original text is different.

<pl> and <cl> were often written as <fl> but not the other way around. Torreblanca argued that <fl> may have represented the same pronunciation as <hl, hll>, namely /h/. He claimed that a trace of the lenited obstruent was still present in words written with <hl, hll>, such as *Hllantada* (< Lat. PLANTĀRE 'to plant') or *hlegó* (< Late Lat. PLĬCĀRE 'to fold, bend, coil') (ibid., 320, 324). This confusion in grapheme use might have been caused by the lack of differentiation between /f/ and /h/ amongst the Castilian speakers. The confusion between /f/ and /h/ was probably due to the debuccalization and later loss of /f/. Moreover, Latin orthography conditioned the writing of /h/ as <f> (ibid., 324-7).

The evolutionary path that Torreblanca described for Spanish word-initial clusters can be summarized as follows: [kl] > *[kʎ] > *[tʎ] > *[pʎ] > [ɸʎ] > [hʎ] > [ʎ] (ibid., 325-6). Torreblanca ventured that *[kʎ] became *[tʎ] due to the palatalization of the obstruent, which then became a dental consonant articulated with the tongue predorsum. Due to the difficult pronunciation of [tʎ] and perhaps due to acoustic confusion, [tʎ] would have become [pʎ]. The labial stop in [pʎ] eventually lenited, which induced the merger with the results of /fʎ/ (ibid.).

Zampaulo (2019a: 62-70) also discussed the outcomes of word-initial OL-clusters. Following Lloyd (1987), Zampaulo stated that the palatal lateral spread from /kl/ to /pl fl/ through analogy. Following Torreblanca (1990), he further argued that [kʎ] merged with [pʎ] in Old Spanish. Subsequently, [pʎ fʎ] underwent the same lenition process that word-initial [f] underwent (ibid., 67-8) and their outcomes merged. Zampaulo proposed the following evolutionary path: [pl kl fl] > *[pl kʎ fl] > *[pʎ kʎ fʎ] > *[pʎ fʎ] > *[ɸʎ] > *[hʎ] > [ʎ].

In Galician-Portuguese, the lack of word-initial obstruent lenition would have facilitated the delateralization of [ʎ] into [j]. At this point of the evolution, [pj] and [fj] merged with [kj] by analogy and the interaction between [k] and [j] eventually resulted in [t͡ʃ] through the intermediate steps *[c] or *[cç]. According to this proposal, the complete evolutionary path was: [pl kl fl] > *[pl kʎ fl] > *[pʎ kʎ fʎ] > *[pj fj kj] > *[kj] > *[c] or *[cç] > [t͡ʃ]> [ʃ] (ibid. 68-9). Postconsonantal OL clusters, which resulted in [t͡ʃ] in Galician-Portuguese and Spanish, would have shared this evolution: the lenition of C_1 would have been prevented, facilitating instead the change [ʎ] > [j], because the OL cluster was preceded by a consonant (ibid., 69-70). The development of postvocalic primary OL clusters, both with short and long obstruents, was not discussed.

Recasens (2020b: 150, 159, 168) proposed different reconstructions for Lat. /pl fl kl/ > GP [t͡ʃ]. On the one hand, /pl/, /fl/, and /kl/ could have evolved independently from each other through the following pathways: /pl fl/ > *[pʎ fʎ] > [pj fj] > [pc fc] > [pt͡ʃ] or [c] > [t͡ʃ] > [ʃ] and /kl/ > *[kʎ] > [kj] > [c] > [t͡ʃ] > [ʃ]. In the case of the independent evolution of /pl fl/ and /kl/, the post-alveolar affricate resulting from /pl fl/ would have been created through a glide hardening process. On the other hand, /pl kl fl/ could have had a common evolution, in which the outcomes of /pl fl/ and /kl/ would have merged. This diachronic pathway is similar to the one proposed by Zampaulo (2019a): /pl fl kl/ > *[pl fl kʎ] > [pʎ fʎ kʎ] > [kʎ] >[kj] > [c] > [t͡ʃ] > [ʃ] or /pl fl kl/ > *[pl fl kʎ] > [pʎ fʎ kʎ] >[pj fj kj] > [kj] > [c] > [t͡ʃ] > [ʃ] (ibid.). Recasens did not elaborate on the possible reasons behind the merger of the diachronic pathways of /pl fl kl/.

Mariño Paz (FF: 329-31) also claimed that the palatalization of the lateral began in /kl/ and /ʎ/ would have later spread to /pl fl/. Following Lapesa (1981) and similar to Recasens's first reconstruction, Mariño Paz stated that the outcome /t͡ʃ/, which is the most common result of OL palatalization in Galician-Portuguese, would have independently arisen in /pl/, /fl/, and /kl/. These OL clusters would have independently resulted in /t͡ʃ/ due to the combination of the voiceless occlusion and the palatal place of articulation (ibid., 330).

In contrast to previous reconstructions, Baker (2004: 123-33) proposed markedly different evolutionary paths for Spanish word-initial OL clusters: [pl fl kl] > *[p^{ʎ} f^{ʎ} k^{ʎ}] > *[$^{(k)}$ʎ $^{(k)}$ʎ $^{(k)}$ʎ] > [ʎ ʎ ʎ] (ibid., 131-3). After the palatalization of the lateral, Baker argued that Latin OL clusters would have surfaced as stops with a palatal lateral release ([p^{ʎ} f^{ʎ} k^{ʎ}]) because "[...] clusters involving stop closure plus laterals would constitute articulatorily complicated arrays of features and as such could be ripe for some reanalysis" (ibid.,126). The quasi-affricates in [p^{ʎ} f^{ʎ} k^{ʎ}] would have been the result of the reduction of the gestural timing between C_1 and C_2 (ibid., 126-31). As a next step, word-initial fortition made [ʎ] more salient (ibid., 129). Consequently, the obstruents were lenited, becoming vestigial occlusions of the preceding fully realized palatal lateral, before being subsequently lost (ibid., 132). Postconsonantal OL clusters or postvocalic primary OL clusters were not discussed in Baker's account.

The reconstruction of OL palatalization in secondary postvocalic OL clusters, e.g., /k(V)l g(V)l/, has been a matter of debate. Generally, two main theories have been postulated to account for OL palatalization in these clusters: the glide or yod hypothesis and the gestural or consonant hypothesis. According to the glide hypothesis, the velar stop in /k(V)l g(V)l/ would have weakened into [j] due to its position in the syllable coda. Syncope of the unstressed vowel would have triggered resyllabification of the velar stop, previously in the syllable onset. That palatal glide would have palatalized the following lateral and would have been subsequently absorbed by it. Baker (2004: 120-3) and Zampaulo (2019a: 52-62), among other scholars, subscribed to this theory. Zampaulo proposed the following evolutionary pathway for the palatalization of secondary postvocalic O(V)L clusters in Ibero- and Gallo-Romance: [-k.l-, -g.l-] > *[-ç.l-, -ʝ.l-] > *[-j.l-] > *[-j.l^{j}-] > [ʎ] (ibid., 52; see also Lloyd 1987: 253-4). This diachronic pathway was argued to be the most plausible because it follows sound change patterns attested in Western Romance such as the weakening of the velar obstruent in the clusters /ks kt/ (cf. Section 4.3.3). Old Spanish /ʒ/, which devoiced and became Spanish /x/, would have arisen due to the delateralization of /ʎ/ and the later fortition of the resulting palatal glide: [ʎ] > *[j] > *[ʝ] > [ʒ] (ibid., 61-2).

In contrast, Wireback (2009: 57-63) rejected the hypothesis that the velar stop weakened into a palatal glide, i.e., /kl/ > *[çl] > *[jl] < [ʎ]. He argued that velar weakening would have only been possible if the velar was in the coda, which he considered to be highly unlikely. In addition, Wireback claimed that the lack of changes in the vowel contravened the presence of a palatal glide. Concretely, the diphthongs *[oj] and *[aj] (with the hypothetical palatal glide) should have resulted in Sp. [we] and [e], respectively. However, inherited words with

OL palatalization do not show these vowel changes, e.g., Lat. ŏcŭlus > [ɔklu] > [ojlo] > [weʎo] > ***huejo* 'eye' instead of the attested Sp. *ojo* (cf. *ojo* (Sp.) in Appendix A) or Lat. nŏvācŭla > Sp. ***naveja* instead of the attested Sp. *navaja* (cf. *navaja* (Sp.) in Appendix A).

Mariño Paz (FF: 355) criticized the glide hypothesis for similar reasons. Like Wireback, Mariño Paz argued that the glide should have fronted and raised the previous /a/ to /e/ and form a diphthong with it in Galician-Portuguese, which is not attested: compare Lat. factus 'deed, action' > Gal. Pt. *feito* with Lat. grācŭla 'jackdaw' > Gal. *gralla* (cf. *gralheira* (GP) in Appendix A and see Section 4.3.3). In addition, he argued that the weakening of a velar stop into [j] cannot explain the evolution of /ngl/ > [ɲ(ʎ)] because the stop should not have weakened in postconsonantal position. The weakening of the velar stop into a glide would have been induced by its position in the syllable coda. However, /g/ could not have been in the coda if it was preceded by a consonant. Therefore, Mariño Paz argued that the lateral became a glide through delateralization of [ʎ], just as in word-initial or postconsonantal OL clusters.

Recasens (2016a: 211; 2014: 163) supported the palatalization of all OL clusters, including secondary postvocalic OL clusters, through articulatory blending, i.e, blending between the back dorsal lingual gesture for /k g/ and the apical front lingual gesture for /l/. Consequently, he reconstructed the evolutionary pathway for /ng(u)l/ as follows (ibid.): [ŋgl] > *[ŋgʎ] > *[ɲɟʎ] >[ɲʎ] > [ɲ]. After the palatalization of the lateral through coarticulation, /g/ would have become alveolopalatal due to blending with the following /ʎ/. Subsequently, [ɟ] underwent articulatory reduction and was elided due to its status as the second member of a homorganic three-consonant cluster.[6] Lastly, progressive nasalization would have caused [ɲʎ] to shift to [ɲ].[7]

In summary, various reconstructions have been proposed for word-initial and postconsonantal OL clusters in Galician, Portuguese, and Spanish. However, other primary OL clusters - such as postvocalic clusters with short and long obstruents - have received little attention in the literature. Concerning secondary postvocalic OL clusters, two triggers for OL palatalization have been hypothesized: (1) weakening of the coda velar into [j], which would have palatalized the following lateral; and (2) coarticulation, following the same mechanism as in other OL clusters. Criticism of the glide account has focused on two factors: the absence of vowel raising and diphthongization due to the influence of the palatal glide, and the resyllabification of the OL cluster. These sound change processes are examined in the following section.

4.3. Sound changes related to OL palatalization

Section 2.4.1 and Section 2.4.3 showed that the absence of OL palatalization in some lexical items can be related to sound changes such as syncope and lenition. Syncope is of special importance because it gave rise to secondary O(V)L clusters, e.g., Lat. ŏcŭlus > oclus > OSp. *ojo*;

[6] Stop elision should be facilitated by delayed velar lowering when the first member of the cluster is a nasal (Recasens 2014: 158).

[7] See also Gutiérrez (2018) for a phonetically-based account of the different outcomes of /ngul nbul ndul/.

without syncope, these clusters would have not formed, preventing OL palatalization. Most lexical items not exhibiting OL palatalization due to syncope are of Galician-Portuguese origin, e.g., Lat. POPULUS > GP *poboo*, Lat. TABULA > GP *tavoa* or *taboas*, Lat. BACULUM > GP *bagoo*, Lat. GLANDŬLA > GP *landoas*, Lat. MACULĀRE > GP *magoasse*, Lat. PERICULUM > GP *perigo* or *prigoo* (also *perigros*), or Lat. TITULUS > GP *tidoo* (cf. Appendix A) . As a result, some scholars (e.g., Williams 1962: 4, 53) hypothesized that syncope in Galician-Portuguese was less regular than in other Romance varieties such as Spanish. Section 4.3.1 provides an overview on the phonological contexts where syncope acted and whether Galician-Portuguese had a tendency to preserve unstressed vowels.

The corpus results also revealed that lenition, i.e., stop voicing and stop spirantization, could have prevented OL palatalization, e.g., Lat. DŬPLĀRE > GP *dobrava* and Sp. *doblado*, Lat. DŬPLĬCĀRE > Sp. *doblegela*, Lat. TRĬPLUS > Sp. *treble*, Lat. GLACĬĒS > GP *lazo*, Lat. GLATTĪRE > OSp. *latidos*, Lat. GLANS, -DIS > GP OSp. *lande*. The study of lenition processes - stop voicing, voiced stop spirantization, and degemination - is essential not only for explaining the absence of OL palatalization in some lexical items, but also for reconstructing OL palatalization patterns. Their mechanisms and chronology are particularly crucial for understanding the diachronic pathways of postvocalic OL clusters (both with short and long obstruents) and word-initial /gl/.

Vowel raising and syllabification are also discussed in this section. As seen in Section 4.2.2, the diachronic pathways of secondary postvocalic O(V)L clusters have been a matter of debate. Two main theories have been proposed to account for OL palatalization in these clusters: the glide hypothesis, which assumes the weakening of the coda velar into a palatal glide, and the articulatory hypothesis, which assumes coarticulation between the velar C_1 and the lateral C_2. The main arguments against the glide account fall into two categories: the absence of vowel raising and diphthongization due to the influence of the palatal glide, and the resyllabification of the OL cluster. For an accurate reconstruction of OL palatalization in secondary postvocalic O(V)L clusters, the discussion of vowel raising and syllabification is crucial.

4.3.1. Syncope of unstressed vowels

Syncope is the process through which an unstressed medial vowel is lost. This was an essential step in OL palatalization, since the loss of the unstressed vowel between C_1 and C_2 led to the formation of secondary O(V)L clusters. Syncope was a pervasive phenomenon throughout Latin history, from Early Latin to Late Latin and all the way to the Romance languages. It is still unclear what triggered the loss of unstressed vowels because, despite following general rules, syncope targeted words irregularly (Weiss 2009: 122; Leumann 1977: 95; Rix 1966: 157). In addition, the process of syncope is closely related to vowel epenthesis or anaptyxis, i.e., the addition of a vowel between two consonants, and these processes may be confused in a particular form of a word.

First of all, the conditions for vowel syncope in Latin and how it interacted with anaptyxis are examined. Subsequently, syncope in Late Latin or Proto-Romance is reviewed. And lastly, the regularity of syncope in, on the one hand, Galician and Portuguese, and, on the other hand, Spanish, is discussed.

An understanding of Latin stress is necessary to study syncope, as only unstressed vowels were lost. With the rise of a new stress system in Proto-Italic, where stress was fixed on the initial syllable, all non-initial syllables were either weakened or lost. Syncope at this time (around the 6th century BCE) usually affected short vowels in syllables without a coda (open syllables), near a sonorant consonant and/or a fricative: **pōklelo-* > **pōkl̥l*$_2$*o-* > Lat. PŌCILLUM 'little cup' (Weiss 2009: 100-11, 122-3). While post-tonic short vowels were being lost, vowel epenthesis became a regular phenomenon between certain plosives and a lateral in Early Latin. Both forms of a word, with and without anaptyxis, often coexisted for a long time, even until Classical Latin (Meiser 2002: 89; Sen 2015: 121-4). Such forms were plentiful in the works of Plautus, e.g., Lat. POPLI vs. POPULI 'people', Lat. PERICLO vs. PERICULO 'danger', and Lat. PŌCLA vs. PŌCULUM 'cup' (ibid., 121-69; Väänänen 1963: 42-3).

It is argued that an epenthetic vowel arose between C_1 and C_2 when a cluster was tautosyllabic, i.e., when the cluster was not separated by a syllable boundary (ibid., 127, 149). The following suffixes illustrate this: PIE **-tlo-* > **-klo-* > OLat. *-cl-* > Lat. *-cul-,* PIE *-dhlo-* > **-blo-* > OLat. *-bl-* > Lat. *-bul-*, and PIE **-pl-* > Lat. *-pul-* (ibid., Meiser 2002: 89). Consequently, the above-mentioned words containing OL clusters from Plautus, e.g., Lat. POPLI, reflected older or more conservative forms that did not have an epenthetic vowel (Sen 2025: 125-69), and did not represent forms that underwent syncope.

At a later time, syncope continued affecting short vowels in open syllables in the proximity of a sonorant, or between obstruents (cf. Leumann 1977: 95-9; Rix 1966: 156). Yet, because of the new accentual system of Classical Latin, defined by the penultimate rule, not only post-tonic vowels, but also pre-tonic ones could also be lost. According to the penultimate rule, the penultimate syllable always bore the stress in a disyllabic word. If the word had more than two syllables, the stress fell in the penultimate syllable if it was long, i.e. if the syllable contained a long vowel, a diphthong, or if the vowel was followed by a (long) consonant. In contrast, the stress fell in the antepenultimate syllable if the penultimate syllable was light, i.e., if the syllable had a short vowel nucleus and no syllable coda (cf. Weiss 2009: 110).

Leumann (1977: 95-9) claimed that a short vowel may have been syncopated in Latin if it was in the proximity of a rhotic, lateral or nasal, e.g., CALIDUS > CALDUS 'hot, warm', SUPERĀ > SUPRĀ 'on top of, above', TABULA > TABLA 'board or panel of wood', *vīnidēmia > VINDĒMIA 'gathering of grapes for wine'. Between identical stops or between obstruents, syncope was also be possible (ibid., 95-98): e.g., POSITUS > POSTUS 'position, site' or OPIFICĪNA > OFFICĪNA 'workshop, factory'. Rix (1966: 156) stated that syncope only took place in open syllables before single consonants, with the exception of closed syllables with /s/ in the coda. In these phonological contexts, a medial unstressed vowel in Latin could have three different fates (ibid., 159): (1) it could be syncopated; (2) it could be weakened and its quality changed; and (3) it could remain unsyncopated because of analogy or because of a resulting cluster which would have been ill-formed under Latin phonotactics.[8]

[8]See Mester (1994) for a theory of syncope in Old and Classical Latin involving foot structure and for different

Williams (1962: 52-3) claimed that a vowel in a penultimate syllable was syncopated in Late Latin in words stressed in the antepenultimate syllable when the vowel was: (1) preceding /l/ or /r/; (2) between /l r/ and /d m p/; (3) between /s/ and /t/; and (4) after a labial consonant. He further claimed that unstressed vowels underwent syncope in Portuguese "[i]f the posttonic penult was *e* or *i* […], preceded by *l, m, n* or *r*, or preceded by *c* and followed by *t* […]" (ibid., 52). However, he argued that "[i]n the Vulgar Latin of the Portuguese territory this vowel fell much less frequently than elsewhere, particularly when followed by *l* or *r*, and when preceded by a labial […]" (ibid., 4). Among the words preserving unstressed vowels, he cited Pt. *névoa*, *perigo*, *tábua* and *povo*. Weiss (2009: 511) and Lloyd (1987: 200) also agreed with the fact that Galician-Portuguese resisted syncope of post-tonic vowels more than other Ibero- and Gallo-Romance languages.

Neither Mariño Paz (2017: 220-222) nor Ferreiro Fernández (1996: 59-61) shared the hypothesis that Galician-Portuguese had a tendency to preserve penultimate unstressed vowels in words with antepenultimate stress. They implied that these words entered Galician-Portuguese at a later time, when syncope was no longer productive. Nunes (1975: 68-9) and de Lima Coutinho (1972: 106-7) agreed with a later introduction of these words in the language. Yet, it may be difficult to argue that lexical items without syncope entered the language at a later time: Lat. NĔBŬLA 'mist' > GP *névoa* shows lenition of the bilabial stop, which dates from the 1st century (cf. Section 4.3.2.2), as well as GP *tavoa* and *tauoa* for Gal. *táboa*, Pt. *tábua* (> Lat. TABŬLA 'board') (FF: 222; de Lima Coutinho 1972: 113) (cf. *tavoa* (GP), *tauoado* (GP), and *névoa* (GP) in Appendix A).

It is difficult to determine when syncope began because it was a recurrent process in the history of Latin. One of the first attestations of syncope between a stop and a lateral can be found in the Appendix Probi, which dates between the 3rd and the 5th centuries (cf. Weiss 2009: 504; Meiser 2002: 67): "*speculum non speclum*", "*angulus non anglus*" and "t*abula non tabla*" are some examples. In addition, syncope was closely related to and often intertwined with anaptyxis, which complicates attributing specific word forms to one process or the other.[9]

According to Leumann's and Rix's accounts, most words with the suffixes -*cul*-, -*gul*- and -*bul*- should have been syncopated in Latin or Late Latin: unstressed short /u/ was in an open syllable followed by a single sonorant. However, unsyncopated forms often coexisted with their syncopated equivalents (Hall 1976: 188; Väänänen 1963: 41). In addition, many words preserved the unstressed post-tonic vowel in Galician-Portuguese (cf. Section 2.4.1.2), effectively preventing OL palatalization, e.g., Lat. NĔBŬLA > Gal. *néboa*, Pt. *névoa* (see *névoa* (GP) in Appendix A). The absence of syncope suggests two different scenarios: either unstressed vowels tended to be preserved in Galician-Portuguese, in line with the opinions of Lloyd and Williams; or the unsyncopated lexical items entered Galician-Portuguese at a later time, when

conditions triggering syncope in Classical Latin and Late Latin. Loporcaro (2010) presents a critical view of Mester's theory.

[9] "Anfangsstufe und Endstufe sind bei Synkope und Anaptyxe einander entgegengesetzt, so bei *cl* und *cul*: Anaptyxe *pōclum* > *pōculum*, Syncope *oculus* > *oclus*, demin. *aedicula* > *aedicla* […]; im gleichen Wort (Instr.-Nomen) **cubiclum* > *cubiculum* > *cubuclum* […]. Die beiden Vokalwandel laufen jahrhundertelang unter unklaren örtlichen und sozialen Bedingungen neben einander her, denn die Synkope reicht von vorhistorischer Zeit bis ans Ende des Altertums" (Leumann 1977: 103).

syncope was no longer productive, as argued by Mariño Paz and Ferreiro Fernández. Given that some words show early instances of voiced stop spirantization, e.g., Lat. TABŬLA > GP *tavoa,* unsyncopated words probably derive from etyma in which the unstressed vowel was preserved. This preservation tendency in Galician-Portuguese accounts for the absence of OL palatalization in some lexical items (cf. Section 2.4.3).

4.3.2. Lenition

In general terms, lenition[10] is a process through which the constriction degree or gestural duration of a sound is reduced (cf. Recasens 2016b). Lenition affected almost all Romance languages or varieties to a certain extent over different periods of time and targeted numerous segments. This section focuses on three lenition processes affecting postvocalic stops, in one case also sonorants: the simplification of geminate consonants, the voicing of voiceless stops, and the spirantization and loss of voiced stops. These three sound changes were deeply interrelated, since they fed and bled each other, and they are considered to be part of a chain shift of lenitive sound changes.

However, it is unclear how exactly these sound changes related to each other and in what order they took place: some linguists claimed that the simplification of geminates triggered voicing and spirantization (Veiga 1988: 17-78; Penny 2002: 75-6): others claimed that the voicing of voiceless obstruents triggered this chain shift (Ariza 1994: 23-43; Ariza 2012: 45-52); and yet others argued that the spirantization of the voiced stops was the trigger (Lloyd 1987: 141). To determine a relative chronology for these three processes, as well as their possible causes (structural, phonetic, substratal) goes beyond the scope of this thesis. However, historical evidence is presented that offers a glimpse into the relative chronology of these lenition processes and how they interacted.

A better understanding of the mechanisms and chronology of lenition is necessary for two reasons. Firstly, stop voicing and voiced stop spirantization can account for the absence of OL palatalization in some lexical items, e.g., Lat. DŬPLĬCĀRE > Sp. *doblegela* and Lat. GLACĬĒS > GP *lazo*. Secondly, the chronology of lenition is crucial for reconstructing the diachronic pathways of OL palatalization. For instance, whether degemination preceded or followed OL palatalization determines how the phonetic development of OL clusters with long obstruents (/k:l k:(V)l/), should be reconstructed.

[10] For the surface realization of the Galician, Portuguese, Spanish, Catalan and French examples in this section, cf. Álvarez and Xove (2002: 40), Álvarez Blanco (1991: 523-4), Dubert-García (2005), Regueira (2010: 15), Mateus and d'Andrade (2000: 11), Zampaulo (2019b: 144), Hualde (2005: 141-2), Clegg and Fails (2018: 267-79), and Bonet and Lloret (1998). These realizations are illustrative and they have been described differently in the literature. Furthermore, the realization of a sound as a fricative, approximant, or even as a stop, depends on the speaker and on the particular situation in which speech is being used.

4.3.2.1. Voicing of Voiceless Stops

The following examples show that postvocalic voiceless stops usually underwent voicing in Ibero- and Gallo-Romance.[11] In contrast, postvocalic voiceless obstruents remained voiceless in many Italo-Romance varieties and in Romanian. However, there are some exceptions to these generalizations: this sound change was absent in some Aragonese and Gascon dialects, such as in Bielsa (Aragon) (Veiga 1988: 20-1; FF: 361).[12]

Table 4.3 illustrates the voicing of voiceless stops, which also occurred when the stop was followed by a rhotic or lateral. Nevertheless, this lenition process affected all voiceless obstruents (cf. Lausberg 1967: 34-8; FF: 357).

Table 4.3.: Evolution of the Latin postvocalic voiceless stops in Romance

Latin	Inherited words in Romance
SA/p/ĔRE	Gal. Sp. Cat. *sa*[β]*er*, Pt. *sa*[b]*er*, Fr. *sa*/v/*oir*, It. *sapere*
CA/p/RA	Gal. Sp. Cat. *ca*[β]*ra*, Pt. *ca*[b]*ra*, Fr. *chè*/v/*re*, It. *capra*, Rom. *capră*
VĪ/t/A	Gal. Sp. Cat. *vi*[ð]*a*, Pt. *vi*[d]*a*, Fr. *vie*, It. *vita*, Rom. *viață*
LA/k/ŪNA	Gal. *la*[ɰ]*oa*, Pt. *la*[g]*oa*, Sp. *la*[ɣ]*una*
LA/k/RĬMA	Gal. Sp. *lá*[ɰ]*rima*, Pt. *lá*[g]*rima*, Cat. *llà*[ɣ]*rima*, Fr. *larme*, It. **lagrima/lacrima*, Rom. *lacrimă*

It is difficult to precisely determine when stop voicing was an active sound change in the Iberian Peninsula (CRC: 193-204). Mariño Paz (FF: 377-8) claimed that this process must have begun before the 5th century[13] and was still active in the 8th and 9th centuries because postvocalic voiceless stops in Arabic borrowings also exhibit it (ibid., 361; also Lloyd 1987: 228-30). Several examples of this sound change from attestations found in Galician-Portuguese territory before the 13th century are provided, such as *abut* (< Lat. APUD, year 939), *cabra* (< Lat. CAPRA, year 942), *marido* (< Lat. MARĪTUS, year 932), *felgaria* (< Lat. *FĪLĬCARĬA, ca. 742-936 and year 926), *sagratissimo* (< Lat. SACRATĬSSĬMUS, year 939), *terredoiro* (< Lat. TERRĬTŌRĬUM, year 942). Lloyd (1987: 228) also provided several examples of this phenomenon, but from Latin documents written in the Iberian-Peninsula: LEBRA (< Lat. LĔPRA, 7th century), IUBENTUDIS (< Lat. IŬVENTŪTIS, genitive singular form of Lat. IŬVENTUS, 7th century), EGLESIE (< Lat. ECLĒSĬAE, genitive or dative singular of Lat. ECLĒSĬA, year 691).

There might be some hints of stop voicing as early as the 2nd century (Ariza 1994: 24-6) but Pensado (CRC: 202-3) and Lloyd (1987: 228) argued that there is no certain evidence of this lenition process in the Iberian Peninsula before the 7th century (also Weiss 2009: 515). Furthermore, Pensado (CRC: 196-202) stated that the historical evidence of this sound change

[11] Voiceless stops underwent voicing and then (allophonic) fricativization in Ibero-Romance. In contrast, voiceless stops underwent fricativization in French and Franco-Provençal (Lausberg 1967: 33, 37, 42-3).

[12] The voicing of voiceless stops in Sardinian appears to have occurred later (Veiga 1988: 26).

[13] Historical evidence from stop voicing across the Roman Empire, including Africa and the most Eastern regions, since at least the 2nd century, may reflect the antiquity of stop voicing in general (CRC: 202-4).

in Arabic loanwords and in Leonese documents indicates that it was still active in the 11th century.

4.3.2.2. Spirantization and loss of voiced stops and sonorants

Spirantization[14] and loss of postvocalic voiced stops were common sound changes in the Romance languages. However, this lenition process operated very irregularly across the Romance-speaking territories. For instance, Romanian and Sardinian regularly lost Lat. /b/ but the majority of the other Romance languages preserved it (Meyer-Lübke 1972: 370-1).[15]

Examples 1 and 2 in Table 4.4 illustrate that Latin /b/ did not usually disappear in Ibero-Romance. Nevertheless, it was lenited and became a fricative (or possibly an approximant). Whereas Latin /b/ was rarely lost, /d/ underwent a spirantization process that usually caused its loss in Ibero-Romance (see examples 3, 4, 5 and cf. Lloyd 1987: 232-4). The loss of Lat. /d/ was, however, more extensive in Galician-Portuguese than in other Ibero-Romance languages (FF: 364-5; cf. GCLI: 160).[16] Lat. /g/ was more resistant to lenition than /d/, but not as much as /b/ (see examples 7 and 8). Even though the velar was sometimes lost, there is no regular pattern for this loss (GCLI: 162; FF: 365).

Table 4.4.: Evolution of postvocalic voiced stops in Romance

ID	Latin	Inherited words in Romance
1	CA/b/ALLUS	Gal. *ca*[β]*alo*, Pt. *ca*/v/*alo*, Sp. *ca*[β]*allo*, Cat. *ca*[β]*all*, Fr. *che*/v/*al*, It. *cavallo*, Rom. *cal*
2	HA/b/ĒRE	Gal. Sp. *ha*[β]*er*, Pt. *a*/v/*er*, Cat. *a*[β]*er*, Fr. *a*/v/*oir*, It. *avere*, Rom. *aveà*
3	CRŪ/d/ĒLIS	Gal. Pt. Sp. Cat. Fr. *cruel*, It. *crudele*
4	PĒS, PĔ/d/IS	Gal. Pt. *pé*, Sp. *pie*, Arag. *piet*, Fr. *pied*, It. *piede*
5	SŪ/d/ĀRE	Gal. Pt. Cat. *suar*, Sp. Arag. *sudar*, Fr. *suer*, It. *sudare*, Rom. *sudoare*
6	LĒ/g/ĀLIS	Gal. Pt. Sp. *leal*, Cat. *lleial*, Fr. *loyal*, It. *legale*
7	LĔ/g/ĔRE	Gal. Pt. *ler*, Sp. *leer*, Fr. *lire*, It. *leggere*
8	PLĀ/g/A	Gal. *cha*[ɰ]*a*, Pt. *cha*[g]*a*, Sp. *lla*[ɣ]*a*, Cat. *pla*[ɣ]*a*, Fr. *plaie*, It. *piaga*, Rom. *plagă*

When postvocalic voiced stops were followed by a rhotic, they were also subjected to spirantization, e.g., Lat. LIBER, -BRI 'book, rind' > Gal. Sp. *li*[β]*ro*, Pt. *li*[v]*ro*. However, these stops were weakened to glides rather than approximants in some contexts. Mariño Paz (FF: 366,

[14]The articulation of /b d g/ in Ibero-Romance shows allophonic variation: when voiced stops occur in postvocalic position, they are articulated as fricatives or approximants. The given realizations of postvocalic /b d g/ are merely illustrative (cf. Section 4.3.2).
[15]For exceptions to the preservation of Lat. /b/, see Mariño Paz (FF: 376) and Ariza (2012: 128).
[16]Adjacent high vowels or palatal glides may have palatalized the stop and bled the lenition process, particularly in the case of dentals and velars (cf. GCLI: 245-6, 258-60; FF: 326-7, 366-7).

footnote 339) claimed that this type of weakening was caused by a change in cluster syllabification: the stop, initially in the syllable onset but subsequently resyllabified into the syllable coda, would have reduced to [j]. De Andrés Díaz (GCLI: 163) preferred to explain this weakening as a result of an accentuation change: Lat. 'CATHEDRA (Gr.) 'chair (of a teacher)' > Gal. Pt. *ca'deira*, Sp. *ca'dera*, Cat. *ca'dira* and Lat. 'INTEGRUM 'untouched, whole' > Gal. *en'teiro*, Pt. *in'teiro*, Sp. *en'tero*, Cat. *en'tero* (cf. Weiss 2009: 68). This weakening process and possible resyllabification in OL clusters are discussed in Section 4.3.3 and Section 4.3.4.

The chronology for the spirantization of the Latin voiced stops is also difficult to determine because different stops appear to have been lenited at different times. It is certain that Latin [w] and [b] had merged as [β] due to fortition and lenition already in the 1st century CE (FF: 375-6; CRC: 127-31). The confusion of these two Latin sounds, and consequently the lenition of /b/, are attested in the corrections of the Appendix Probi (3th-5th century CE, cf. Weiss 2009: 504, Meiser 2002: 67): "*vapulo, non baplo*", "*tabes, non tavis*", "*baculus, non vaclus*". The spirantization of Latin /b/ (but not its complete loss) was the only lenition process affecting all Romance languages.

Pensado (CRC: 177-81) argued that historical evidence from Arabic loanwords shows that the spirantization of /b/ was still an ongoing process at the time of the colonization of the Iberian peninsula by North African people. Furthermore, Mariño Paz (2017: 379-82) provided several examples of confusion of the graphemes <v> and <u> to write words that came from Latin etyma containing /p/. Since Latin /p/ underwent voicing and became /b/, the attestations of the voiced bilabial stop written as <u v> instead of <b> indicate that the new /b/ (< Lat. /p/) was being further lenited.[17] These examples come from the 14th and 15th centuries and suggest how long-lived /b/ spirantization was: Lat. PŎPŬLUS > GP *pouóó(s)* (GE), *pouoo(s)* (HT) (cf. *poboo* (GP) in Appendix A); Lat. RECIPĬŌ (Lat. RECIPERE) > GP *rresçeuo* (HGP, year 1405); Lat. SAPŬĬT (Lat. SAPĔRE) > GP *souvo* (GE, HT); or Lat. CAPĬTĬA (Lat. CAPUT, -PITIS) > GP *caueça* (SVP, year 1420; VFD, year 1458) (ibid., 379).

The historical evidence for the lenition of /d/ and /g/ is more recent and less compelling than the examples for the spirantization of /b/. However, some Romance words lacking intervocalic /g/ may indicate that the lenition of the voiced velar stop began in Late Latin: Lat. EGŌ 'I' > Gal. Pt. *eu*, Sp. *yo*, Cat. *jo*, Fr. *je*, It. *io*, Rom. *eu*. In addition, there are also instances of spirantization and loss of Lat. /t/ after undergoing voicing: Lat. AMĀTIS ('you love', 2nd person plural) became Pt. *amais* (Williams 1962: 68) and Gal. *amás*, *amais* (FF: 361, 374).[18]

The historical evidence suggests that voicing and spirantization coexisted for a long time. Furthermore, the outcomes of stop voicing fed stop spirantization (cf. FF: 373-4; Penny 2002:

[17] It is important to differentiate between different spirantization processes in Spanish, Galician, and Portuguese. This difference is clear in Portuguese: in Portuguese and Galician-Portuguese, the spirantization of Lat. /b/ (and occasionally of Lat. /p/ after voicing) resulted in /v/ (Lat. /b w/ > /β/ > /v/), e.g., Lat. NĔBŬLA > Pt. *né*/v/*oa*; in contrast, the outcome [β] in some Portuguese varieties represents a later spirantization process, where [β] did not become /v/, e.g., Lat. SA/p/ĔRE > Pt. *sa*[β b]*er* (cf. FF: 375-82; GCLI: 150, 157-8; Zampaulo 2019b: 144).

[18] These forms are only used in some Galician varieties. In others, the outcome with the preserved dental, i.e., Gal. *amades*, is used.

76). This feeding relationship implies that voicing must have ended before spirantization concluded (see CRC: 223).

4.3.2.3. Simplification of geminates

Latin geminates were simplified in most Romance languages, being only preserved in Southern and Central Italian dialects and in Sardinia (Lausberg 1967: 67; Veiga 1988: 24). The lenition of these long obstruents had the same outcome in all Ibero-Romance languages: the feature length was neutralized and they merged with their short counterparts (see examples 1-5 in Table 4.5).[19]

Table 4.5.: The evolution of Latin geminates in Romance

ID	Latin	Inherited words in Romance
1	CU/p:/A	Gal. Pt. Sp. Cat. *co*/p/*a*, Fr. *cou*/p/*e*, It. *co*/p:/*a*, Rum. *cu*/p/*ă*
2	GU/t:/A	Gal. Pt. Sp. Cat. *go*/t/*a*, Fr. *gou*/t/*e*, It. *go*/t:/*a*, Rom. *gu*/t/*ă*
3	VA/k:/A	Gal. Pt. Sp. Cat. *va*/k/*a*, Fr. *va*/ʃ/*e*, It. *va*/k:/*a*, Rom. *va*/k/*ă*
4	A/d:/ŪCERE	Gal. Sp. *a*[ð]*ucir*, Pt. *a*[ð]*uzir*, OCat. **a*[ð]*ur*, OFr. *a*/d/*uire*, It. *a*/d:/*urre*, Rom. *a*/d/*uce*
5	SU/f:/ERRE	Gal. *su*/f/*rir* (**sofrer*), Pt. *so*/f/*rer*, Sp. Cat. *su*/f/*rir*, Fr. *sou*/f/*rir*, It. *so*/f:/*rire*, Rom. *su*/f/*erì*
6	A/n:/US	Gal. Pt. *a*/n/*o*, Sp. *a*/ɲ/*o*, Cat. *a*/ɲ/, Fr. *an*, It. *a*/n:/*o*, Rom. *a*/n/
7	GA/l:/ĪNA	Gal. *ga*/l/*iña*, Pt. *ga*/l/*inha*, Sp. Cat. *ga*/ʎ/*ina*, OFr. *ge*/l/*ine*, It. *ga*/l:/*ina*, Rom. *găină*

The degemination of the alveolar nasal and lateral resulted in different outcomes in Ibero-Romance (see examples 6-7): while /l: n:/ degeminated in Galician-Portuguese, they palatalized in Spanish and Catalan.[20] Some linguists, such as Ariza (1994: 41-42), have claimed that the different results of Lat. /n:/ and /l:/ indicate that nasal, lateral and rhotic geminates underwent degemination after obstruents did. The degeminated nasals and laterals were not further lenited and lost in Galician-Portuguese (Section 4.3.2.2).

The absolute and relative chronology of degemination is perhaps the most difficult to determine: Ariza (2012: 47) stated that there are very few examples in early times, the first in the 2nd and 3rd centuries. Yet, Pensado (CRC: 214-5) claimed that the early evidence of degemination is not certain. Mariño Paz (FF: 358) gave several examples of degemination in texts written in Galician-Portuguese territory between the 9th and 11th centuries: *cupa* (< Lat. CŬPPA, year 952), *uaca* (< Lat. VACCA, year 952), *abate* (< Lat. ABBĀS, -TIS, year 1069), *ano* (< Lat. ANNUS, year 899 and ca. 982-990). Regarding the end of this sound change, Pensado

[19] If the geminate was followed by a palatal vowel or glide, then the outcome underwent palatalization, e.g., Late Lat. *BASSIĀRE 'to sink, to lower' > Gal. Pt. Cat. *baixar*, Sp. *bajar* and Late Lat. *PETTIA 'piece' > Gal. *peza*, Pt. *peça*, Sp. *pieza*, It. *pezza* (cf. FF: 317-8, 336, 359; REW: 977, 6450).

[20] Geminate nasals and laterals were preserved in the Aragonese region of Bielsa (Veiga 1988: 20).

(CRC: 177-80) argued that Arabic loanwords with /b:/ could have reflected the phonemes /p/, /b/ and /v/, e.g., *ḥabb ar-rá’s* > Sp. *favarraz, abarrazo, jabarraz, habarraz*; *muǧabbana* > Sp. *amojávana; šabbût* > Sp. *japuta*; *Banī Uba* > Sp. *Beniopa* (Toponym) (ibid., 149-50).[21] Consequently, the use of the graphemes <b, v> for Arab. /b:/ might indicate that either the spirantization process was not over or that the distinction between [b] and [β] was unstable (ibid., 178).

The examples found of degemination were both fewer and later than those of stop voicing. This may indicate that degemination coexisted with stop lenition but started later. However, the later attestation of degemination examples seems to contradict its status as one of the most widespread lenition changes in the Romance territory (FF: 372-3). The extension of the degemination process, therefore, could imply that degemination occurred earlier than stop voicing and voiced stop spirantization. However, this does not need be the case.

Pensado (CRC: 214) mentioned the process of expressive or affective gemination (cf. Leumann 1977: 182-3; Meiser 2002: 126), which she claimed to have been specially active in Late Latin or Vulgar Latin (cf. etymologies in DCECH: cachorro/cacha). Examples of expressive or affective gemination are attested in the Appendix Probi (cf. Väänänen 1963: 59-60). Alongside gemination processes, Latin also had other degemination processes different from those discussed in this section.[22] Given that gemination and degemination processes seem to have coexisted in (Late) Latin, degemination may have required a longer period to become systematic in Romance despite its early origin.

In addition, there is almost no evidence of further lenition of the outcomes of degemination, i.e., the resulting short voiceless stops were not voiced and the resulting short voiced stops were not lost (cf. FF: 372-3, 378; CRC: 197, 221; Lausberg 1967: 67). The only exceptions that I am aware of are Lat. ECCLĒSĬA ‘assembly of the people’ > Gal. *igrexa*, Pt. *igreja*, Sp. *iglesia* and Lat. PITTACIUM ‘small piece of cloth, label’ > Pt. *pedaço*, Sp. *pedazo* (cf. CRC: 214; REW: 6547), both of which were Greek borrowings. In the case of Lat. ECCLĒSĬA, there is evidence suggesting that it underwent degemination very early (cf. *egleja* (GP) and *eglesia* (Sp.) in Appendix A and DCECH: iglesia).

Therefore, he relationship between degemination and the other lenition processes seems to be one of *counterfeeding,* as the results of degemination should have fed voicing and spirantization. This counterfeeding relationship could have two explanations: either these changes occurred earlier than degemination, or all processes coexisted and were, therefore, mutually exclusive (Penny 2002: 74-6). Given that degemination affected many more varieties than voicing, it is unlikely that voicing preceded it. However, it is possible to assume that the two processes coexisted and that voicing ended before degemination (see CRC: 223).

Degeminated obstruents did not undergo spirantization. Consequently, Mariño Paz (FF: 373) assumed that degemination must have ended later than stop spirantization. However, Pen-

[21] The grapheme <p> in Arabisms with /b:/ may be due to hypercorrections also found for Lat. /b:/: “[...] esto está apoyado por la existencia de grafías *p* ultracorrectas para la -BB- latina en la época de orígenes: *apatissa* ‘abadesa’ [...]” (CRC: 178).

[22] Further information on degemination processes like the *mamilla* rule in Weiss (2009: 156-7), Leumann (1977: 184-5) or Meiser (2002: 125).

sado (CRC: 177-80) argued that traces of spirantization are found in Arabic loanwords with /b:/. In addition, Mariño Paz provided examples of spirantization of Lat. /p/ (after undergoing voicing) from the 14th and 15th centuries (cf. Section 4.3.2.2). These facts might suggest that both processes coexisted but that might have ended at approximately the same time (cf. CRC: 223).

4.3.2.4. A tentative relative chronology of lenition

The historical evidence in this section paints a complex picture. This evidence shows that the outcomes of degemination underwent neither voicing nor spirantization, and that the outcomes of voicing could undergo spirantization and be subsequently lost. These facts suggest that voicing was completed before degemination and spirantization, and that spirantization and degemination coexisted for a long time.

Regarding a more concrete chronology, spirantization might have been an active sound change between the 1st and 15th centuries, voicing might have occurred between the 5th and 11th centuries, and degemination must have been active at least until the borrowing of Arabic words was possible. Since the spirantization of Lat. /b/ and degemination are the most widespread changes, it could be assumed that degemination began slightly after spirantization but before voicing (ibid.). These dates, while illustrative, indicate that all three sound changes coexisted for centuries.

Regarding the interaction between lenition and OL palatalization, the first attested examples of OL palatalization in Ibero-Romance date from the 9th century (Section 1.4 or Section 4.4.5). This suggests that OL palatalization must have begun earlier, since the evolution from (Late) Latin OL clusters to the various resulting outcomes required time. Given that the Appendix Probi (3rd-5th centuries) contains some of the first attestations of syncope in O(V)L clusters, the beginning of OL palatalization could be tentatively set between the 3rd and 5th centuries. The timeline in Figure 4.1 schematically illustrates the relative chronology of these changes.

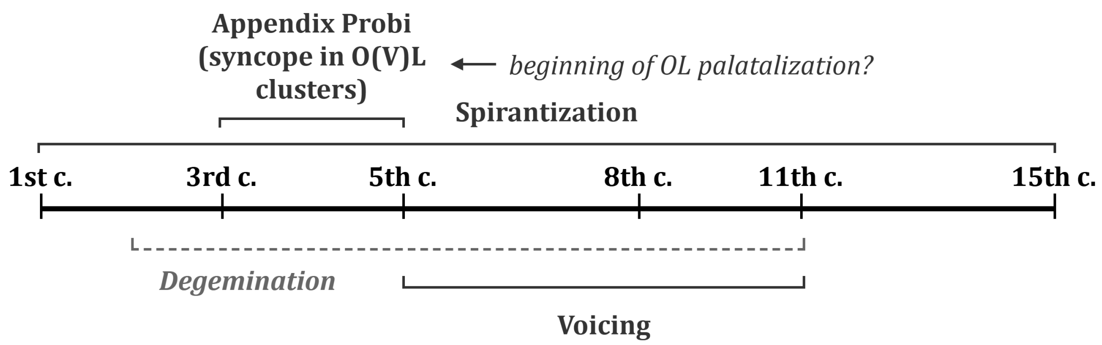


Figure 4.1.: A tentative chronology of lenition and the start of OL palatalization

It is apparent that all three lenition processes coexisted for centuries. In addition, OL palatalization could have been triggered while spirantization and degemination were active and not long before stop voicing started. Given that lenition was an active sound change at the beginning of OL palatalization, it could have influenced the evolutionary pathways of OL clusters in two ways: either by preventing OL palatalization by altering its triggering conditions, or by influencing the changes resulting in the various palatal outcomes. Chapter 4 and Section 4.4.5 provide further discussion of this topic.

4.3.3. Vowel raising

Two hypotheses have been proposed in the literature for OL palatalization in secondary postvocalic O(V)L clusters: the glide or yod hypothesis, which assumes the weakening of the coda velar into /j/, and the articulatory or consonant-based hypothesis, which assumes gestural blending between the velar C_1 and the lateral C_2. A major objection to the glide hypothesis is the absence of vowel raising and diphthongization due to the influence of the palatal glide. Consequently, vowel raising in Ibero-Romance is discussed below.

Penny (2022: 47) defined metaphony as the "[...] assimilatory raising of vowels, in anticipation of a following, higher phoneme, typically a high vowel or a glide [...]." Consequently, a following /j/ or /i/ would affect the Late Latin vowels in many Romance-speaking areas, so that they would usually be raised by one degree of aperture. The high vowel or palatal glide did not need to be directly adjacent to the vowel and it could be tautosyllabic with the vowel (belonging to the same syllable) or heterosyllabic (belonging to different syllables). An overview of the vowel changes from Latin to Galician-Portuguese and Spanish, with and without vowel raising (VR), is given in Table 4.6 (cf. Penny 2002: 44-7; FF: 122; GCLI).

Table 4.6.: Vowel changes from (Late) Latin to Spanish (OSp.) and Galician-Portuguese (GP)

Latin	Late Latin	OSp. (no VR)	OSp. (VR)	GP (no VR)	GP (VR)
/a/	[a]	/a/	/e/	/a/	/e/
/eː/	[e]	/e/	/i/	/e/	/i/
/i/	[ɪ]	/e/	/i/	/e/	/i/
/e/	[ɛ]	/ɛ/ > /je/	/e/	/ɛ/	/e/
/o/	[ɔ]	/ɔ/ > /we/	/o/	/ɔ/	/o/
/oː/	[o]	/o/	/u/	/o/	/u/
/u/	[ʊ]	/o/	/u/	/o/	/u/

Vowel raising was not a regular process and depended on the particular sequence of vowel, glide, and consonant (Penny 2002: 48). It has also been hypothesized that the presence or absence of metaphony correlates with the length of survival of the glide (ibid. 51; cf. FF: 143), i.e., how long the glide was present before being absorbed by a adjacent consonant. Penny (ibid., 47-51) provided an overview of five different phonological contexts where vowel raising was possible in Old Spanish and Mariño Paz thoroughly described all possible causes of metaphonic changes in Galician-Portuguese (FF: 121-52). According to Penny's review, the vowel least likely to undergo raising in its evolution to Old Spanish was Late Lat. [a] followed by [e], while the vowels most likely to undergo it where Late Lat. [ɛ] and then [ɔ]. The summaries provided by Mariño Paz (FF: 149-51) coincide with this scenario.

Table 4.7 presents an overview of different metaphonic environments and their effects on (Old) Spanish and Galician-Portuguese vowels (Penny 2002: 47-51; FF: 122-48, 350-2). The Late Latin column indicates the evolution of Latin vowels in the absence of raising. The column "VR" indicates whether vowel raising is attested: "+" denotes raising, "-" denotes its absence, and "+/-" denotes irregular raising. The given inherited words are historical attestations that may not correspond with the modern standard words.

The examples are organized into five broad categories: in examples 1-13, the relevant vowel was adjacent to a tautosyllabic /j/, which could have resulted from a consonant cluster; in examples 14-18, the tautosyllabic /j/ was due to metathesis; examples 19-24 contain a heterosyllabic /j/ from sequences such as /dj gj bj pj mj/; examples 25-31 exhibit a heterosyllabic /j/ from the sequences /lj nj/; and examples 32-40 have secondary postvocalic O(V)L clusters, in which the velar would have become /j/ according to the glide hypothesis (similar to examples 1-13).

Table 4.7.: Vowel raising in Ibero-Romance

ID	Latin	Late Lat.	(Old)Spanish	Sp. VR	Galician-Portuguese	GP VR
1	LAC,-TIS	[a]	*leche*	+	*leite*	+
2	MATAXA	[a]	*madeja*	+	*madeixa*	+
3	LĀICUS	[a]	*lego*	+	*leigo(s)*	+
4	AGNUS	[a]	*año*	-	*año*	-
5	PĔCTUS	[ɛ]	*pecho*	+	*peitos*	+
6	ĬNTĔGRUM (<- ĬNTĔGER)	[ɛ]	*entero*	+	*enteiro*	+
7	ŎCTO	[ɔ]	*ocho*	+	*oito*	+
8	CŎXUS (<- CŎXA)	[ɔ]	*cojo*	+	*coxo* (cf. DCECH: cojo/cuja)	+
9	STRĬCTUS	[e]	*estrecho*	+	*estreito*	+
10	TĒCTUS	[e]	*techo*	+	*teito*	+
11	LĬGNA (<- LĬGNUM)	[e]	*leña*	+	*leña*	+
12	TRŬCTA	[o]	*trucha*	+	*truita*	+
13	PŬGNUS	[o]	*puño*	+	*punho*	+
14	ĀRĔA	[a]	*era*	+	*eira* (cf. FF: 144-5)	+
15	SAPĬAM (<- SAPĔRE)	[a]	*sepa*	+	*saiba*	-
16	MĀTĔRĬA	[ɛ]	*madera*	+	*madeira*	+

17	CŎRĬUM	[ɔ]	*cuero* (cf. Penny 2002: 50-1)	?	*coiro*	+
18	AUGŬRĬUM	[o]	*agüero* (ibid.)	-	*agoiro, aguyro* (cf. FF: 145)	+/-
19	RABĬA	[a]	*rabia*	-	*ravia, raiva*	-
20	NĔRVĬUM	[ɛ]	*nervio*	+	*nervios*	+
21	*NŎVĬUS	[ɔ]	*novio*	+	*noivo, novio*	+
22	VĬNDĒMĬA	[e]	*vendimia*	+	*vendimia*	+
23	RŬBĔUS	[o]	*rubio*	+	*Rrubio* vs. *roibo*	+/-
24	PLŬVĬA	[o]	*lluvia*	+	*chuvia* vs. *choiva, chovia*	+/-
25	ARĀNĔA	[a]	*araña*	-	*aranna*	-
26	EXTRĀNĔUS	[a]	*estraño*	-	*estrayo*	-
27	INGĔNĬUM	[ɛ]	*engeño*	+	*engeño*	+
28	SŎMNĬUM	[ɔ]	*sueño*	-	*sonho*	+
29	CONCĬLĬUM	[e]	*concejo*	-	*conçello*	-
30	TĬNĔA	[e]	*tiña*	+	*tiña*	+
31	CŬNĔUS	[o]	*cuño*	+	*cuño*	+
32	GRĀCŬLUS, -A	[a]	*grajos*	-	*gralla*	-
33	NŎVĀCŬLA	[a]	*navaja*	-	*navalla*	-
34	SPĔCŬLUM	[ɛ]	*espejo*	+	*espello*	+
35	VĔTŬLUS, -A	[ɛ]	*viejo*	-	*vello*	-
36	ŎCŬLUS	[ɔ]	*ojo*	+	*olho*	+
37	RŎTŬLUS,-A	[ɔ]	*rollo*	+	*rrolha*	+
38	APĬCŬLA	[e]	*abeja*	-	*abellas*	-
39	TĒGŬLA	[e]	*teja*	-	*tella*	-
40	PĒDŬCŬLUS	[o]	*piojo*	-	*piollo*	-

The examples in Table 4.7, together with the mentioned descriptions given by Mariño Paz and Penny, show that vowel raising was, generally, not a regular process. As a result, some vowels were regularly raised in some given phonological contexts while those same vowels exhibit irregular raising or not at all in other phonological contexts (cf. FF: 149-51; Penny 2002: 47-51): for instance, Late Lat. [a] was raised in Lat. LĀICUS > Sp. *lego*, GP *leigo(s)* and Lat. ĀRĔA > Sp. *era*, GP *eira* but not in Lat. RABĬA > GP *raiva* or Lat. SAPĬAM > GP *saiba*. Similarly, all vowels in examples 1-13, which would have been tautosyllabic with the following /j/, underwent this process. However, only Late Lat. [ɛ] and [ɔ] were raised in examples 32-40, where they were followed by secondary O(V)L clusters. For both Galician-Portuguese and Old Spanish, the vowels with the most instances of raising were the open-mid vowels [ɛ ɔ], while the vowel with the fewest instances was /a/. Interestingly, /a/ shows a strong tendency to exhibit metaphonic changes when adjacent to tautosyllabic /j/ (except in the sequence (/agn/, see example 4), but it was very resistant to the effects of heterosyllabic /j/ (see examples 19 and 25).

Tautosyllabic /j/ could come from several sources; among these are Lat. /kt ks ps gr dr gm gn/ and glide metathesis in /rj pj bj fj sj/ (ibid.). These consonant clusters are especially relevant since they are traditionally considered to have undergone similar evolutions; the velar C_1 was weakened due to its position in the syllable coda and became a palatal glide, which palatalized the following consonant (cf. Penny 2002: 69-71; FF: 139-43; Zampaulo 2019a: 51-8). The outcomes of /kt ks gn gr dr/, in which the velar developed into /j/, are the main argument behind the glide hypothesis, since they provide a typological parallel to /k(V)l g(V)l/ (ibid.). However, it is important to ask why /a/ did not undergo raising before /gn/[23] but did before /kt ks/, if these clusters had indeed parallel evolutions. Consequently, the evolution of these sequences in Ibero-Romance is briefly reviewed and examples are provided in Table 4.8, Table 4.9, and Table 4.10[24]. It should be noted that C_1 underwent weakening only in Western Romance, e.g., Ibero-Romance and Gallo-Romance.[25]

Table 4.8.: The evolution of Latin /kt/ in Ibero-Romance

Latin	Inherited words in Romance	VR
LAC,-TIS	Gal. Pt. *le*/jt/*e*, Sp. *le*/t͡ʃ/*e*, Arag. *le*/j/, Cat. *llet*, Fr. *lait*	+
FACTUS	Sp. *he*/t͡ʃ/*o*, GP *fe*/jt/*o*	+
LĔCTUS	Sp. *le*/t͡ʃ/*o*, GP *le*/jt/*o*	+
PĔCTUS	Gal. Pt. *pe*/jt/*o*, Sp. *pe*/t͡ʃ/*o*, Arag. *peito/peto*	+
NŎX,-TIS	Gal. Pt. *no*/jt/*e*, Sp. *no*/t͡ʃ/*e*, Arag. *nuei*, Fr. *nuit*	+
ŎCTO	Sp. *o*/t͡ʃ/*o*, GP *o*/jt/*o*	+
STRĬCTUS	Sp. *estre*/t͡ʃ/*o*, GP *estre*/jt/*o*	-
TĒCTUS	Sp. *te*/t͡ʃ/*o*, GP *te*/jt/*o*	-
TRŬCTA	Sp. *tru*/t͡ʃ/*a*, GP *tru*/jt/*a* (also attested as *troyta* in PDG)	+

Table 4.8 shows that all vowels except for Lat. /e: i/ (> Late Lat. [e]) were raised, but the palatal glide is only preserved in Galician, Portuguese, and Aragonese, forming a diphthong. Mariño Paz (FF: 141) hypothesized that vowel raising was not possible in Lat. STRĬCTUS and Lat. TĒCTUS because the raising of Lat. /e: i/ into /i/ would have caused the disappearance of the diphthong. The palatal glide might also have palatalized the following /t/, as in Spanish where the yod triggered the change /t/ > /t͡ʃ/ before disappearing.[26] A similar tendency is

[23] Latin <GN> was realized as [ŋn] (Weiss 2009: 59-62; McCullagh 2011: 87; Recasens 2018: 133).

[24] For information on the given inherited words, see GCLI, REW, FF.

[25] In Eastern Romance, e.g., Italo-Romance and Romanian, other sound changes, such as assimilation, took place: Lat. LAC,-TIS > It. *latte*, Rom. *lapte*, Lat. PĔCTUS > It. *petto*, Rom. *pie,* Lat. *axem > It. asse,* Lat. CŎXA > It. *coscia*, Rom. *coapsă*, and Lat. COGNĀTUM > It. *cognato*, Rom. *cumnat.*

[26] For a different view of the development of /kt/, but still involving the weakening of /k/, see Wireback (2010): "Blending in sequences of dental or alveolar and velar consonants involves the superposition of the tongue front and tongue back contact areas for C1 and C2. The superposition between [k] and [t] in the sequence [kt] may give rise to (alveolo)palatal stop [c] [...]. At a later stage, the outcoming (alveolo)palatal stop may be categorized as an affricate [...]" (Recasens 2014: 162).

found in the cluster /ks/: the glide was preserved in Galician and Portuguese, but not in Spanish. However, Lat. /s/ was palatalized in the three languages (Table 4.9).

Table 4.9.: The evolution of Latin /ks/ in (Ibero)-Romance

ID	Latin	Inherited words in Romance	VR
1	AXIS	Gal. *e*/jʃ/*e*, Pt. *e*/jʃ/*o*, Sp. *e*/x/*e*, Cat. *e*/jʃ/	+
2	TAXUS	Gal. Pt. *te*/jʃ/*o*, Sp. *te*/x/*o*, Arag. *ta*/ʃ/*o*, Cat. *te*/jʃ/*o*	+
3	MATAXA	Sp. *made*/x/*a*, GP *made*/jʃ/*a*	+
4	CŎXA	Gal. Pt. *co*/ʃ/*a* (also attested as *coixa* or *coyxa* in TA and MS, cf. FF: 141), Sp. *co*/x/*a*, Cat. *cu*/jʃ/*a*, Fr. *cuisse*, It. *coscia*, Rom. *coapsă*	+
5	CŎXUS	GP *co*/ʃ/*o* (TC), Sp. *co*/x/*o*	+
6	BŬXUS	GP *bu*/ʃ/*o* (VFD), Sp. *bo*/x/ (DCECH: boj)	+/-
7	FLŬXUS	GP *fro*/jʃ/*o* (14th) or *frou*/ʃ/*o*, Sp. *flo*/x/*o*	-

In the case of the Latin cluster /ks/, C_1 also appears to have weakened into a palatal glide. That glide was usually preserved in Galician-Portuguese but it was eventually lost in some words (examples 4-6), particularly after a back vowel (cf. GCLI: 285; FF: 140-2) . Similarly to /kt/, the palatal glide was never preserved in Spanish. The following fricative was palatalized, both in Galician-Portuguese and in Spanish, and the previous vowel was typically raised.

Table 4.10.: Vowel raising in Latin /gn/

ID	Latin	Inherited words in Romance	VR
1	AGNUS	Sp. GP *a*/ɲ/*o*	-
2	TAM MAGNUS	Sp. GP *tama*/ɲ/*o*	-
3	STAGNUM	Gal. Pt. Sp. Arag. *esta*/ɲ/*o*, Fr. *étain*	-
4	LĬGNA	Sp. GP *le*/ɲ/*a*	-
5	COGNĀTUM	Gal. Pt. Sp. *cu*/ɲ/*ado* (also attested as GP *coynado*), Arag. *cu*/ɲ/*au*, Cat. *cu*/ɲ/*at*	+
6	PŬGNUS	Gal. Pt. Sp. Arag. *pu*/ɲ/*o*, Cat. *pu*/ɲ/	+
7	PŬGNĀRE	OSp. *pu*/ɲ/*ar* (DCECH: puño), GP *pu*/ɲ/*ar* (FF: 201, 351)	+

The hypothesized palatal glide, so common in the outcomes of /kt/ and /ks/, has left practically no trace in the outcomes of Latin /gn/ (cf. Table 4.10). Moreover, Late Lat. [a] was not raised, which is unusual with tautosyllabic /j/, cf. LAC,-TIS > Sp. *leche* and GP *leite*, Lat. LĀICUS > Sp. *lego* and GP *leigo(s)*, and Lat. MATAXA > Sp. *madeja*, GP *madeixa* (examples 1-3 in Table 4.7). In contrast, Late Lat. [o ʊ] did undergo raising (see examples 6-7 in Table 4.10). The palatal glide is, however, attested in several Galician-Portuguese examples: *coynado* (TC) for Lat. COGNĀTUM; *Eines* (PRMF, OMOM) or *Eynes* (PRMF, CDMO) for the name AGNES (without nasal palatalization according to Mariño Paz, cf. FF: 351); and *puinhar* (LP) and *puinhemos*

(LP) for Lat. PŬGNĀRE.[27] The forms with a palatal glide are few and infrequent compared to those without a glide but might support the weakening of /g/. Nevertheless, most if not all of these forms exhibit metaphonic changes, in contrast to examples 1-4 in Table 4.10. Despite of the disappearance of the glide, the nasal underwent palatalization in all inherited words.

The lack of raising in the vowel preceding /gn/ has been often explained due to the early absorption of the glide by the palatal nasal (FF: 143; Penny 2002: 51; Baker 2004). This hypothesis might find support in the aforementioned examples. As seen in Table 4.8, the glide from the cluster /kt/ was preserved in Galician-Portuguese but the consonant was not palatalized. As a result, the palatal glide could not be perceived as the glide-like transition to the following palatal(ized) consonant. In the case of /ks/, the vowels were typically raised and the following consonant was palatalized (cf. Table 4.9). The glide was also occasionally lost, which could suggest that /j/ could have indeed been parsed as part of /ʃ/. Table 4.10 showed that the palatal glide from /gn/ completely disappeared, while the vowels did not usually undergo raising and the nasal was palatalized. Preceding /ɲ/, the glide could have been easily misperceived as part of the following palatal nasal; if the glide was absorbed by the following palatal nasal early enough, that could have prevented the glide from raising the preceding vowel from raising.

A similar scenario has been hypothesized for postvocalic secondary O(V)L clusters, where vowel raising was unusual (see examples 32-40 in Table 4.4): the glide could have been more rapidly absorbed by the following consonant because both the glide and, in this case /ʎ/, were palatal segments with a high F2. In this regard, Baker (2004: 119-21) argued that the palatal glide could easily be parsed as part of /ʎ/ because there would be very little F2 transition from one segment to the other. Furthermore, he claimed that fricatives and affricates have strong noise cues that would promote the parsing of the glide and the obstruent independently from each other (ibid.). Consequently, the palatal glide would not be as easily parsed as part of the following post-alveolar fricative or affricate.

Nevertheless, it should be noted that the rapid absorption of the glide could only happen next to /ʎ ɲ/, and for /ʎ ɲ/ to arise, they first had to be palatalized by the preceding glide. The evolution of O(V)L clusters was described by Zampaulo (2019a: 52-62) as follows: [k.l g.l] > *[ç.l, ʝ.l] > *[j.l] > *[j.lʲ] > [ʎ]. As this evolutionary path shows, the presence of the glide before the palatalization of the following sonorant might have left some room of opportunity for vowel raising. In this regard, Spanish offers two illustrative examples: Lat. CĬCŌNĬA > Sp. *cigüeña* (GP *cegoña*) and Late Lat. *RISŌNĔUM-A > Sp. *risueño* (GP *risonna*) (cf. Wireback 2009: 57; FF: 132; Penny 2002: 51-2). Lat /o/ became Sp. /we/, even though the usual evolution would have been Sp. /o/ or, in the case of vowel raising, /u/. The diphthong was produced by the combination of the Latin /o/ with a palatal glide, i.e., /oj/ > /we/. The tautosyllabic glide could have been a product of metathesis or could have involved anticipatory glide epenthesis (Wireback 2009: 55-60). These examples reaffirm what was already shown in Table 4.7 (see examples 1-18) and in forms like GP *Eines*, *Eynes* < Lat. AGNES and GP *puinhar* < Lat. PŬGNĀRE: tautosyllabic glides tended to raise the preceding vowel or form a diphthong with it. For this

[27] In Southern Italian varieties, forms like Lat. AGNUS > Calabrese [ˈajnə] and Lat. PŬGNUS > *puinu* are still preserved (Recasens 2020b: 152; FF: 143).

reason, the early absorption of the glide through /ʎ ɲ/ does not seem to fully account for the lack of vowel changes in Ibero-Romance.

As an alternative to the glide hypothesis, the development of /gn/ has also been explained "[…] through a simultaneous increase in the tongue contact area towards the front for C1 and towards the back for C2 […]" (Recasens 2014: 163) or as "[…] gestural overlap between the back lingual gesture for a velar and the front lingual gesture for an alveolar […]" (Recasens 2016a: 211).[28] An account based on gestural blending would effectively explain the lack of raising in /a/ (cf. Wireback 2009) and the historical examples with palatal glides could be explained as cases of glide insertion before palatal consonants (ibid.).[29]

The palatalization of postvocalic secondary O(V)L clusters has been given the same two explanations as /gn/: either the velar in the syllable coda weakened into /j/, which palatalized the following lateral, or the lateral palatalized due to gestural blending with the preceding velar. Examples 32-40 in Table 4.7 showed no instances of a preserved palatal glide. In addition, vowel raising is irregular, affecting only the vowels most likely to undergo metaphonic changes, i.e., [ɛ] and [ɔ]. The glide hypothesis has explained the lack of vowel raising in /gn/ and /k(V)l g(V)l/ with the early absorption of the glide by the palatal lateral (Penny 2002: 69-70; Zampaulo 2019a: 51-8; for the discussion of the problems arising from a yod-based approach, see Wireback 1997a and 2009). As discussed above, the glide should have caused changes in the vowel before palatalizing the following sonorant.

Under the consonant-based account, the palatalization of the lateral in /k(V)l g(V)l/ would have followed the same mechanisms as in primary OL clusters, namely coarticulation between the dorsal gesture of the velar segment and the apical front lingual gesture for the alveolar lateral (Recasens 2014: 163; Recasens 2016a: 211; Recasens 2018: 133, 142, 150). The lack of raising in some vowels and the irregular raising in others could be explained by the fact that the influence of palatal consonants is a less effective trigger for metaphonic changes than palatal glides. Diphthongization could be explained through anticipatory glide epenthesis (cf. Recasens 2016a: 209-12). Nevertheless, the gestural account assumes that /k(V)l g(V)l/ were tautosyllabic clusters after syncope occurred, which has been criticized (e.g., Zampaulo 2019a: 51-58; Loporcaro 2010). In contrast, the glide account assumes that /k(V)l g(V)l/ were heterosyllabic, which prompted velar weakening due to its position in the syllable coda.

The consonant-based and glide hypotheses reconstruct the diachronic pathways of O(V)L clusters in different ways. Therefore, it is crucial to examine them and determine which account aligns better with Ibero-Romance sound change patterns. This section focused on vowel raising, the main objection to the glide hypothesis. The following section discusses OL cluster syllabification, which has been another point of criticism in both theories.

[28] For the development of /kt/ as a result of a similar gestural blending process, see Recasens (2014: 39) and Wireback (2009, 2010).

[29] However, Recasens (2018: 133) states that explaining the change [ŋn] > /ɲ/ through articulatory blending of the back lingual gesture for the velar and the front lingual gesture for the alveolar nasal is problematic "[…] since [ŋ] is realized with even less dorsal contact than [k] or [g] and therefore is expected not to merge easily with following /t/ or /n/ into an intermediate alveolopalatal articulation."

4.3.4. Syllabification

The syllabification of postvocalic secondary O(V)L clusters remains a matter of debate. The glide hypothesis presupposes that such clusters underwent resyllabification following syncope, yielding heterosyllabic O(V)L[30] sequences in which the velar stop and lateral belonged to different syllables. The coda position of the velar is the primary motivation for positing velar weakening, as evidenced in forms such as Lat. ˈIN.TEG.RUM > Gal. *enˈteiro*, Pt. *inˈteiro*, Sp. Cat. *enˈtero*. By contrast, the gestural account typically assumes that all OL clusters were tautosyllabic. This section reviews the arguments for and against the heterosyllabicity of postvocalic secondary O(V)L clusters.

Weiss (2009: 67-70) provided a brief overview of the changes in the syllabification of OL clusters in the history of Latin. Consonant clusters were invariably heterosyllabic when C_1 and C_2 were separated by a morpheme boundary: Lat. AB.LUO 'to wash away' or Lat. AB.RIPIO 'to tear away' (ibid., 68). Similarly, OL clusters were invariably tautosyllabic in postconsonantal or word-initial position. However, the syllabification of postvocalic OL and OR clusters varied throughout Latin history. Evidence for cluster syllabification is found in poetry, which was ruled by metrics: heterosyllabic clusters made the preceding syllable closed and long, e.g., Lat. TEM.PUS, while tautosyllabic clusters did not close the preceding syllable, e.g., Lat. PA.TRIS. Through such evidence, it has been established that OL and OR clusters were tautosyllabic in Old Latin, in contrast to most other consonant clusters, which were heterosyllabic. In Classical Latin poetry, however, OL and OR clusters could be treated as either heterosyllabic or tautosyllabic, e.g., Lat. PA.TRIS vs. Lat. PAT.REM (ibid.; Loporcaro 2010: 103). This syllabification change could be accompanied by a change in stress.

Weiss (ibid.) then proceeded to review the Romance evidence to elucidate how OR and OL clusters were syllabified in Late Latin and Proto-Romance. Some phonological processes support the heterosyllabicity of OL and OR clusters while others support their tautosyllabic syllabification. The most telling evidence is perhaps the change in stress that some words with OR clusters underwent, e.g., Lat. ˈIN.TE.GRUM > Late Lat. IN.ˈTEG.RUM > Gal. *enˈteiro*, Pt. *inˈteiro*, Sp. Cat. *enˈtero* or Lat. ˈCA.THE.DRA > Late Lat. CA.ˈTHED.RA > Gal. Pt. *caˈdeira*, Sp. *caˈdera*, Cat. *caˈdira*. The Latin words had antepenultimate stress because the penultimate syllable was short, i.e., the penultimate syllable had no coda and the syllable nucleus was neither a long vowel nor a diphthong. If OR clusters became heterosyllabic, the penultimate syllable would have acquired a syllable coda and become closed. Consequently, the stress shifted from the antepenultimate syllable to the penultimate. With the available historical evidence, Weiss concluded that OR and OL clusters were probably heterosyllabic in Late Latin and Proto-Romance. At a later time, some Romance varieties could have parsed these clusters as tautosyllabic.

Loporcaro (2010) claimed that the so-called "Contact Law" was the driving force behind many Romance sound changes. According to this law, "[a] syllable contact $A^{S}B$ is the more preferred the less the consonantal strength of A and the greater the consonantal strength of B" (ibid.,

[30] Primary postvocalic OL clusters would have undergone syllabification as well, but they have received little attention in the literature on OL palatalization.

99). OR and OL clusters would have been heterosyllabic and the Contact Law would have optimised the syllable contact between the coda and onset segments. The best or most acceptable syllable contacts would have had a weaker consonantal strength in the coda than in the following onset segment. The consonantal strength was measured within the following sonority scale: voiceless stops > voiced stops > fricatives > nasals > laterals > rhotics > glides > high vowels > low vowels (ibid., 94). Loporcaro argued that pre-vocalic gemination in Italian, and stress shifts and lenition in Ibero- and Gallo-Romance, among other changes, were triggered by the Contact Law (ibid., 99-104).

Thus, OL and OR clusters were tautosyllabic in Old Latin, could be optionally treated as heterosyllabic in Classical Latin, and became heterosyllabic in Late Latin. According to the Contact Law, these new heterosyllabic clusters would have created undesirable syllable contacts. Since codas should have had less consonantal strength than onsets, OL and OR clusters would have had "bad" syllable contacts because the coda is a stop and the following onset a sonorant. Several strategies were used to repair them, e.g., Italian geminated the stops so that the coda did not have more consonantal strength than the onset, e.g., Lat. LABRUM 'lip' > It. *labbro* or Lat. DŬPLUS 'double' > It. *doppio* (ibid., 99-101). The stress shift in several words containing OR clusters provides another example of syllable contact repair (see Table 4.11).

Table 4.11.: Stress shift with possible stop weakening in Ibero- and Gallo-Romance

Latin	Late Latin	Romance
ˈCA.THĔ.DRA	CA.ˈTHED.RA	Gal. Pt. *ca'deira*, Sp. *ca'dera*, OFr. *chai'ere*, OProv. *ca'zeira*
ˈIN.TĔ.GRUM	IN.ˈTEG.RUM	Gal. *en'teiro*, Pt. *in'teiro*, Sp. *en'tero*, Fr. *enti'er*
ˈCO.LŬ.BRA	CO.ˈLUB.RA	GP *'cobra* (attested as *coobra*, *coovra* in DEHLP), Sp. *cu'lebra*, Fr. *cou'leuvre*, OProv. *co'loura*
ˈTE.NĔ.BRAE	TE.ˈNEB.RAE	Sp. *ti'nieblas*, Gal. *'tebras* (attested as GP *tẽevras*, *teeura*, cf. FF: 377)

In Latin, disyllables were stressed on the penultimate syllable (barring a few exceptions). In trisyllabic or longer words, the penultimate syllable bore the stress if it contained a long vowel, a diphthong or a coda segment. All Latin words in Table 4.11[31] had short vowels and tautosyllabic clusters and, as a result, these lexical items were stressed on the antepenultimate syllable (cf. Weiss 2009: 110). However, many penultimate syllables were no longer light in Late Latin, when the clusters became heterosyllabic. Consequently, the stress shifted from the antepenultimate to the penultimate syllable. This position of the stress can still be seen in the relevant inherited words (ibid., 103). Apart from the stress shift, /g d/ were weakened into palatal glides, which are still preserved in Galician and Portuguese. This weakening would have been a result of the Contact Law: a better syllable contact was created by weakening the stop into a glide since glides have less consonantal strength than rhotics.

The historical evidence suggests that OR and perhaps OL clusters were heterosyllabic at certain stage of Latin. This appears to be the case for Late Latin, where the aforementioned

[31] Cf. Loporcaro (2010: 101), REW, FF (207-8)

examples indicate that heterosyllabicity in OR clusters was likely (cf. Wireback 1997a for a critical view of the heterosyllabicity of OL clusters). Nevertheless, it is still unclear whether OL clusters were also heterosyllabic. The examples provided by Weiss and by Loporcaro principally contain OR clusters, so evidence of the heterosyllabicity of OL clusters is not directly provided.

Heterosyllabicity in OL clusters could be indicated by stress shifts like in Lat. ˈ*CA.THE.DRA* > Gal. *ca.ˈdei.ra.* However, many Latin words with O(V)L clusters were trisyllabic and, after syncope, became disyllabic. Latin disyllabic words were typically stressed in the penultimate syllable so the stress would be in the penultimate regardless of the syllabification of the OL cluster, e.g., Lat. ˈŎ.CŬ.LUS > Late Lat. ˈŎC.LUS or ˈŎ.CLUS > Gal. ˈ*ollo* or Lat. ˈTĒ.GŬ.LA > Late Lat. ˈTĒG.LA or ˈTĒ.GLA < Gal. ˈ*tella*. In a similar manner, the stress did not shift in longer words, e.g., Lat. AU.ˈRĬ.CŬ.LA > Late Lat. AU.ˈRĬC.LA or AU.ˈRĬ.CLA > Gal. *oˈrella* or Lat. AR.ˈTĬ.CŬ.LUS > Late Lat. AR.ˈTĬC.LUS or AR.ˈTĬ.CLUS > Gal. *arˈtello*. In the case of trisyllabic or longer words, the preservation of the original Latin stress could have been due the heterosyllabicity of O(V)L clusters since heterosyllabic clusters closed the preceding syllables. In consequence, the penultimate was stressed in the same syllable as before syncope. If the penultimate syllable would have remained short, then the antepenultimate syllable should have been stressed according to Latin stress rules.[32]

With regard to the evolution of OR clusters, it is important to note that the examples[33] in Table 4.11 do not represent the most common evolution of these sequences. In other lexical items, the stop in OR clusters underwent lenition without complete loss (see Table 4.12). Weakening to a palatal glide was possible but occurred in specific Romance languages like Occitan, rather than constituting a general rule.

Table 4.12.: The development of OR clusters in Romance

ID	Latin	Inherited words in Romance
1	LACRĬMA	Gal. Sp. Pt. *lágrima*, Ast. *llá(g)rima*, Arag. *glárima*, Occ. Aran. *lèrma*, Fr. *larme*, Rom. *lacrimă*
2	SACRĀTUS	Gal. Sp. Pt. *sagrado*, It. *sacrato*, Cat. *sagrat*, Fr. *sacré*
3	SŎCRUS, -A	Sp. *suegro*, Gal. Pt. *sogro/a*, Cat. *sogre*, Occ. *sògre*, Rom. *socru*, Romash *sör*
4	ARĀTRUM	Gal. Sp. Pt. *arado*, Ast. *aladru*, It. *arato*, Occ. *araire* or *laire*
5	LATRO, -ŌNIS	Gal. Sp. *ladrón*, Pt. *ladrão*, Cat. *lladre*, Occ. Aran. *lairon/laire*, It. *ladro*, Fr. *larron*
6	QUADRUS, -A	Gal. Sp. *cuadro*, Pt. *quadro*, It. *quadro*, Occ. *cairel*, OFr. *quarre*, Verona It. *kuara*
7	QUADRĀGĬNTA	Gal. Sp. *cuarenta*, Pt. *quarenta*, It. *quaranta*, Fr. *quarante*

[32] It is also possible that stress rules no longer applied, preserving the original stress. However, I have not found any literature addressing this particular topic.

[33] For information on these examples, cf. Georges, LS, DCECH, FF (361-367), GCLI (139-41, 162-64), DGLA, and REW.

8	QUADRAGESĬMA	Gal. Sp. *cuaresma*, Pt. *quaresma*, It. *quaresima*, Fr. *carême*
9	PĬGRĬTĬA	Sp. *pereza*, Gal. *preguiza*, Pt. *preguiça*, Fr. *paresse*
10	NĬGER, -GRUM	Gal. Sp. Pt. *negro*, Rom. *negru*, It. *nero*, Fr. *noir*

The sound changes in Table 4.12 can still be accounted for by the Contact Law: a voiced stop has less consonantal strength than a voiceless stop, so the syllable contact would have improved. The stop disappeared in some instances, effectively dissolving the syllable contact. Most importantly, the stop could be lost but was not usually weakened to [j] in these words. In Ibero-Romance, a palatal glide would have raised the preceding vowel and would have been preserved in Galician and Portuguese (cf. Table 4.11 and Section 4.3.3), which is not observed in examples 6-9 of Table 4.12. Instead, the stop underwent regular lenition. Particularly in OR clusters with voiceless stops, the stops simply voiced in Ibero-Romance (cf. examples 1-5). As was shown in Section 4.3.2.1, voicing was the regular outcome of postvocalic /p t k/. In contrast, /gɾ dɾ/ often lost the stop in Ibero-Romance but this loss was irregular, as was the case for intervocalic /g d/ (cf. Section 4.3.2.2).

In conclusion, the evolution of the inherited words in Table 4.12 implies that syllabification did not affect lenition and that heterosyllabicity in OR clusters did not translate into stop weakening. These facts suggest that coda velars did not necessarily weaken into /j/, as the glide theory assumes, even though OR and OL clusters might have been heterosyllabic. Instead, stop weakening was just one of the processes that coda segments underwent and not necessarily the most common. These findings refine the reconstruction of the diachronic pathways of primary and secondary postvocalic OL clusters, which is discussed in Section 4.4.3.

4.4. Reconstructing OL palatalization in Ibero-Romance

As discussed in Section 1.4, the development of OL palatalization across the Romance languages remains unclear. It may have been either a pan-Romance sound change with a common trigger but independent evolutions in different varieties, or a diffusive change that originated in one variety and subsequently spread to others. In addition, the diachronic pathways of specific OL clusters remain largely unexplored: while the evolution of primary word-initial and postconsonantal OL clusters and secondary postvocalic O(V)L clusters has received considerable scholarly attention, the development of primary postvocalic OL clusters (with both short and long obstruents) remains poorly understood.

Despite having been extensively studied, the mechanisms of OL palatalization in secondary postvocalic O(V)L clusters are still debated: some authors prefer to hypothesize one unique articulatory origin for the entire process of OL palatalization (e.g., Repetti & Tuttle 1987); others prefer to hypothesize two different stages of OL palatalization with two different triggers, specially for Ibero-and Gallo-Romance (e.g., Zampaulo 2019a). Therefore, secondary postvocalic O(V)L clusters would have palatalized through gestural blending between the velar C_1 and the lateral C_2 according to the consonant-based or articulatory hypothesis. In contrast, the glide or yod hypothesis assumes that secondary postvocalic O(V)L clusters underwent palatalization following the weakening of the coda velar obstruent into /j/. This glide would then have palatalized the following lateral. However, this account also posits that primary OL clusters palatalized through coarticulation between both members of an OL cluster.

Two major objections to the glide hypothesis concern the absence of vowel raising and diphthongization in inherited words due to the influence of the palatal glide, and the assumption that O(V)L clusters would have been heterosyllabic following syncope. Regarding the consonant-based hypothesis, a major criticism concerns the assumption that O(V)L clusters would have remained tautosyllabic following syncope. Advocates of the glide hypothesis (e.g., Baker 2004; Zampaulo 2019a) argued that the lack of vowel raising or diphthongization in the vowel preceding O(V)L clusters was due to the early absorption of the glide by the following /ʎ/. This rapid absorption has been explained by the misperception of the palatal glide as the glide-like transition to the following palatal consonant due to the minimal F2 transition from one segment to the other.

The discussion in Section 4.3.3 and Section 4.3.4 suggested that vowel raising and diphthongization should have occurred in contact with a palatal glide. Given that /j/ was adjacent to the vowel before it palatalized the following lateral and was subsequently absorbed by it, the glide would have been in contact with the vowel for some duration, e.g., AGNES > *Eines* or *Eynes* (cf. FF: 351). Consequently, I argued that this hypothesized glide should have had an opportunity to trigger vowel raising and diphthongization before the palatalization of the following sonorant occurred.

Concerning syllabification, the historical evidence supports the heterosyllabicity of OR clusters, and perhaps also of OL clusters, in Late Latin. In several lexical items, the resyllabification of OR clusters triggered a stress shift and voiced stop weakening, e.g., Lat. ˈIN.TE.GRUM > Late Lat. IN.ˈTEG.RUM > Gal. *enˈteiro*, Pt. *inˈteiro*, Sp. *enˈtero.* However, other inherited words containing OR clusters exhibited lenition (stop voicing, spirantization, and loss), rather than weakening to /j/, e.g., Lat. SŎCRUS, -A > Sp. *suegro*, Gal. Pt. *sogro/a* or Lat. NĬGER, -GRUM > Gal. Sp. Pt. *negro*. These data suggest that coda velars did not necessarily weaken into /j/, even when OR and OL clusters were heterosyllabic. The results from these two sections provide crucial evidence for the reconstruction of postvocalic OL and O(V)L clusters

Secondary postvocalic /k(V)l g(V)l/ are thought to have been the first OL clusters to palatalize, primarily because OL palatalization in these clusters is the most widespread across the Romance-speaking territory; secondary postvocalic O(V)L clusters palatalized even in varieties that do not exhibit OL palatalization, such as Catalan and French. From secondary postvocalic O(V)L clusters, OL palatalization is thought to have spread to other clusters. However, the mechanisms behind this spread may vary depending on the proposed trigger for the palatalization of /k(V)l g(V)l/ - whether they palatalized as a result of gestural blending or through velar weakening. The chronology of the spread of OL palatalization is related to the chronology of lenition, since both sound changes coexisted for several centuries (cf. Section 4.3.2).

For the OL palatalization of /pl fl bl/, analogy is invoked: OL palatalization would have been originally triggered in /kl gl/, specifically in secondary postvocalic O(V)L clusters, since both velars and laterals are lingual segments while labials involve an independent articulator. From these clusters, palatalization would have spread to /kl gl/ in other positions and subsequently to /pl fl bl/. The reasons behind the triggering of OL palatalization first in /k(V)l g(V)l/, are discussed in Section 4.4.5.

The following sections discuss the origins, spread and evolutionary paths of OL palatalization in Ibero-Romance. First, the phonological development of all OL cluster configurations is examined, from the original OL clusters to the most-common outcomes in Galician, Portuguese and Spanish. To establish the most accurate developments, previous proposals for the diachronic pathways of OL clusters (Section 4.2.2) and the historical evidence from relevant sound changes (Section 4.3) are applied.

Given the results in Section 2.4.1, OL clusters are categorized by their position within the word rather than as primary and secondary. The compiled historical corpus in Appendix A showed that all postconsonantal clusters developed similarly, as did all postvocalic clusters, resulting in the same outcomes within each positional category, e.g., Lat. AMPLUS > GP OSp. *ancho* and Lat. SARCŬLUM > GP *sachio*, OSp. *sacho*, compared with Lat. VERMĬCŬLUS, -a > GP *uermelia*, OSp. *vermejo* and Late Lat. *(IN)VORUCLUM > GP *envurullar*, OSp. *burujo*. However, postvocalic clusters with long obstruents diverged from those with short obstruents in Old Spanish, e.g., Lat. ACCLĀMĀRE > OSp. a[ʎʝ]*amare* versus Late Lat. *CACCŬLUS > Sp. *cacho*. Additionally, primary word-initial clusters showed distinct developments in Old Spanish, e.g., Lat. CLĀVIS > OSp. *llave,* while word-initial /gl/ had a particular evolution in Ibero-Romance, e.g., Lat. GLANS, -DIS > OSp. GP *lande.* Therefore, the diachronic developments of OL clusters are examined in four separate categories: word-initial clusters, postconsonantal clusters, postvocalic clusters with short obstruents, and clusters with long obstruents.

Finally, the relative chronology of OL palatalization is addressed. The discussion of how OL palatalization spread across different cluster configurations and Romance varieties is based on several sources of evidence: previous literature on OL palatalization, chronological data extracted from the corpus (cf. Appendix A), the relative chronology of lenition, and articulatory data from the experiment in Chapter 3.

4.4.1. Word-initial OL clusters

The evolutionary paths for word-initial /pl fl kl/, both in Galician-Portuguese and Spanish have been thoroughly discussed in the literature (cf. Section 4.2.2). It is generally agreed that the first step in OL palatalization was the palatalization of the lateral, which was triggered by coarticulation between the dorsal gesture of the velar C_1 and the apical front lingual gesture of the alveolar lateral C_2. The articulatory experiment in Chapter 3 showed coarticulatory dynamics in line with this proposal since the tongue blade anterior and posterior during the production of the lateral C_2 were (generally) significantly higher in /kl gl/ than in singleton /l/ (cf. Section 3.4.1).

Following this initial stage of lateral palatalization, the evolutionary paths for Galician-Portuguese and Spanish fundamentally diverged: whereas voiceless obstruents were lost in Old Spanish, they were retained in Galician-Portuguese, thereby facilitating the delateralization of [ʎ] to [j]. Zampaulo (2019a: 68-9) and Recasens (2020b: 150, 159, 168) proposed the phonetic developments for word-initial OL clusters in Galician and Portuguese.

Table 4.13.: Possible evolutionary pathways for word-initial /pl fl kl/ in Galician and Portuguese as proposed by Zampaulo (2019a) and Recasens (2020b)

ID	Latin	Evolutionary path	GP, Gal.	Pt.
1	/pl fl kl/	> *[pl fl kʎ] > *[pʎ fʎ kʎ] > *[pj fj kj] > *[kj] > *[c] or *[cç] >	[t͡ʃ]	[ʃ]
2	/pl fl kl/	> *[pl fl kʎ] > *[pʎ fʎ kʎ] > *[pj fj kj] > *[kj] > *[c] >	[t͡ʃ]	[ʃ]
3	/pl fl kl/	> *[pl fl kʎ] > *[pʎ fʎ kʎ] > *[kʎ] > *[kj] > *[c] >	[t͡ʃ]	[ʃ]
4	/pl/	> *[pʎ] > *[pj] > *[pc] > *[pt͡ʃ] or *[c] >	[t͡ʃ]	[ʃ]
5	/fl/	> *[fʎ] > *[fj] > *[fc] > *[c] >	[t͡ʃ]	[ʃ]
6	/kl/	> *[kʎ] > *[kj] > *[c]	[t͡ʃ]	[ʃ]

The evolutionary paths 1 (Zampaulo 2019a: 68-9) and 2 (Recasens 2020b: 150, 159, 168) in Table 4.13 describe the same phonological steps: following the delateralization of [ʎ] to [j], all OL clusters would have merged into [kj], perhaps by analogy, and coarticulation between [k] and [j] would eventually have resulted in [t͡ʃ] through the intermediate step *[c] (or *[cç]). Reconstruction 3 (ibid.) would also account for the Galician-Portuguese outcomes, differing only in the stage at which the OL clusters merged, i.e., the results of /pl fl kl/ would have merged into *[kʎ] prior to the delateralization of [ʎ] to [j], rather than into *[kj] (cf. path 2). The phonetic developments in 1/2 and 3 appear equally likely since no historical evidence is available to illuminate when /pl fl kl/ merged.

Recasens (ibid.) also proposed reconstructions 4-6, which would entail the independent evolution of /pl/, /fl/, and /kl/. Consequently, these clusters would have resulted in GP [t͡ʃ] independently of one another. In my view, the phonetic developments in 1-3, which assume the merger of /pl fl kl/, are more probable than those in 4-6, which entail the independent development of /pl fl kl/, for two reasons.

First, Old Spanish historical data presented by Torreblanca (1990) indicate that the development of /pl fl kl/ involved merger at some point. Torreblanca found hypercorrections and confusions of OL clusters in Castilian texts between the 11th and 13th centuries. These confusions can be summarized as follows: <cl> > <pl>, e.g., Lat. CLAUSA > OSp. *plosa*, and <cl pl> > <fl>, e.g., Lat. CLAUSA > OSp. *flausa, flosa* and Lat. PLĀNAS > OSp. *Flanes*. In contrast, <pl fl> were never written as <cl> and <fl> was never confused with <pl>. These data suggest that [kʎ] merged with [pʎ] in Old Spanish and, subsequently, [pʎ fʎ] underwent the same lenition process as word-initial [f] (cf. Section 4.2.2). Given that /pl fl kl/ converged to a single outcome in Galician-Portuguese, as they also did in Old Spanish, such a merger as suggested by the Old Spanish historical evidence can be assumed.

Second, glide hardening processes that resulted in voiceless affricates, as assumed in reconstructions 4-5, are not attested as common sound changes in Ibero-Romance. Changes such as Lat. /j/ > GP [d͡ʒ] > GP [ʒ] > Gal. [ʃ] (FF: 324-8) or Lat. /j/ > OSp. [ɟ̞] (Penny 2002: 62, 72-3; GCLI: 249-50) are well-documented. However, I am not aware of other cases of glide hardening in Ibero-Romance. In other Romance varieties, such as Franco-Provençal dialects or Occitan, instances of glide hardening are much more common (Recasens 2020b: 141-2, 148-53) and are even attested as results of OL palatalization, e.g., [ptʃen] (< Lat. PLĒNUS) and [ptʃy] (< Lat. PLŪS, -RIS) in the Italian of Isone, in the canton of Ticino (ibid., 148).

Zampaulo (2019a: 67-8), following Torreblanca (1990: 325-6), also proposed an evolutionary path for Spanish word-initial /pl fl kl/: after the palatalization of the lateral, [kʎ] would have merged with [pʎ] in Old Spanish; the word-initial obstruent in [pʎ fʎ] would then have been lenited, as was the case with word-initial [f], so that their results merged. The phonetic developments 1 (Zampaulo) and 2 (Torreblanca) in Table 4.14 only differ in one step where Torreblanca ventured that *[kʎ] became *[tʎ] due to the palatalization of the obstruent, which became a predorsal dental consonant. Subsequently, *[tʎ] became [pʎ] due to the difficult pronunciation or due to acoustic confusion. Given that OL clusters with a dental C_1 were generally disfavoured in (Late) Latin,[34] this intermediate step may be unnecessary.

Table 4.14.: Possible evolutionary pathways of word-initial /pl fl kl/ in Spanish as proposed by Zampaulo (2019a), Torreblanca (1990) and Baker (2004)

ID	Latin	Evolutionary path	Sp.
1	/pl fl kl/	> *[pl fl kʎ] > *[pʎ fʎ kʎ] > *[pʎ fʎ] > *[ɸʎ] > [hʎ] >	[ʎ]
2	/pl fl kl/	> *[pl fl kʎ] > *[pʎ fʎ kʎ] > *[pʎ fʎ tʎ] > *[pʎ fʎ] > *[ɸʎ] > [hʎ] >	[ʎ]
3	/pl fl kl/	> [pʎ fʎ kʎ] > [⁽ᵏ⁾ʎ ⁽ᵏ⁾ʎ ⁽ᵏ⁾ʎ] >	[ʎ]

Baker (2004: 123-33) proposed a different reconstruction (3 in Table 4.14), where Lat. /pl kl fl/ would have surfaced as stops with a palatal lateral release. These would then have condensed to quasi-affricates due to the reduction of the gestural timing between both segments, so that individual features merged into a single segment (ibid. 126). Consequently, word-initial fortition would have made the palatal lateral more salient, facilitating obstruent lenition and loss and, ultimately, the merger of the outcomes of /pl fl kl/.

Concerning word-initial /gl/, the loss of the velar segment was the usual outcome, both in Galician-Portuguese and Spanish. Recasens (2018: 150) argued that this elision can be accounted for by homorganicity, since /g/ may share a back dorsal constriction with the following consonant in tautosyllabic clusters. Tuttle (1975: 100-1) proposed that /g/ was simply lenited postvocalically irrespectively of word boundaries. He argued that word-boundaries "[...] did not constitute an impervious barrier to numerous phonological processes even in Western Romance languages during their earliest phases" (ibid., 101). The experimental data showed that postvocalic obstruent lenition is common across word-boundaries in Spanish

[34]The change [tl] > [kl] is attested several times in the history of the Italic languages but PIE /tl dl/ also often became /l/ or /lː/ (cf. Weiss 2009: 164-5): PIE *-*tlom* > Latin -*cul*- and Lat. /tul/ > /tl/ > Late Lat. /kl/.

and that this lenition process affects the production of both the velar segment and the following lateral, reducing their constriction (Section 3.4.1). Therefore, a possible reconstruction for the phonetic developments of word-initial /g/ would be Lat. [gl] > [ɣl] > [ɰl]> Gal., Pt., Sp. [l]. However, it is unclear whether the elision or lenition of /g/ preceded OL palatalization. If so, word-initial /gl/ could not have undergone OL palatalization due to prior lenition. Alternatively, if /g/ lenition followed OL palatalization, the lack of OL palatalization in word-initial /gl/ would require a different explanation.

There is ample historical evidence suggesting that /g(V)l k(V)l/ were the first OL clusters to palatalize (cf. Section 1.4 and Section 4.4.5). It is possible that, at this point in time, lenition was beginning to act but was not yet generalized enough as to extend beyond word-boundaries. If word-initial OL clusters palatalized at a later time, lenition could have been a more pervasive sound change: /g/ would have been produced as a fricative or an approximant, effectively preventing the coarticulatory dynamics leading to the palatalization of the lateral, and, consequently, to OL palatalization.

The chronological data from the corpus in Appendix A support that inherited words with OL palatalization in secondary O(V)L clusters slightly predate examples of OL palatalization in primary OL clusters (cf. Section 4.4.5). In addition, Section 4.3.2.2 and Section 4.3.2.4 showed that historical evidence of lenition coincides with or slightly predates the historical evidence of OL palatalization in /g(V)l k(V)l/, which points to the full coexistence of both sound changes (cf. Section 4.3.2). Therefore, lenition would already have begun when primary OL clusters palatalized (see Section 4.3.2.2 and Section 4.3.2.4). This matter is further discussed in Section 4.4.5.

Nevertheless, the reasons behind the lenition of word-initial /g/ are unclear, given that word-initial obstruent lenition is an even rarer phenomenon in Galician-Portuguese than in Old Spanish. Apart from word-initial /f/, which was first debuccalized and subsequently lost in Old Spanish, I am not aware of any cases of word-initial obstruent loss in Ibero-Romance. However, the loss of /g/ in clusters is attested in many different Romance varieties and the compiled database in Appendix A includes several lexical items where the etymological velar C_1 was lost:[35] Late Lat. CLOCCACULUM > Salm. *locajo*; Late Lat. ECLĒSĬA < Sp. *ilesia* (cf. *eglesia* (Sp.) in Appendix A), GP *eyreja* (cf. *egleja* (GP) in Appendix A), and Ast. *ilesia*; Late Lat. EC(C)LESĬŎLA > GP *Eirexúa* (cf. *ygreioa* (GP) in Appendix A), Late Lat. FĪLIUS E(C)CLĒSIAE > GP *frigesia, friguesia* (cf. *feegres* (GP) in Appendix A); and Lat. ECLIPSIS > AL *elisar*.

Recasens (2018: 150) provided several examples of /g/ elision in OL and OR clusters in different Romance varieties (cf. FF: 366 and Table 4.12): Lat. PIGRĬTĬA 'laziness' > Cat. *peresa*, Lat. NĬGER, -GRUM 'black' > It. *nero* and Fr. *noir*, Lat. GRANDIS 'large' > Calabrese *ranne* (cf. It. *grande* 'big'), Lat. CRŬX, -ŬCIS 'cross' > Logudorese ['ruɣe], and Late Lat. *GLŎMŬLUS (uncertain etymon form) 'wool ball' > Sardinian *lómuru* (cf. REW: 3800). Similarly, there are multiple examples of C_1 loss or lenition in /gʎ/, and sometimes in /bʎ/, in many Italian dialects, and in Ribagorçan Catalan and Aragonese (Repetti & Tuttle 1987: 416-25; Recasens

[35] Popular words containing the outcome /l/ were searched in the corpus after excluding borrowings, words with uncertain etymologies, and words that did not contain OL clusters.

2018: 150; Viudas Camarasa 1979: 358, 367), such as: Lat. GLANS, -DIS > South Abruzzo It. *ʎannə*, North Calabria It. *ʎanna*; Lat. BLASPHĒMĀRE/BLASPHĒMĬA > South Abruzzo It. *jaštəmá*, North Calabria It. *jestiña*; Late Lat. ECLĒSĬA > Rib. Cat. *esllésia*; Lat. GLARĔA > Rib. Cat. *llera* (cf. *lleral* (Rib. Arag.) in Appendix A), and Lat. GLĒBA < Rib. Cat. *lleva* (cf. *lleba* (Rib. Arag.) in Appendix A).

The loss of /g/ in clusters is, therefore, not a rare occurrence in Romance, even though it was not a regular process. Since primary (word-initial) OL clusters appear to have palatalized later than secondary postvocalic /g(V)l k(V)l/, lenition could have affected word-initial /g/, blocking OL palatalization.

4.4.2. Postconsonantal OL clusters

Primary and secondary postconsonantal /pl fl kl k(V)l/ typically resulted in [t͡ʃ], both in Galician-Portuguese and in Old Spanish. The phonetic developments for postconsonantal /pl fl kl/ are the same as those discussed for word-initial /pl fl kl/ in Galician-Portuguese, so they are only briefly discussed (cf. Section 4.4.1). These phonetic developments are represented in Table 4.15 by evolutionary pathways 1.1 and 1.2, as proposed by Zampaulo (2019a: 68-9) and Recasens (2020b: 150, 159, 168). In contrast, evolutionary pathway 2.1 in Table 4.15 reconstruct the development of secondary postconsonantal /k(V)l/. I base these reconstructions on the descriptions given by Zampaulo and Recasens, but reconstructions for these particular clusters have not been specifically described by these authors or discussed in previous literature.

Table 4.15.: Possible evolutionary pathways of primary and secondary postconsonantal /pl fl kl k(V)l/ in Galician, Portuguese, and Spanish based on Zampaulo (2019a) and Recasens (2020b)

ID	Latin	Evolutionary path	Gal. Pt. Sp.
1.1	/pl fl kl/	> *[pl fl kʎ] > *[pʎ fʎ kʎ] > *[pj fj kj] > *[kj] > *[c] >	[t͡ʃ]
1.2	/pl fl kl/	> *[pl fl kʎ] > *[pʎ fʎ kʎ] > *[kʎ] > *[kj] > *[c] >	[t͡ʃ]
2.1	/kVl/	> /kl/ > *[kʎ] > *[pj fj kj] > *[kj] > *[c]	[t͡ʃ]

As with all OL clusters, the first step was the palatalization of the lateral, which subsequently underwent delateralization and became [j] due to the lack of obstruent lenition postconsonantally. The coarticulation between the palatal glide and the preceding /k/ eventually resulted in [t͡ʃ]. Evolutionary pathways 1.1 and 1.2 differ only in the point at which the evolution of /pl fl kl/ merged, and it is uncertain which would have been the more likely evolution. The only difference between reconstructions 1.1 and 1.2, and 2.1 is that reconstruction 2.1 first describes the syncope in secondary O(V)L clusters.

Reconstruction 2.1 only accounts for the palatalization of secondary postconsonantal /k(V)l/. The reason behind this is that the historical corpus in Appendix A includes no etyma containing postconsonantal /f(V)l/ and only one etymon with /p(V)l/, which did not undergo OL palatalization (e.g., Lat. MESPILUM > GP *nespereyra* and OSp. *nisperos*; cf. Section 2.4.2.2, Section 2.4.2.5, and Table 2.15). Moreover, it is unclear whether postconsonantal /p(V)l f(V)l/ could be assumed to have undergone OL palatalization, as the evidence from related clusters is contradictory: on the one hand, OL palatalization in postconsonantal /pl fl/ is well-attested; on the other hand, secondary postvocalic /p(V)l f(V)l/ did not palatalize.

Regarding secondary /ng(V)l/, Recasens (2014: 163) proposed an evolutionary path (see below) in which the outcome [ɲ] was achieved through articulatory blending between the back lingual gesture for the velar(ized) nasal and the velar stop, and the front lingual gesture for the lateral. This blending would have caused the velar stop to become alveolopalatal. This new alveolopalatal stop would have undergone articulatory reduction and be elided because it was the second member of an homorganic three-consonant cluster. Recasens (2014: 158) stated that the elision of the alveolopalatal stop would have been promoted by delayed velar lowering of the nasal C_1. Lastly, progressive nasalization would have caused [ɲʎ] to shift to [ɲ].

As shown in Table 2.5 (cf. Appendix B), there are multiple examples of inherited word forms with an original /ng(V)l/ resulting in [ɲʎ], [ɲ] and [ʎ], e.g., Late Lat. SĬNGŬLĀRĬUS > GP *senlleira* and OSp. *señeros*, Lat. SĬNGŬLUS > GP *senllas* and OSp. *seños*, Lat. CĬNGŬLUM > GP *cinho, cenllo* (cf. *çinchos* (GP) in Appendix A) and OSp. *cello* (also attested in the compiled corpus as *cincho, ceño, cejo*), and Lat. ANGŬLĀRIS < GP *anllar*. Inherited words in Spanish mostly showed the outcome [ɲ], while there was quite a lot of variation in Galician-Portuguese.

- /ng(V)l/ > [ŋgl] > [ŋgʎ] > [ɲɟʎ] >[ɲʎ] > [ɲ] or [ʎ]

Like secondary postconsonantal /p(V)l f(V)l/, inherited words from etyma containing postconsonantal /gl bl b(V)l/ show no evidence of OL palatalization (Section 2.4.2.3 and Section 2.4.2.1). In fact, the compiled wordlist includes no etyma containing postconsonantal /bl gl/. For postconsonantal primary and secondary /bl/, OL palatalization is not assumed here since evidence for palatalization of /bl/ across all positions is very scarce. For postconsonantal /gl/, OL palatalization could potentially be assumed based on the evolution of /ng(V)l/, which did palatalize. Nevertheless, this remains purely hypothetical, as no historical evidence of OL palatalization was found in postconsonantal /gl/.

4.4.3. Postvocalic OL clusters with short obstruents

The phonetic evolution of /k(V)l g(V)l/ have been widely discussed in the literature, and two main hypotheses have been proposed. The glide hypothesis assumes that the velar weakened to /j/ due to its position in the syllable coda and that this glide palatalized the following lateral. In contrast, the gestural hypothesis assumes that the lateral palatalized due to gestural blending with the preceding velar, like in other OL clusters, after which the velar was lenited.

Table 4.16 provides several possible reconstructions for the phonetic development of postvocalic /k(V)l g(V)l kl/. Evolutionary pathway 1.1, as proposed by Zampaulo (2019a: 52-62), represents this development according to the glide hypothesis.

Evolutionary pathway 1.2 follows the gestural hypothesis and is reconstructed here based on descriptions given by Repetti and Tuttle (1987) and Lloyd (1987: 243-4, 254) (cf. also Recasens 2016a: 211 and Penny 2002: 64, 70-1) for the development of /k(V)l g(V)l/ according to the gestural hypothesis. Diachronic pathway 2.1 is likewise reconstructed here based on these authors' descriptions, offering a possible development for postvocalic /kl/, which is not directly addressed in the existing literature.This reconstruction also follows the gestural hypothesis.

OL palatalization is only reconstructed for postvocalic /k(V)l g(V)l kl/ because the historical corpus contains null or scant evidence of this process in postvocalic /p(V)l b(V)l pl bl fl/ (cf. Section 2.4.2.1, Section 2.4.2.2, and Section 2.4.2.5). Therefore, OL palatalization cannot be assumed for these clusters.

Table 4.16.: Possible evolutionary pathways of primary and secondary postvocalic /kl k(V)l g(V)l/ in Galician, Portuguese, and Spanish based on Zampaulo (2019a), Repetti and Tuttle (1987), and Lloyd (1987)

ID	Latin	Evolutionary path	GP, Gal., Pt.	Sp.
1.1	/kVl gVl/	> [k.l g.l] > *[ç.l, ʝ.l] > *[j.l] > *[j.lʲ] >	[ʎ]	> *[j] > *[ʝ̞] > OSp. [ʒ] > [ʃ] > [x]
1.2	/kVl gVl/	> [kl gl] > *[kʎ gʎ] > *[gʎ] > *[ɣʎ] >	[ʎ]	> OSp. [ʒ] > [ʃ] > [x]
2.1	/kl/	> *[kʎ] > *[gʎ] > *[ɣʎ] >	[ʎ]	> OSp. [ʒ] > [ʃ] > [x]

According to evolutionary path 1.1, velars would have weakened due to its syllable coda position and would have become palatal glide after undergoing a fricativization phase. The palatal glide would have subsequently palatalized the following lateral, which would result in Galician-Portuguese [ʎ]. The voiced postalveolar fricative in Old Spanish would have arisen due to the delateralization of /ʎ/ and the later fortition of the resulting palatal glide (Zampaulo 2019a: 52-62).

As mentioned in previous sections (cf. Section 4.2.2), several objections have been raised against this reconstruction. One concern is the lack of raising or diphthongization in the vowel preceding the OL cluster. The absence of vowel changes has been explained by the rapid absorption of the glide by the following palatal lateral, triggered by the small F2 transition between [j] and [ʎ]. However, as argued in Section 4.3.3, the hypothetical palatal glide would still have been adjacent to the vowel before palatalizing the lateral (see Table 4.16, *[j.l] in evolutionary pathway 1.1) and being subsequently absorbed by it. Therefore, [j] would have been in contact with the vowel for some duration, providing an opportunity to trigger vowel raising and diphthongization before the palatalization of the following sonorant occurred. As with /kt ks gn/, palatalization in /k(V)l g(V)l/ can be explained through coarticulation or gestural blending between both members of the cluster, which would better account for the changes (or lack thereof) in the vowels (cf. Section 4.3.3).

Another issue is that the evolution of OR clusters showed that heterosyllabicity did not necessarily cause the weakening of the coda velar. The glide hypothesis assumes that OL clusters became heterosyllabic in Late Latin, so that the velar was resyllabified to the syllable coda, prompting its weakening. Historical evidence presented in Section 4.3.4 supports the heterosyllabicity of OR and OL clusters, e.g., Lat. 'IN.TE.GRUM > Late Lat. IN.'TEG.RUM > Gal. *en'teiro*, Pt. *in'teiro*, Sp. *en'tero.* However, additional historical evidence also shows that velar weakening was not the most common evolution of OR clusters. Examples like Lat. LACRĬMA > Gal. Sp. Pt. *lágrima* and Lat. SŎCRUS, -A > Sp. *suegro*, Gal. Pt. *sogro/a* (Table 4.12) indicate that heterosyllabic /k/ in OR clusters underwent voicing just like intervocalic /k/ did, as in Lat. LACŪNA > Gal. *lagoa*, Sp. *laguna*. Therefore, it is not necessary to assume velar weakening to account for the development of heterosyllabic /k(V)l g(V)l/. Given that lenition affected velars (and obstruents in general) regardless of their syllabification, I suggest that OL palatalization in postvocalic OL clusters was triggered by coarticulation irrespective of how the cluster was syllabified (cf. Recasens 2016a: 205-6).

Evolutionary path 1.2 in Table 4.16 demonstrates the palatalization of the lateral through coarticulation with the preceding velar, as hypothesized for word-initial and postconsonantal OL clusters. The velars would have been lenited, merged into [ɣʎ], and eventually been lost (Repetti & Tuttle 1987: 66, 73). This is consistent with lenition patterns in Ibero-Romance, where /k/ underwent voicing (but could further lenite and be subsequently lost), and /g/ underwent spirantization and in some cases loss (cf. Section 4.3.2; Wireback 1997b: 288). It is possible that the velar fricative could have assimilated to the following palatal lateral, fronting its place of articulation.

Concerning the Spanish outcomes, the phonetic developments proposed by Lloyd (1987: 243-4, 254), e.g., [ʎ] > OSp. [ʒ] > [ʃ] > Sp. [x], seem to find more support than those proposed by Zampaulo (2019a: 52-62), e.g., [ʎ] > *[j] > *[ʝ] > OSp. [ʒ] > [ʃ] > [x]. On the one hand, previous research on the historical phonology of Spanish corroborates the change [ʎ] > OSp. [ʒ] (cf. Penny 2002: 64, 70-1; GCLI: 276), even though the changes [ʎ] > *[j] and /j/ > /ʝ/ > /ʒ/ appear better attested typologically (cf. Kümmel 2007: 90-91,165-167, 209). On the other hand, a shorter sequence of changes might account for the earlier attestation of secondary postvocalic O(V)L clusters compared to other cluster configurations.

Compared to secondary postvocalic O(V)L clusters, primary postvocalic OL clusters are vastly under-represented in the scientific literature. Postvocalic /kl gl/ are either not mentioned or are implicitly grouped together with postvocalic /k(V)l g(V)l/ (cf. Zampaulo 2019a; Recasens 2018; Repetti & Tuttle 1987). The joint discussion of all postvocalic OL clusters in Italo-Romance might be well-founded because the number of examples with OL palatalization is larger (cf. Tuttle 1975). However, evidence of OL palatalization in postvocalic /kl gl/

in Ibero-Romance is very scant and was not available in previous accounts of OL palatalization. The wordlist compiled in this dissertation includes only three certain instances of /kl/ palatalization: Late Lat. *(IN)VORUCLUM > GP *envurullar*, OSp. *burujo*, and Lat. BICLARA > Sp. *Béjar* (cf. Lat. COCHLEAR > GP *culiares*, OSp. *cuchar* in Appendix A). These few examples suggest that the evolution of primary and secondary postvocalic OL clusters (with short obstruents) was similar and might have resembled evolutionary path 2.1 (cf. reconstruction 1.2). The only difference between these reconstructions is that the clusters in pathway 1.2 underwent syncope.

A last point to discuss are the mechanisms of OL palatalization in postvocalic /g(V)l/. The results of the articulatory experiment showed that, while the tongue blade posterior and anterior during the production of the lateral were higher in /gl/ than in /l/ in both positions, the difference was larger word-initially than postvocalically (cf. Section 3.4.1.2 and Section 3.4.1.3). This entails that, word-initially, the lateral in /gl/ would be produced with a higher tongue blade posterior, which is the main correlate of secondary lateral palatalization (Kochetov 2011; Kochetov 2005; cf. Section 3.1.1). Given these articulatory dynamics, it is important to ask why postvocalic /g(V)l/ underwent OL palatalization but not word-initial /gl/. There are two possible explanations for this asymmetry: either OL palatalization occurred at a time when /g/ was not yet lenited, which is chronologically possible (cf. Section 4.3.2.4); or the results from the voicing of /kl/ (> *[gl]) merged with /gl/, effectively blocking the further lenition of the original /gl/. This matter is further discussed in Section 4.4.5.

4.4.4. Postvocalic OL clusters with long obstruents

The Latin secondary /kː(V)l/ and primary clusters /pːl fːl kːl/ resulted in [t͡ʃ] in Galician-Portuguese. This outcome parallels the evolution of OL clusters in word-initial and postconsonantal positions (Section 4.4.1 and Section 4.4.2). As established in Section 4.3.2 and in Section 4.3.2.3, the outcomes of voiceless geminate simplification did not undergo further lenition, remaining voiceless stops that facilitated the delateralization of the palatal lateral into a glide. I base the reconstructions in Table 4.17, once again, on the descriptions given by Zampaulo (2019a: 68-9) and Recasens (2020b: 150, 159, 168), though the phonetic developments of OL clusters clusters containing long obstruents have not been specifically described by these authors or discussed in previous literature.

In contrast to postvocalic /kː(V)l gː(V)l kl/, where the obstruent was lost, resulting in [ʎ ʒ], the outcomes of /kː(V)l pːl fːl kːl/ in Galician-Portuguese, and partly in Spanish, do not indicate obstruent loss, as indicated in evolutionary path 1.1 in Table 4.17: following syncope of the unstressed vowel, the lateral would have palatalized through coarticulation and, subsequently, the obstruents would have undergone degemination. Through delateralization, [kʎ] would have become [kj]. Finally, the coarticulation between [k] and [j] would eventually have resulted in [t͡ʃ] through the intermediate step *[c] (or *[cç]).

Table 4.17.: Possible evolutionary pathways of primary and secondary /p:l f:l k:l k:(V)l/ in Galician, Portuguese, and Spanish based on Zampaulo (2019a) and Recasens (2020b)

ID	Latin	Evolutionary path	Gal. Pt.	Sp.
1.1	/k:Vl/	> [k:l] > *[k:ʎ] > *[kʎ] > *[kj] > *[c] >	[t͡ʃ]	[t͡ʃ]
2.1	/p:l f:l k:l/	> [pl fl kl] > *[pl fl kʎ] > *[pʎ fʎ kʎ] > *[pj fj kj] > *[kj] > *[c] >	[t͡ʃ]	
2.2	/p:l f:l k:l/	> [pl fl kl] > *[pl fl kʎ] > *[pʎ fʎ kʎ] > *[kʎ] > *[kj] > *[c] >	[t͡ʃ]	
2.3	/p:l f:l k:l/	> [pl kl fl] > [pl fl kʎ] > *[pʎ fʎ kʎ] > *[pʎ fʎ] > *[ɸʎ] > *[hʎ]		[ʎ]

This reconstruction only assumes OL palatalization of /k:(V)l/ due to the lack of etyma with /f:(V)l/ and the scarce evidence of palatalization in /p:(V)l/ gathered in the historical database. As indicated in Section 2.4.2.5, Appendix A only includes two examples of palatalization in /p:(V)l/: Late Lat. *cappŭla > GP *cachas* and OSp. *cacha.* These examples may suggest that this cluster underwent palatalization. However, given that secondary /p(V)l/ did not palatalize, such an assumption for /p:(V)l/ appears unjustified.

In addition, it should be noted that the compiled historical corpus in Appendix A does not include any Galician-Portuguese examples of OL palatalization of Lat. /k:l/. As a result, it cannot be said with certainty whether this cluster resulted in /t͡ʃ/. However, the corpus does contain several instances of OL palatalization of /k:(V)l/ in Galician-Portuguese and one example of /k:l/ in Spanish. e.g., Late Lat. *bŭccŭla > GP *bochecha*, Late Lat. *caccŭlus > Sp. Gal. *cacho*, and Lat. acclamāre > OSp. *allamare*. As shown in Section 2.4, OL clusters in the same position within the word rarely had different outcomes, especially if the OL clusters contained a voiceless $C_{1,}$ e.g., Late Lat. plĭcāre > GP *chegou* and OSp. *llegarán*, Lat. flamma > GP *chama* and OSp. *llama*, and Lat. clāvis > GP *chave*, OSp. *llave*. Given this pattern, it can be assumed that /k:l/ resulted in /t͡ʃ/ in Galician-Portuguese, despite the lack of historical evidence.

Given that the obstruents were preserved, determining the precise timing of degemination in /k:(V)l/ is challenging. As demonstrated in Section 4.3.2 and Section 4.3.2.3, degemination outputs did not undergo subsequent voicing or spirantization - short voiceless obstruents resulting from degemination resisted further lenition. Consequently, the timing of degemination (whether *[k:ʎ] > *[kʎ] or *[k:ʎ] > *[k:j]) would not have affected the ultimate outcome of /k:(V)l/, which yielded [t͡ʃ] across Galician, Portuguese, and Spanish. Two scenarios are plausible. Since gemination and degemination processes appear to have coexisted in Late Latin, and the earliest Ibero-Romance attestations of degemination date from the 9th century, the geminate obstruents may have persisted through the delateralization of [ʎ]. Alternatively, degemination may have preceded the palatalization of [l], potentially preventing the formation of articulatorily complex onsets (cf. evolutionary pathways 2.1 and 2.2 in Table 4.17).

In contrast, the chronology of degemination played a crucial role in the development of /p:l f:l k:l/, particularly in Spanish. All OL clusters containing geminate obstruents resulted in [t͡ʃ] in Galician and Portuguese (cf. evolutionary paths 1.1, 2.1, and 2.2), while in Spanish, secondary /k:(V)l/ yielded [t͡ʃ] but primary /p:l f:l k:l/ yielded [ʎ] (cf. evolutionary paths 1.1, and 2.3). This asymmetry indicates that obstruents were lost in primary OL clusters with geminates but preserved in secondary O(V)L clusters with geminates. Such contrasting outcomes suggest that degemination affected /p:l f:l k:l/ earlier than /k:(V)l/ and must have been largely completed by the time of OL palatalization in Old Spanish - otherwise, the obstruents would have been preserved.

These clusters appear to follow the developmental pattern of word-initial OL clusters in Spanish, where obstruents also underwent lenition: after lateral palatalization through gestural blending between C_1 and C_2, the palatal lateral spread from [kʎ] to [pʎ fʎ], with [kʎ] subsequently merging with [pʎ]. The [pʎ fʎ] sequences then converged through debuccalization and loss of the labial and labiodental obstruents, paralleling the fate of word-initial [f] (cf. evolutionary path 2.3 in Table 4.17). Torreblanca (1990) and Zampaulo (2019) attributed obstruent loss in word-initial OL clusters to a parallel development with word-initial /f/ loss (cf. Section 4.2.2). However, this parallel cannot be extended to word-medial environments, where postvocalic /f/ was voiced or spirantized but rarely lost (cf. GCLI: 165-71). Beyond invoking analogy with word-initial OL clusters, the precise mechanisms underlying the development of /p:l f:l k:l/ remain unclear.

As with /k:(V)l/, the precise timing of degemination would not have affected the ultimate outcome of /p:l f:l k:l/ in Galician and Portuguese. Evolutionary pathways 2.1 and 2.2 in Table 4.17, on the one hand, and 1.1, on the other, only differ at the point of degemination. Pathways 2.1 and 2.2 assume earlier degemination because this process may have had a common Ibero-Romance origin. However, degemination could have occurred later in Galician-Portuguese - for example, before the spread of the palatal lateral (cf. reconstruction 1.1) - since the outcomes are identical for primary and secondary postvocalic OL clusters containing geminate obstruents.

The hypothetical earlier degemination in /p:l f:l k:l/ contrasts with evidence suggesting that the primary postvocalic clusters /p:l f:l k:l/ underwent OL palatalization later than the secondary postvocalic clusters /k:(V)l/, particularly in Old Spanish. Reconstruction 2.3 in Table 4.17 indicates that /p:l f:l k:l/ resulted in OSp. [ʎ], mirroring word-initial OL clusters (cf. Section 4.4.1). In contrast, primary and secondary postvocalic OL clusters with short obstruents resulted in [ʒ] (cf. Section 4.4.3). However, both OSp. [ʎ] and [ʒ] derived from Old Spanish or Proto-Spanish [ʎ]. This palatal lateral originated from different Latin sources, i.e., /l:/, /lj/, /pl fl kl/, and /k(V)l g(V)l/.

However, these [ʎ] sounds followed divergent evolutionary paths. OSp. [ʎ] from Lat. /lj k(V)l g(V)l/ underwent further changes and eventually became Sp. /x/ (OSp. [ʒ]), as in Lat. FILIUS > Sp. *hi*/x/*o* and Lat. ŏCŬLUS > Sp. *o*/x/*o*. Conversely, Old Spanish [ʎ] from Lat. /l: pl fl kl/ was preserved, though it later merged with [ʝ] in many varieties through *yeísmo* (cf. Penny 2002: 106; GCLI: 228-31), as in Lat. CAVALLUS > Sp. *caba*[ʎ, ʝ]*o* and Lat. PLĀNUS > Sp. [ʎ, ʝ]*ano.*

These divergent developments indicate that Old Spanish or Proto-Spanish [ʎ] arose at two different times (cf. Zampaulo 2019a: 49-77).

The change Lat. /lj k(V)l g(V)l/ > [ʎ] appears to have occurred first due to its extent across Romance. As demonstrated earlier, /k(V)l g(V)l/ resulted in [ʎ] in most Ibero- and Gallo-Romance varieties. Similarly, the change Lat. /lj/ > [ʎ] is attested in almost all Romance varieties (ibid. 49-51; Lausberg 1967: 58). In contrast, the evolutions Lat. /lː/ > [ʎ] and Lat. /pl fl kl/ > [ʎ] are unusual within the Romance family (cf. Zampaulo 2019a: 63, 75): while the change Lat. /pl fl kl/ > [ʎ] is restricted to Spanish and Astur-Leonese varieties, Lat. /lː/ > [ʎ] also happened in Catalan and Aragonese varieties (ibid.).

These uncommon outcomes within the Romance-speaking territory suggest that OL palatalization began later in primary OL clusters and in the development of Latin /lː/ in Ibero-Romance. Consequently, if postvocalic /pːl fːl kːl/ had undergone OL palatalization at roughly the same time as postvocalic /k(V)l g(V)l/, the outcome of the primary postvocalic OL clusters containing geminates would have been [ʒ] in Old Spanish. The two different evolutions of postvocalic OL clusters with long obstruents in Spanish, thus, might provide some insight in the relative chronology of OL palatalization. This topic is further discussed in the following section.

4.4.5. A relative chronology of OL palatalization

Menéndez Pidal (1964: 501) stated that OL palatalization originated in Italy, and Bonfante (1999: 31-3, 92-3) claimed that OL palatalization in Italo- and Eastern-Romance happened much earlier than in Ibero- and Gallo Romance. However, a review conducted for this dissertation of several sources cited by Bonfante revealed no historical evidence supporting early OL palatalization in Italo-Romance or Italy. Meyer (1888: 365) and d'Ovidio and Meyer (1888: 532-3)[36] stated that the palatalization of the lateral goes back to the 2nd century CE but that a historical connection between south-western and eastern Romance varieties is not proven.[37] For the completion of OL palatalization in (central) Italian, Meyer-Lübke (1972: 345-9) gave examples of authors and literary works from the 13th century onwards, such as Bonvesin (13-14th centuries) or Giacomino de Verona (13th century).[38] Torraca (1905: 9-12) provided examples of short pieces of vernacular language in Latin texts found in Italy and of the first Italian texts from the 8th century to the 12th century. In these texts, I could identify only one example of OL palatalization (OIt. *chericato* < Lat. CLĒRĬCUS, year 1197, cf. *chierico* in TLIO), while several examples showed preservation of the original OL cluster: OIt. *pubblica* (year 730, cf.), OIt. *templo* (year 1135, cf. *tempio* in TLIO), OIt. *plu* (year, 1197), OIt. *plait* (year 1207), etc.

To find early instances of OL palatalization, a brief search was conducted for this study in the DELI (*Dizionario etimologico della lingua italiana*) and in the *Corpus del Tesoro della Lingua*

[36] Note that Meyer-Lübke published as 'Meyer' before his marriage in 1889 (Moldenhauer 1938: 386).
[37] Little chronological information in support of these claims was given (ibid.).
[38] Sicilian *xumara* (*flumara*) is given as an example to date OL palatalization in Southern Italy (Meyer-Lübke 1972: 348) but the attestation date for this form could not be located.

Italiana delle Origini (TLIO, Italian texts before 1375). This search revealed that the targeted inherited words[39] exhibiting OL palatalization were first attested in the 13th century. Earlier attestations of the searched forms were found, but these words still retained the original OL clusters: cf. OIt. *oclo* (12th century) and *occhio* (13th century), OIt. *classus* (8th century) and *chiasso* (13th century), OIt. *blancos* (10th century) and *bianco* (13th century), OIt. *clodus* and *chiovo* (both in the 13th century), OIt. *plaçono* (12th century) and *piacere* (13th century) (cf. DELI).[40] Therefore, this historical evidence does not indicate that OL palatalization in the Italian Peninsula happened earlier than it did in the Iberian Peninsula.

This contrasts with the Ibero-Romance evidence: there are multiple Galician-Portuguese and Old Spanish lexical items exhibiting OL palatalization before the start of the 13th century, especially from secondary postvocalic O(V)L clusters. Beyond the examples discussed in Section 1.4, the chronological data collected in the historical database reveals numerous additional instances of early OL palatalization (cf. the relevant words in Appendix A).

The examples listed below include only words where OL palatalization is certain: attested in the 12th century, Sp. *ancho*, Sp. *nadija*, Sp. *orejadas*, GP *orellas*, Sp. *cincha*, Sp. *llama*, GP *chaman*, GP *Chouzan*, GP *conchouso*, Sp. *concha,* Sp. *corneja*, GP *cõelio*, GP *ficheira*, Sp. *fallar*, Sp. *inojos*, Sp. *majada*, GP *moolho*, Sp. *ojo*, Sp. *pareja*, Sp. *llagar*, Sp. *llano*, Sp. *llanto*, Sp. *llena*, Sp. *inchámoslas*, Sp. *allegando*, Sp. *llegarán*, Sp. *llorar*, Sp. *llouiesse*, GP *sachio*, Sp. *seños*, Sp. *señeros*, Sp. *restojo*, GP *telia*, Sp. *uña*, Sp. *vermejo*, and GP *guedelia*; in the 11th century, GP *agulia*, Sp. *moion*, GP *Navalia*, GP *parelios*, GP *Vellia*, and Sp. *viejo*; attested in the 10th century, GP *achamus*, GP *moliones*, Sp. *ovelias*, Sp. *relia*, GP *relia*, Sp. *spillu*, and GP *uermelia*; and attested in or before the 9th century, GP *Chano* (8th-10th centuries), and GP *ouelias* and GP *chomacio* (both attested in the 9th century).[41] Since no evidence was found of OL palatalization happening earlier in Italo-Romance than in Ibero-Romance, I conclude that OL palatalization originated from a common trigger (coarticulation between both cluster members) and evolved independently in the different Romance varieties.

Regarding this common trigger that initiated palatalization**,** it has been repeatedly proposed that OL palatalization was triggered first in secondary postvocalic O(V)L clusters. Wireback (1997b: 78-84) hypothesized that OL palatalization was originally stress-conditioned due to two factors: the great extension of the palatalization of /k(V)l g(V)l/ in Romance, affecting also French and Catalan, and the (seeming) irregularity of OL palatalization in Ibero-Romance. According to the stress rule proposed by Wireback, only words with antepenultimate stress, in which OL clusters would have been in post-tonic position, would have been initially affected by OL palatalization. This includes most words containing secondary

[39]Since both the corpus and dictionary were lemmatized, it was possible to search for the modern Italian form and obtain information on previous and alternative spellings. The words searched in DELI were: *chiodo, chiosa, chiostro, chiudere, ginocchio, ghiaccio, ghianda, ghiotto, piacire, piaga, pialla, pianeta, piangere, piano, pianta, pidocchio, pieno, pioggia, piombo, pioppo, piovere, ampio, inchinare, biada, bianco, biasimare, biondo, occhio, specchio, vecchio, vermiglio, tavola, nebbia, pecchia, coniglio, fiore, fioco, fiotto, fiosso, chiamare, chiaro, chiasso, chiave, chierico, chiesa, chiesola,* and *chinare*.

[40]A further search in the *Archivio della Latinità Italiana del Medioevo* (Latin texts written in Italy during the Middle Ages) may yield different results, but the scope of this dissertation does not allow for a more exhaustive search.

[41]It should be noted that this list only includes the first attestation of each inherited word. There may be additional examples of the given inherited form or of alternative forms in these early centuries.

postvocalic O(V)L clusters, such as Lat. AN'NĬCŬLUS, AR'TĬCŬLUS, AU'RĬCŬLA, 'ŎCŬLUS, O'VĬCŬLA, PĀ'NŬCŬLA, 'SPĔCŬLUM, 'TĒGŬLA, or 'VĔTŬLUS.

Zampaulo (2019a: 51-8) argued that OL palatalization in secondary postvocalic /k(V)l g(V)l/ must have occurred earlier than in other OL clusters due to contextual factors such as obstruent weakening or lenition, which would be expected postvocalically but not word-initially. The earlier palatalization of secondary postvocalic O(V)L clusters could also explain why /k(V)l g(V)l/ mostly resulted in [ʎ] in Ibero-and Gallo-Romance, while word-initial OL clusters present a wider variety of results (ibid.). In contrast, Repetti and Tuttle (1987) claimed that the spread and phonologization of OL palatalization were driven by secondary postvocalic /k(V)l g(V)l/ because the Latin suffix *-cul-* was a very productive derivative suffix, which would have constituted most of the input for OL palatalization.

The widespread palatalization of secondary postvocalic O(V)L clusters across Romance varieties and their relatively uniform outcomes (compared to other cluster configurations) suggest that these clusters underwent OL palatalization first. The chronological evidence in the corpus compiled for this dissertation is consistent with this proposal. Of all inherited words where OL palatalization is certain, 51 are attested before the start of the 13th century. Of those 51 words (listed in the previous paragraphs), 17 come from primary OL clusters and 34 from secondary O(V)L clusters; of those 34 examples, 27 come from postvocalic secondary O(V)L clusters.[42] Consequently, the first attestations of the inherited words exhibiting OL palatalization seem to indicate that this sound change, at least in Ibero-Romance, first phonologized in secondary postvocalic O(V)L clusters.[43]

Many of these O(V)L clusters came from the suffix *-cul-*, which means that /k(V)l/ constituted a major source of clusters for OL palatalization[44] because this suffix was highly productive in Latin (Repetti & Tuttle 1987). It was mainly used to make diminutive forms but also served to derive deverbal nouns for tools and instruments (cf. Leumann 1977: 305-14), e.g., Lat. AURIS 'ear' -> Lat. AURĬCŬLA 'ear-lap', Lat. ŎVIS 'sheep' -> Lat. ŎVĬCŬLA 'little sheep' (cf. LS). Previous research has shown that high frequency facilitates phonological change (cf. Bybee 2001, 2002). Additionally, I propose that the association of these clusters with a specific morphological function (diminutive formation) could have further facilitated this process, as speakers could readily identify these clusters with a particular morphological category. This hypothesis is supported by the findings of Bybee (2002), who showed that morphological relations, which emerge from phonological and semantic similarity, are one driving force behind sound change diffusion.

[42] The analysis of the compiled historical corpus is based on 473 inherited words. Of these, primary OL clusters (n = 218) and secondary O(V)L clusters (n = 255) are comparable in number (Section 2.4). Secondary postvocalic O(V)L clusters are much more numerous (with OL palatalization, n = 126) than secondary postconsonantal O(V)L clusters (with OL palatalization, n = 47). However, the percentage of earlier attested inherited words is still higher (but comparable) in secondary postvocalic O(V)L clusters (21.43%) than in secondary postconsonantal O(V)L clusters (14.89%).

[43] An earlier attestation of secondary O(V)L clusters compared to primary OL clusters was not found for Italo-Romance.

[44] The compiled historical corpus includes 190 inherited words that came from secondary postvocalic O(V)L clusters (with and without OL palatalization), from which 108 contained /k(V)l/.

A further indication that postvocalic secondary O(V)L clusters palatalized at an earlier time than other OL clusters is the divergent development of Old Spanish or Proto-Spanish [ʎ]. As pointed out in Section 4.4.4, this palatal lateral derived from different Latin sources, i.e., /lː/, /lj/, /pl fl kl/, and /k(V)l g(V)l/. However, these [ʎ] sounds followed divergent evolutionary paths.

Old Spanish or Proto-Spanish [ʎ] (< Lat. /lj k(V)l g(V)l/) underwent further changes and eventually became Sp. /x/, e.g., Lat. ALIUM > Sp. *a*/x/*o* and Lat. ŎVĬCŬLA > Sp. *ove*/x/a. In contrast, Old Spanish [ʎ] (< Lat. /lː pl fl kl/) was preserved (cf. Penny 2002: 106; GCLI: 228-31), e.g., Lat. CAVALLUS > Sp. *caba*[ʎ, ʝ]*o* and Lat. FLAMMA > Sp. [ʎ, ʝ]*ama.* These divergent developments suggest that Old Spanish or Proto-Spanish [ʎ] arose at two different times (cf. Zampaulo 2019a: 49-77). Lat. /lj k(V)l g(V)l/ > [ʎ] is assumed to have occurred before Lat. /lː/ > [ʎ] and Lat. /pl fl kl/ > [ʎ] because the latter changes are very widespread across the Romance varieties, while the former are restricted to some Ibero-Romance varieties such as Spanish or Astur-Leonese varieties (ibid., 49-51; Lausberg 1967: 58). The rarity of the changes Lat. /lː/ > [ʎ] and Lat. /pl fl kl/ > [ʎ] within the Romance-speaking territory indicates that they were Ibero-Romance innovations, triggered at a later time.

The articulatory evidence gathered in Section 3.4.1 also suggests that (secondary) postvocalic OL clusters could have been more likely to undergo OL palatalization. The articulatory data showed that the position of the tongue blade posterior and anterior during the lateral (at the point of maximum constriction) was significantly higher across all positions in the cluster /kl/ than in singleton /l/. This is the main factor in secondary lateral palatalization (cf. Section 3.1.1). Similarly, the tongue blade anterior sensor during the lateral was significantly higher in /kl/ than in singleton /l/ word-initially and postvocalically. These height differences were largest in postvocalic position. This suggests that the height changes in the tongue blade sensors during the lateral from singleton /l/ to /kl/ were less gradual postvocalically than word-initially or postconsonantally. Consequently, the greater articulatory differences in postvocalic position suggest that this context provided more extreme variants, perhaps also more acoustically or perceptually salient. These more acoustically or perceptually salient realizations might have been more likely to trigger the perceptual reanalysis of OL clusters by the listeners (Ohala 1993, 2003). Additionally, the earlier OL palatalization of postvocalic (secondary) OL clusters could have been aided by lenition accelerating the erosion of the obstruent in postvocalic position, which could have also enhanced the salience of the nascent palatal lateral.

As discussed in the preceding paragraphs, historical and articulatory evidence appears to be in line with the assumption that secondary postvocalic O(V)L clusters underwent OL palatalization first in Ibero-Romance. At this point, it is important to explore the palatalization mechanisms in these clusters. There are two main theories describing this process in /k(V)l g(V)l/ (Section 4.4.3): the palatal glide account assumes the weakening of the velar obstruent into /j/, which would then have palatalized the following lateral; in contrast, the gestural account assumes gestural blending between the dorsal velar and the apical lateral gestures as the trigger of OL palatalization. The glide hypothesis implies that OL palatalization in Ibero- and Gallo-Romance, but not in Italo- and Eastern-Romance, had two stages with two different triggers of lateral palatalization: secondary postvocalic O(V)L clusters palatalized through velar weakening, but other OL clusters palatalized through coarticulation. The gestural blending hypothesis postulates only one trigger in Romance: coarticulation, whose results spread from one OL cluster to others.

It was argued in Section 4.4.3 that the glide hypothesis does not account for the lack of raising or diphthongization in the vowels preceding OL clusters. Furthermore, the hypothetical heterosyllabicity of OL clusters does not automatically translate into the weakening of the coda velar into a glide. As demonstrated in Table 4.12, velar segments in heterosyllabic clusters underwent voicing and loss in multiple lexical items.

A further issue with the glide account is that it does not adequately explain the relative chronology of OL palatalization or how OL palatalization spread from /kl/ to the other OL clusters. First, it is unclear how OL palatalization could have had a pan-Romance origin (at least for primary OL clusters), if secondary postvocalic O(V)L clusters underwent OL palatalization first and independently in Ibero-Romance and Gallo-Romance, on the one hand, and in Italo-Romance and Eastern-Romance, on the other hand. Second, it is unclear how OL palatalization could have spread from /kl/ to the other OL clusters if secondary postvocalic O(V)L clusters, which were the primary sources of /kl/, were no longer available as input. In Latin, the primary cluster /pl/ was actually a more common OL cluster than /kl/, and the instances of /pl fl/ together far outnumbered the instances of /kl/.[45] Zampaulo (2019a: 70) and Lloyd (1987: 225) did not address these questions.

In my view, the divergent diachronic pathways of OL palatalization in Ibero-Romance can be explained through the gestural account. Ample evidence has been given that indicates that the palatalization of secondary postvocalic /k(V)l g(V)l/ happened earlier than in primary OL clusters. Müller (2011: 97-9) and Zampaulo (2019a: 51-8) made a clear distinction between the changes in primary and secondary OL clusters in Ibero- and Gallo-Romance, which would have been the result of different sound change processes. However, different chronological timing for the palatalization of different OL clusters does not contradict the hypothesis that all OL clusters palatalized through the same trigger. In fact, variation in the timing of palatalization across different OL clusters can account for the distribution of OL palatalization and for lack of palatalization in some OL clusters caused by, for example, lenition.

OL palatalization could have phonologized first in the secondary postvocalic /k(V)l g(V)l/ due to the high frequency of the diminutive suffix -*cul-*, which was the main sources of these clusters. The association of these clusters with a particular morphological category - diminutive formation - could have also facilitated phonologization. In addition, the velar segment could have been more easily lenited or eroded in postvocalic position, especially when followed by an homorganic segment such as [ʎ].

[45]See Müller (2011: 113) for an overview of the frequencies of OL clusters in the *LS* and in the *Französisches Etymologisches Wörterbuch* (von Wartburg 1928-2003). The frequencies from the *LS* can be easily reviewed and explored through the Perseus Digital Library (https://www.perseus.tufts.edu/hopper/text?doc=Perseus%3atext%3a1999.04.0059). The etyma included in the historical corpus compiled for this dissertation mirror these results: the corpus contains approximately 46 etyma with etymological /pl/ and 32 etyma with etymological /kl/.

The diminutive suffix -*cul*- could also be postconsonantal if the lexical base had a consonant stem (cf. Leumann 1977: 307), e.g., Lat. FŪR, -RIS 'thief' -> Lat. FŪRUNCŬLUS 'petty thief', Lat. CARBO, -ŌNIS 'coal charcoal' -> Lat. CARBŬNCŬLUS 'small coal' (cf. LS). Moreover, OL palatalization in postconsonantal /k(V)l g(V)l/ is attested at roughly the same time as postvocalic /k(V)l g(V)l/. Therefore, it is possible that secondary postconsonantal O(V)L clusters underwent OL palatalization at the same time as secondary postvocalic O(V)L clusters did.

In a similar manner, the secondary postvocalic clusters /k:(V)l/ could have undergone OL palatalization early because they were identified with the diminutive suffix -*cul*-. The etyma containing these clusters included in the compiled wordlist are Late Lat. *CATTŬLUS (cf. Georges: catulus), Late Lat. *BŬCCŬLA (cf. Georges: buccula), and Late Lat. *CACCŬLUS. All these etyma were diminutive derivational forms from their respective roots (cf. DCECH: cachorro; DEHLP: bochecha). Semantically, Lat. CACCABUS > Late Lat. *CACCŬLUS > Gal. Sp. *cacho* may also be considered a diminutive (see *cacho* (Gal.) or *cacho* (Sp.) in Appendix A). These diminutive forms were derived with the diminutive suffix -*ul*-, rather than -*cul*-, but they were diminutive forms whose root contained /k/. If /k/ was reinterpreted as being part of the suffix, then these etyma would have been effectively linked to secondary postvocalic O(V)L clusters, which were the first OL clusters where palatalization phonologized (cf. Section 4.4.5). However, the chronological information contained in the corpus provides no attestations of the inherited words that come from these etyma before the 13th century.

Postvocalic primary /kl/ must have also undergone OL palatalization early because it had parallel phonetic developments to secondary /k(V)l g(V)l/ in Galician-Portuguese and Spanish. In addition, Proto-Spanish [ʎ] became [ʒ], like in the outcome from Latin /lj/, which indicates that these clusters palatalized before primary word-initial OL clusters and postvocalic OL clusters with geminates, which preserved Proto-Spanish [ʎ]. Nevertheless, the corpus in Appendix A contains no inherited words from etymological postvocalic /kl/ exhibiting OL palatalization before the 13th century.

Given the available chronological and historical information, there are two possible scenarios for when OL palatalization became phonologized. First, OL palatalization might have become phonologized in all secondary O(V)L clusters and in primary postvocalic /kl/ at roughly the same time. Alternatively, and perhaps more accurately, OL palatalization may have become phonologized first in secondary postvocalic OL clusters, which were the most frequent in Late Latin and exhibit the most widespread OL palatalization across the Romance varieties, with the other relevant clusters following not long after.

The evidence for the second scenario comes from French and Catalan, which only exhibit OL palatalization in secondary postvocalic OL clusters: if all secondary OL clusters had undergone OL palatalization at the same time, more OL clusters should exhibit palatalization in these languages. Given that these clusters resulted in [ʎ] in most Ibero- and Gallo-Romance varieties, the chronological spread of OL palatalization was likely similar across these language families. Based on this evidence, I suggest that OL palatalization became phonologized first in secondary postvocalic OL clusters and, not long after, in secondary postconsonantal

O(V)L clusters, secondary postvocalic O(V)L clusters with geminates, and in primary postvocalic /kl/.

The phonologization of OL palatalization would have occurred last in primary OL clusters. As mentioned in previous paragraphs, the outcome [ʎ], rather than [ʒ], in Spanish primary word-initial and postvocalic (with geminates) OL clusters suggests that their phonetic developments were later than in secondary postvocalic O(V)L clusters. A later chronology for primary clusters could also account for the effect of lenition in word-initial /gl/, in both Galician-Portuguese and Old Spanish, and in (Old) Spanish /pːl fːl kːl/, where the obstruent was lost: if OL palatalization occurred when lenition was a more pervasive sound change, potentially extending beyond word-boundaries, the loss of the obstruents in these clusters can be more easily explained.

The interaction between lenition and OL palatalization is summarized in Figure 4.2. This timeline updates Figure 4.1 with noteworthy periods in the development of OL clusters. As the timeline shows, the period between the syncope, which triggered the formation of secondary clusters, and the first attestations of OL palatalization in Ibero-Romance overlapped completely with all three lenition processes. The palatalization of the lateral, which represents the first phonetic development in the OL palatalization process, must have occurred not long after syncope, perhaps between the 5th and 6th centuries. In contrast to the first attestations of OL palatalization, where secondary postvocalic OL clusters already exhibited their final outcomes in Galician-Portuguese and Old Spanish, the final outcomes of some OL clusters, such as Old Spanish word-initial clusters, had not yet been achieved in the 11th and 13th centuries.

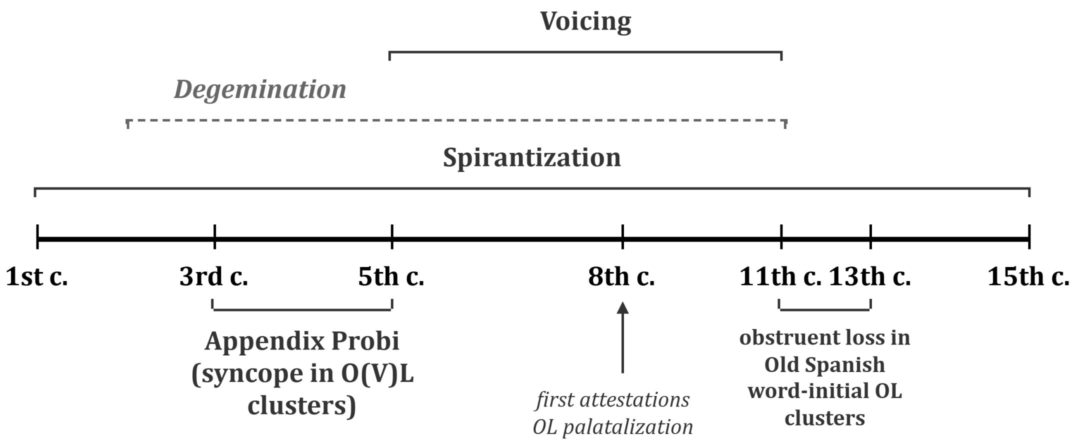


Figure 4.2.: A relative chronology of lenition and OL palatalization

As a last point, it is necessary to discuss the spread of OL palatalization from /kl/ to /pl fl/, i.e., [pl fl kʎ] > [pʎ fʎ kʎ]. This spread has been traditionally explained through analogy (cf. Lausberg 1967; Repetti & Tuttle 1987; Lloyd 1987; Zampaulo 2019a). Bateman (2007: 126) stated that the key to OL palatalization in Spanish lay in the lateral and not in the obstruent since the outcomes of /pl fl kl/ merged and the nature or place of articulation of the obstruent seems to have lost relevance in this evolution. This is also relevant for Galician-Portuguese, where /pl fl kl/ resulted in the same outcome within the same cluster configuration.

Therefore, perhaps the obstruents in the clusters /pl fl kl/ lost their distinctiveness and were only perceived as voiceless transitions. In my view, further acoustic or perceptual experiments are necessary before settling on analogy as the answer to the spread of OL palatalization in Ibero-Romance. For want of a better option, analogy will still be used to account for the spread of OL palatalization.

Figure 4.3 demonstrates the chronology of the phonologization of OL palatalization. This sound change would have been triggered in clusters containing a velar stop through gestural blending between the velar C_1 and the lateral C_2. This gestural blending is not possible for labial segments, which are not lingual segments and involve an independent articulator. OL palatalization would have become phonologized first in secondary postvocalic O(V)L clusters due to their high frequency and their identification with a particular morphological category (diminutive formation). Historical evidence suggests that OL palatalization was phonologized next in the remaining secondary O(V)L clusters and primary postvocalic /kl/. The last clusters to undergo palatalization were the primary OL clusters. Since /pl kl/ did not palatalize in secondary clusters, the spread of palatalization from [kʎ] to [pʎ fʎ] would have occurred in this last stage.

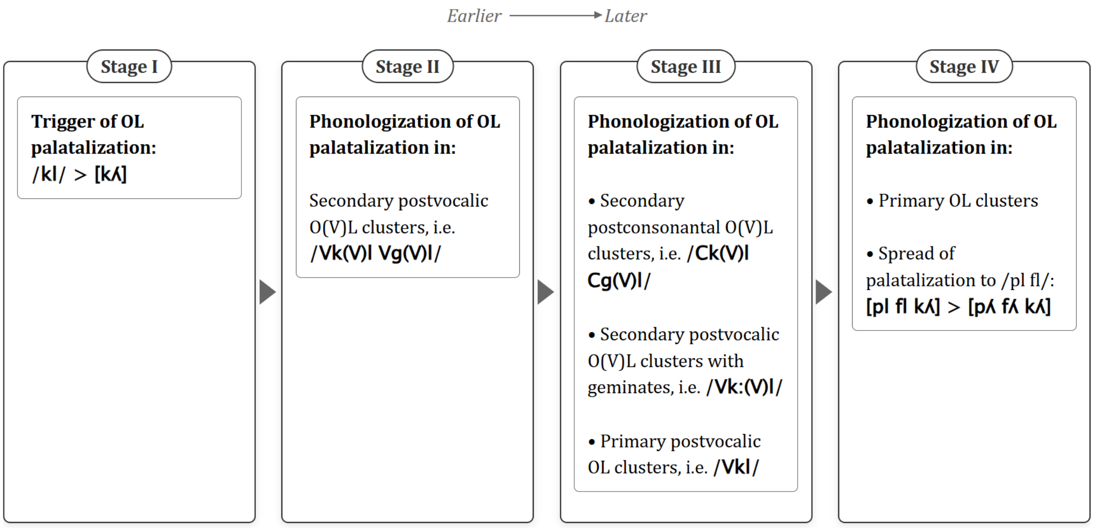


Figure 4.3.: A relative chronology of the stages of OL palatalization

4.5. Discussion

This chapter aimed to reconstruct the diachronic pathways of OL palatalization in Galician, Portuguese, and Spanish. To achieve this, the results of Chapter 2 and Chapter 3 were combined with previous historical and typological research, which included discussions of: the quality of the Latin lateral, previous proposals for evolutionary pathways, and

Ibero-Romance sound change typology, focusing on syncope, lenition, vowel raising, and syllabification.

The sound change discussion revealed several key findings. First, unstressed post-tonic vowels were often preserved in Galician-Portuguese, rather than undergoing syncope, which blocked OL palatalization in some lexical items (Section 4.3.1). Second, the OL palatalization process coexisted with various lenition changes (Section 4.3.2; cf. Figure 4.1 and Figure 4.2). Third, the palatalization of secondary postvocalic O(V)L clusters proposed by the glide hypothesis does not account for the phonetic development of these clusters. The historical evidence presented in Section 4.3.3 and Section 4.3.4 suggests that this hypothesis cannot account for the absence of vowel raising and diphthongization in the Ibero-Romance lexical items. Moreover, velar weakening into /j/ was not the most common outcome of heterosyllabic clusters, lenition being the predominant process instead.

In light of this evidence, the phonetic developments of OL palatalization in Ibero-Romance were discussed. Word-initial and postconsonantal OL clusters had already been widely accounted for in previous literature. The different reconstructions of the development of /k(V)l g(V)l/ - according to the glide hypothesis or to the gestural hypothesis - were discussed and it was concluded that the gestural hypothesis, assuming lateral palatalization through coarticulation and C_1 lenition, better accounts for the diachronic pathways of secondary postvocalic O(V)L clusters.

Possible evolutionary pathways, based on those for secondary postvocalic O(V)L clusters, were proposed for primary postvocalic /kl/ since the glide hypothesis cannot fully account for the vowel changes or for the spread of OL palatalization. Possible reconstructions for the developments of postvocalic OL clusters with long obstruents were also proposed based on the diachronic pathways of postconsonantal clusters. Given that the obstruents were generally preserved, several reconstructions were offered for the timing of degemination. In the case of /p:l f:l k:l/, they resulted in Spanish [ʎ]. Obstruent loss in these clusters suggests that degemination affected them very early. Consequently, the obstruent underwent further lenition, just like in word-initial OL clusters.

The relative chronology of OL palatalization and its spread from one OL cluster to others was also discussed. The historical evidence provided in Section 4.4.5 indicates that secondary postvocalic /k(V)l g(V)l/ were the first clusters to undergo OL palatalization. The results from the articulatory experiment in Chapter 3 seem to support the earlier palatalization of these clusters. It was argued that the different chronological timing for the palatalization of different OL clusters does not contradict the hypothesis that all OL clusters underwent palatalization through the same articulatory trigger.

The phonologization of OL palatalization occurred first in /k(V)l g(V)l/ because these clusters were identified with -*cul*-, a highly productive and frequent Latin diminutive suffix. The chronological information contained in the historical corpus compiled for this dissertation (cf. Appendix A), together with evidence from divergent sound change patterns, suggests that postconsonantal secondary /k(V)l g(V)l/, postvocalic /p:(V)l k:(V)l/, and postvocalic /kl/, would have followed shortly afterwards. At a later stage, OL palatalization would have been phonologized in primary OL clusters and would have spread to /pl fl/. This variation in the timing of palatalization across different OL clusters accounts for the absence of palatalization in some segments caused by, for example, lenition: when lenition became a more generalized and pervasive process, OL palatalization might have been blocked due to spirantization or obstruent loss, as in the case of word-initial /gl/. In contrast, when lenition was still in its initial stages, /g/ should not have undergone spirantization and, therefore, /gl/ could have been targeted by OL palatalization, like in secondary postvocalic /gl/.

This dissertation offers the first exhaustive reconstruction of the evolutionary pathways of OL palatalization in Ibero-Romance. While this research has broadened our knowledge about the development of this process, some questions require further research. First, the reconstruction of the phonetic development of clusters containing geminates remains unclear due to the difficulty of dating degemination. Second, the mechanisms or motivations behind the spread of OL palatalization from /kl/ to /pl fl/ are still not well-understood. Acoustic research on this topic might illuminate these mechanisms.

5. Conclusion

This dissertation aimed to study the origin and evolution of OL palatalization in Ibero-Romance from an experimental-historical approach. The historical perspective has brought a deeper understanding of the relative chronology of OL palatalization, its diachronic development, and its apparent irregularity in Ibero-Romance. The experimental-phonetic approach has shed new light on the possible articulatory origins of OL palatalization and on the role of position within the word and voicing of C_1 in its evolution in Ibero-Romance. To address these topics, this dissertation applied a three-pronged foundation: a historico-etymological corpus research, an articulatory experiment, and a comparative typological analysis of Ibero-Romance sound changes.

The historical foundation of the dissertation was an etymological and historical research on inherited Ibero-Romance words that might have come from etyma containing OL clusters. The result of this diachronic corpus research was a wordlist (Appendix A), where the etymological information of lexical items with and without OL palatalization in Galician, Portuguese, and Spanish was included. The aim of the wordlist was to provide an exhaustive historical groundwork for the quantitative and qualitative analysis of OL palatalization in Ibero-Romance (Chapter 2).

The compiled corpus has provided new historical evidence of OL palatalization in clusters where this sound change was previously unattested, such as postvocalic primary /Vkl/ and secondary/Vk:l/. Furthermore, evidence of OL palatalization has been found in one new cluster configuration: secondary postvocalic clusters with geminate stops (/Vp:(V)l Vk:(V)l/), which had not been described as undergoing OL palatalization in previous accounts. Although the found instances of OL palatalization in /Vkl/ are scarce, they suggest that postvocalic primary and secondary OL clusters underwent similar evolutions since they resulted in Galician-Portuguese /ʎ/ and Old Spanish /ʒ/.

Concerning the distribution of OL palatalization, the historical evidence gathered in the historical dataset has indicated clear patterns across different clusters. The cluster /kl/ palatalized in all configurations, while /pl fl/ only underwent palatalization in primary word-initial, postconsonantal, and postvocalic (with long obstruents) clusters. In contrast, /gl/ only palatalized in secondary O(V)L clusters, and /bl/ never underwent OL palatalization (Section 2.4.2). The review of the outcomes of OL clusters conducted in Section 2.4.1 and Section 2.4.3 has suggested that the absence of OL palatalization in Ibero-Romance was not necessarily the result of the irregular implementation of OL palatalization. Rather, the absence of OL palatalization in most lexical items can be explained by the effect of other phonological processes, such as lack of syncope, liquid dissimilation, and lenition, or by the substitution of the inherited form with OL palatalization for a more conservative form of the word without it. Lastly, the chronological information included in the historical corpus has provided new insights into the relative chronology of OL palatalization (cf. Section 4.4.5).

The experimental-phonetic foundation of this dissertation was an Electromagnetic Articulography (EMA) experiment (Chapter 3). The goal of this experimental research was to elucidate whether the coarticulatory dynamics between both members of OL clusters could have triggered OL palatalization. In addition, the effect of position within the word of the OL clusters on these coarticulatory dynamics was also studied. To this end, the production of words containing OL clusters and their singleton counterparts in three positions within the word was compared in Peninsular Spanish.

Previous accounts of OL palatalization had hypothesized that it was triggered by gestural blending between both members of OL clusters containing velar segments. Consequently, the experiment studied whether the changes in the production of the velar and the lateral in OL clusters would be in line with their palatalization: on the one hand, velar palatalization involves fronting of the tongue back and tongue blade posterior; on the other, lateral palatalization involves raising of (primarily) the tongue blade posterior.

The analysis of the articulatory data in Section 3.4.2 has shown that the tongue back and tongue blade sensors during the production of the velar C_1 were not in a significantly more fronted position in /kl gl/ compared to /k g/. In contrast, the tongue blade anterior and posterior sensors during the production of the lateral C_2 were significantly higher in /kl gl/ compared to /l/. The tongue blade posterior was significantly higher during the lateral in /kl gl/ than in /l/ across all positions. Similarly, the tongue blade anterior was significantly higher during the lateral in /kl/ than in /l/ word-initially and postvocalically, while in /gl/ this height increase was only significant word-initially (Section 3.4.1). The interaction of position within the word with C_1 voicing and its effects were clear: while the tongue blade sensors during lateral production maintained a similar height in /kl/ across positions, their height during the lateral significantly decreased in postvocalic /gl/.

The present results are consistent with the hypothesis that the palatalization of the lateral, which is thought to have been the first step in OL palatalization, could indeed have been triggered by coarticulation; the observed articulatory dynamics indicate raising of the tongue blade sensors during lateral production in /kl gl/, which is the main indicator of secondary palatalization in laterals. However, these dynamics do not indicate that coarticulation would have caused shifts in the place of articulation of the velars consistent their palatalization. Additionally, the articulatory data has shown that voiced stop spirantization affected the coarticulatory dynamics between /g/ and /l/: the height of the tongue blade sensors during the lateral C_2 decreased significantly in lenition-inducing positions, i.e., postvocalically, compared to lenition-blocking positions, i.e., postconsonantally. The observed effects of lenition could have implications for the spread of OL palatalization in Ibero-Romance, where primarily OL clusters with a voiceless obstruent underwent OL palatalization.

Lastly, the review of sound changes and phonological processes in Ibero-Romance provided the phonological and typological foundation for this dissertation (Chapter 4). The study of syncope, lenition, vowel raising, and syllabification aimed to inform the reconstruction of the diachronic pathways of OL palatalization. On the one hand, some sound changes might have coexisted with OL palatalization and could have prevented some lexical items from undergoing this process. An example is the lack of syncope in many Galician-Portuguese inherited words, which hindered cluster formation, preventing cluster formation. On the other hand, deep knowledge of the sound change patterns in the history of the Ibero-Romance languages is crucial for accurately reconstructing the phonetic development of OL palatalization.

The results of the sound change review were discussed in light of the corpus research and the articulatory experiment to reconstruct the relative chronology and the diachronic pathways of OL palatalization. The corpus research provided new historical evidence on the outcomes and patterns of OL palatalization, while the articulatory experiment shed new light on the triggering mechanisms of this process

Regarding the evolutionary pathways of OL palatalization, primary word-initial and postconsonantal OL clusters had already been widely accounted for in previous literature. Based on these pathways, reconstructions were proposed for primary and secondary postvocalic OL clusters with long obstruents. While postvocalic /pːl fːl kːl/ and /kː(V)l/ resulted in Galician-Portuguese [t͡ʃ], they resulted in Spanish [ʎ] and [t͡ʃ], respectively. To account for obstruent loss in /pːl fːl kːl/, it was suggested in Section 4.3.2.3 that degemination affected /pːl fːl kːl/ much earlier than /pː(V)l fː(V)l kː(V)l/. Consequently, the obstruents were lost in Old Spanish, as in word-initial OL clusters.

The development of secondary postvocalic /k(V)l g(V)l/ was thoroughly discussed in Section 4.4.3. Given the historical evidence presented on vowel raising and syllabification in Section 4.3.3 and Section 4.3.4, it was concluded that the evolution of secondary postvocalic /k(V)l g(V)l/ is better accounted for through coarticulation and lenition (gestural hypothesis), rather than through velar weakening into /j/ (glide hypothesis). Based on these evolutionary pathways, possible reconstructions for the phonetic development of primary postvocalic /kl/ were proposed.

Ample historical evidence indicates that /k(V)l g(V)l/ were the first clusters to undergo OL palatalization. It was argued in Section 4.4.5 that several factors might have contributed to the early phonologization of palatalization in these clusters: first, the frequency of -*cul*-, a very productive Latin diminutive suffix and the source of most /k(V)l/ clusters; and second, the association of /k(V)l g(V)l/ with a particular morphological category, namely diminutive formation. In addition, the experimental data in Section 3.4.1 showed that the height differences in the tongue blade posterior and anterior during lateral production in /kl/ and /l/ were largest postvocalically. Greater articulatory differences in postvocalic position might suggest that this context provided more extreme variants, perhaps also more acoustically or perceptually salient, which could have been more easily reanalysed by listeners. Given the early attestations and the resulting outcomes, it was concluded in Section 4.4.5 that postconsonantal secondary /k(V)l g(V)l/, postvocalic /kː(V)l/, and postvocalic /kl/ must have undergone OL palatalization next. The last OL clusters to palatalize were primary word-initial and postconsonantal/pl fl kl/ and postvocalic /pːl fːl kːl/.

One significant claim in this dissertation is that the different timing of OL palatalization for different OL clusters does not contradict the hypothesis that this process had a single trigger. In fact, this timing difference can account for the distribution of OL palatalization and for the absence of palatalization in specific clusters in Ibero-Romance. For example, the absence of OL palatalization in primary word-initial /gl/, but not in secondary postvocalic /g(V)l/, can be explained through lenition: voiced stop spirantization would have been a more pervasive and generalized process when word-initial OL clusters palatalized; since the initial voiced stop underwent lenition, OL palatalization did not target this cluster. In contrast, /g(V)l/ would have been targeted by OL palatalization because the process of lenition had just started and both processes coexisted.

In a similar way, primary postvocalic /p:l f:l k:l/ resulted in Spanish [ʎ], while /k:(V)l/ resulted in Spanish [t͡ʃ]. These different outcomes can be explained through the interaction between OL palatalization and degemination, as was argued in Section 4.3.2.3: at an earlier time, degemination would not have been a generalized process. As a result, /k:(V)l/ did not lose the stop due to further lenition. In contrast, the later palatalization of /p:l f:l k:l/ in Spanish would have meant that degemination had already affected the OL clusters, making them prone to further stop reductions. After the phonologization of [kʎ] in all clusters, the palatal lateral would have spread to /pl fl/ in primary cluster configurations. The mechanisms behind this spread, which have been traditionally explained by analogy, are not fully understood yet.

This dissertation is the first thorough laboratory phonology account of OL palatalization in Ibero-Romance and has significantly deepened our knowledge of the evolution and mechanisms of this sound change. The reconstruction of the development of OL palatalization in Ibero-Romance offers valuable insights into the interactions between different sound changes and how such interactions may result in apparent irregularity or in diverse diachronic pathways for the same sound change process. Nevertheless, several questions remain open for future research. As pointed out, the mechanisms behind the spread of OL palatalization from /kl/ to /pl fl/ are still unclear. While the influence of analogy is possible, acoustic analysis comparing OL clusters with their singleton counterparts could bring new insights into the merger of the outcomes of /pl fl kl/ in Ibero-Romance.

In addition, the articulatory dynamics of OL clusters in other Romance languages could be compared with the available Spanish data. Finally, this dissertation has argued that OL palatalization was a pan-Romance process with a unique trigger. However, a full account of OL palatalization can only be achieved through a cross-linguistic comparison of multiple Romance varieties. In this regard, the expansion of the historical corpus to include inherited words that originally came from OL clusters in Gallo-Romance, Italo-Romance, and Eastern-Romance varieties would provide a more exhaustive foundation to fully describe the evolution of OL palatalization in Romance.

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A. Historico-etymological corpus

This appendix comprises the etymological and historical information from the diachronic corpus research. The inherited forms listed (main elements in the bullet list) correspond to the first attestation.

Most sources consulted for the compilation of this dataset were digital and online resources. Consequently, the search term used to access the relevant information is given together with the digital resources and, occasionally, specific sources contained within those resources: for instance, DCECH (abeja) means that the word *abeja* must be searched in the digital version of the DCECH; similarly, DDGM (achaar, TC) indicates that, within the digital resource DDGM, the word *achaar* was searched and the information from the source TC was particularly relevant.

- ***abeja* (OSp.)**

  Etymology: Lat. APĬCŬLA (root/stem: APIS)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: CRC (438); GCLI (278); DCECH (abeja); REW (523); CORDE.

- ***abellas* (GP)**

  Etymology: Lat. APĬCŬLA (root/stem: APIS)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: FF (135, 354); REW (523); DELG (abella); DDGM (abella); TMILG (CSM); DEHLP (abelha); DEM (25); Mir. *abeilha* (GCLI: 278).

- ***abraiar* (Gal.)**

  Etymology: Lat. GLADIUS (root/stem: GLADIUS) (u.o.)

  Other forms: *aglaiar?*

  Attestation date: 20th century

  Sources and notes: DELG (aglaiar/abraiar); DEEH (710); DDD (abraiar/aglaiar); TLPGP (abraiar/abraiar(se)/abraiado); cf. DEHLP (gládio/gladi-) and DEM (1104); no information in DCECH (gladio). According to DXL (42), Gal. *aglaio* comes from Cat. *esglaiar.* No etymological information is given for Gal. *abraiar* (ibid., 8).

- ***abrojos* (OSp.)**

  Etymology: Lat. APĔRĪ ŎCŬLOS (root/stem: ŎCŬLUS)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: CRC (424); DCECH (abrojo); DEEH (468); TDHLE (abrojo); CORDE. According to DRAE (abrojo), Sp. *abrojo* originated from the combination of *abre* and *ojo,* and not from Lat. APĔRĪ ŎCŬLOS.

- ***abrolhos* (GP)**

  Etymology: Lat. APĔRĪ ŎCŬLOS (root/stem: ŎCŬLUS)

  Attestation date: 13-14th centuries, OL palatalization: yes

  Sources and notes: DCECH (abrojo); DELG (abrollo); TDHLE (abrojo); DDGM (abrollos, TC); DEHLP (abrolho); DEEH (468); DEM (36); TMILG (TC, cf. DDGM).

- ***acetres* (GP)**

  Etymology: Arab. *saṭl* (root/stem: *saṭl*)

  Other forms: *acetere*

  Attestation date: 14th century, OL palatalization: no

  Sources and notes: From Lat. SĬTŬLA through Arab. *satl* (DCECH: acetre; DELG: acetre; DEHLP: acéter); TMILG (both given forms in GHCD); more examples in DEM (53-4).

- ***acha* (GP)**

  Etymology: Lat. ASTŬLA (root/stem: AXIS)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: With the meaning '(wood) splinter'. Georges (astula/axis 2); FF (330); GCLI (283); DCECH (astilla/rajar); DEEH (481); DELG (acha); DEHLP (acha 2); LS (assŭla/assis/axis); DDGM (acha); TMILG (CSM, CT). The evolution of the etymon might have been as follows: Lat. ASSŬLA ~ ASTŬLA > *ASTLA > Late Lat. ASCLA > GP *acha* (cf. DCECH: rajar, REW: 736, DEM: 54).

- ***achaar* (GP)**

  Etymology: Late Lat. APPLĀNĀRE (root/stem: PLĀNUS) (u.o.)

  Attestation date: 13-14th centuries

  Sources and notes: It is possible that Gal. *achandar* comes from Late Lat. APPLĀNĀRE (DDGM: achaar, TC; DEHLP: achanar; DXL: 18-19), but most sources did not support or discuss this possibility (cf. REW: 6568; DCECH: llano; DELG: chan; DEHLP: achanar) and instead assumed it to be a derivational form of GP *chan*. For information on Gal. *achanzar*, see DELG (chanzar) and DXL (19).

- ***achalgo* (GP)**

  Etymology: Late Lat. AFFLATĬCUM (root/stem: FLĀRE) (u.o.)

  Other forms: *achadigo*

  Attestation date: 13th century

  Sources and notes: GCLI (294); no information found in REW (261); DEEH (447); DDGM (achadigo); TMILG (FCR; GP *achadego* is attested in 15th-century MNP); GP *achalgo* is also attested in PMH (*Leges* VI: 930); no etymological information in DEM (55). According to DEHLP (achádego/achádigo) and DXL (18), GP *achadigo* is a derivational form from GP *achar* (also cf. DELG: achar-se, DCECH: hallar).

- ***achamus* (GP)**

  Etymology: Lat. AFFLĀRE (root/stem: FLĀRE)

  Attestation date: 10th century, OL palatalization: yes

  Sources and notes: FF (330); GCLI (235); DCECH (hallar); REW (261); DDGM (especially TC); DEM (55) (cf. CODOLGA: PMH, VII); DEHLP (achar); DELG (achar-se); GP *achar* is attested in the 13th century (TMILG: LP, CSM, MSXC).

- ***achazar* (Gal.)**

  Etymology: Lat. PLACĬTUS (root/stem: PLACĒRE) (u.e.)

  Attestation date: 18th century, OL palatalization: yes

  Sources and notes: DEEH (878) and REW (6561) gave Gal. *achazar* as a derivational form from Lat. PLACĬTUS. Therefore, the etymological pathway remains uncertain: whether it comes from a Late Lat. etymon like *(A)PLĀCĬTARE or whether it was derived from an inherited form **chazo* < Lat. PLACĬTUS. No information on GP or Pt. *achazar* was found in DEHLP, DEM, DELG or DCECH (plazo). Similarly, there are also no examples of Gal. *achazar* in TLPGP, but several were found in DDD (achazar). Gal. *achazar* means ‘reconcile, placate’ (ibid.), but it is unclear if GP *achasam* (TMILG: DGS13-16) may have had that meaning.

- ***achegar* (GP)**

  Etymology: Lat. APPLĬCĀRE (root/stem: PLĬCĀRE)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: Georges and OLD (plico, applico); DEHLP (achegar); DEM (579-60); cf. DELG (chegar); REW (548); DEEH (470); DDGM (achegar, see especially TC and Tato Plaza 1999); TMILG (LP, CSM, TC).

- ***achitabla* (Alav.)**

  Etymology: Lat. ACETABŬLA (root/stem: ACETABULUM) (BORR)

  Attestation date: 20th century, OL palatalization: no

  Sources and notes: No etymological information found in TDHLE (achitabla). According to Corominas, Alav. Burg. *achitabla* was borrowed from Basque, which took the word from Latin (DCECH: achitabla). This may be confirmed by DEEH (436), where *achitabla* is also given as an Alavese form.

- ***aciche* (Sp.)**

  Etymology: Late Lat. ACISCŬLUS (root/stem: ACISCŬLUS)

  Attestation date: 18th century, OL palatalization: yes

  Sources and notes: LS (acisculus); CRC (259); DEEH (437); DCECH (aciche); TDHLE (aciche); cf. DRAE (aciche), through an intermediate Mozarab. form.

- ***aconchegar* (Gal.)**

  Etymology: Lat. COMPLICĀRE (root/stem: PLĬCĀRE)

  Attestation date: 18th century, OL palatalization: yes

  Sources and notes: DEEH (593); DELG (chegar); DDD (conchegar/aconchegar); DXL (22); cf. DEHLP (conchegar) and DEM (650); TLPGP (aconchegar).

- ***adelfa* (Pt.)**

  Etymology: Arab. *díflà* (root/stem: *díflà*) (u.e.)

  Attestation date: 18th century, OL palatalization: no

  Sources and notes: DCECH (adelfa); DEEH (630); DEM (75).

- ***adelfa* (OSp.)**

  Etymology: Arab. *díflà* (root/stem: *díflà*) (u.e.)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: DCECH (adelfa); DEEH (630); DRAE (adelfa); TDHLE (adelfa).

- ***adelha* (Pt.)**

  Etymology: Lat. ANATĬCŬLA (root/stem: ANAS, -ĂTIS)

  Attestation date: 20th century, OL palatalization: yes

  Sources and notes: With the meaning ‘wooden piece in a mill’. DELG (adella); DEM (adelha); cf. REW (440); DDD; TLPGP; DRAG (adella).

- ***affricones* (GP)**

  Etymology: Lat. AFFLICTIO, -ŌNIS (root/stem: AFFLIGĔRE)

  Other forms: *afliçom*

  Attestation date: 15th century, OL palatalization: no

  Sources and notes: DELG (aflixir); DEM (104); REW (263); DEHLP (aflição); GP *afliçom/aflicçom* are attested in the 14th century (ibid.).

- ***affrigir* (GP)**

  Etymology: Lat. AFFLIGĔRE (root/stem: AFFLIGĔRE)

  Other forms: *afliger, afreito*

  Attestation date: 14th century, OL palatalization: no

  Sources and notes: DELG (aflixir); DEM (104); REW (263); DEHLP (afligir); TMILG (GP *afligeu* attested in 15th-century CI). Other inherited forms are Gal. *afreito/afreita* (REW: 263; DEEH: 447; DDD: afreita) and Pt. *afrito* (DEM: 104; DEHLP: aflito). For information on the given inherited form, see DEHLP (afligir).

- ***afreícion* (OSp.)**

  Etymology: Lat. AFFLICTIO, -ŌNIS (root/stem: AFFLIGĔRE)

  Other forms: *aflición*

  Attestation date: 15th century, OL palatalization: no

  Sources and notes: TDHLE (afreisión/aflicción); cf. DEEH (447); CORDE (OSp. *aflición* attested in the 13th century). DCECH (afligir) considers OSp. *afreír, afreisión, afreícion* semi-popular or semi-learned forms. Notably, none of the given inherited words in REW (263) exhibits OL palatalization.

- ***afreído* (OSp.)**

  Etymology: Lat. AFFLIGĔRE (root/stem: AFFLIGĔRE)

  Other forms: *afligido*

  Attestation date: 15th century, OL palatalization: no

  Sources and notes: CRC (417); DRAE (afligir); DEEH (447); cf DEM (104). OSp. *afligido* is attested in the 15th century, OSp. *aflito* in the 10th century (CORDE). DCECH (afligir) considers OSp. *afreír, afreisión, afreícion* semi-popular or semi-learned forms and REW (263) considers them technical or learned words.

- ***aglomerar* (Gal.)**

  Etymology: Lat. AGGLŎMĔRĀRE (root/stem: GLŎMUS, -ERIS) (BORR)

  Attestation date: 19th century, OL palatalization: no

  Sources and notes: DDD (aglomerar); TILG. The Pt. cognate is also attested in the 19th century (cf. DEHLP: aglomerar) but Pt. *glomerar* is attested in the 17th century (DEHLP: glomerar; DEM: 1106). Attempted root or stem reconstruction for words like Lat. CONGLŎMĔRĀTIO, CONGLŎMĔRO, INGLŎMĔRO, GLŎMĔRĀBĬLIS, GLŎMĔRĀRĬUS, GLŎMĔRĀTĬO, GLŎMĔRO, GLŎMĔRŌSUS, and GLŎMUS (see LS for words containing the root -*glom*-): *chom*, *gl?om*, *l?om*, lom*, gom*, xom*, *nl?om*, *ñom* (<g> = <g i j> in TMILG) (TMILG, DDGM; *xom* was only searched in TILG).

- ***aglomerar* (Sp.)**

  Etymology: Lat. AGGLŎMĔRĀRE (root/stem: GLŎMUS, -ERIS) (BORR)

  Attestation date: 18th century, OL palatalization: no

  Sources and notes: DCECH (aglomerar); DRAE (aglomerar). Attempted root or stem reconstruction for words like Lat. CONGLŎMĔRĀTIO, CONGLŎMĔRO, INGLŎMĔRO, GLŎMĔRĀBĬLIS, GLŎMĔRĀRĬUS, GLŎMĔRĀTĬO, GLŎMĔRO, GLŎMĔRŌSUS, and GLŎMUS (see LS for words containing the root -*glom*-): *chom*, *gl?om*, *l?om*, lom*, jom*, ion*, yom*, gom*, *nnom*, *ñom* (for all Regex, <ue> was also searched instead of <o> due to possible diphthongization) (CORDE).

- ***aguja* (OSp.)**

  Etymology: Lat. ACŪCŬLA (root/stem: ACUS)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: CRC (439, 446); GCLI (278); DCECH (aguja); DRAE (aguja); REW (119); DEEH (438); CORDE.

- ***agujero* (OSp.)**

  Etymology: Lat. ACŪCŬLARIUS (root/stem: ACŪCŬLA) (u.o.)

  Attestation date: 14th century

  Sources and notes: CRC (239); DEEH (438); CORDE. REW (121) proposed the etymology Lat. ACŪCŬLARIUS > Sp. *agujero* and Pt. *agulheiro* but considered the possibility that these words might be derivational forms from Sp. *aguja* and Pt. *agulha* (also DRAE: agujero; cf. DEHLP: agulheiro; DCECH: aguja; DEM: 122-3).

- ***agulia* (GP)**

  Etymology: Lat. ACŪCŬLA (root/stem: ACUS)

  Attestation date: 11th century, OL palatalization: yes

Sources and notes: FF (354); GCLI (278); DELG (agulla); REW (119); TMILG (CSM, XH, TA); DEHLP (agulha); see DEM (122-3) for further examples. GP *agulia* is attested in the year 1012 (PMH, *Diplomata et Chartae* I: 133) but I could find it neither in TMILG nor in CODOLGA.

- ***allamare* (OSp.)**

  Etymology: Lat. ACCLĀMĀRE (root/stem: CLĀMĀRE)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: With the Lat. meaning 'to shout at or exclaim (also in a hostile sense), to blame by shouting, to shout applause' (LS: acclamo) and the OSp. meaning 'to complain, invoke the protection of' (TDHLE: allamarse; DEEH: 435); TDHLE (allamarse); Torreblanca (1990: 319); DEEH (435); no information on OSp. *allamare* found in DCECH (llamar); cf. CORDE.

- ***allanada* (OSp.)**

  Etymology: Late Lat. APPLĀNĀRE (root/stem: PLĀNUS) (u.o.)

  Attestation date: 13th century

  Sources and notes: It is possible that OSp. *allanar* comes from Late Lat. A(P)PLĀNĀRE (TDHLE: allanar) but most sources did not support or discuss this possibility (cf. REW: 6568, DCECH: llano, DRAE: allanar), and instead assumed it to be a derivational form of OSp. *llano*; CORDE.

- ***allegando* (OSp.)**

  Etymology: Lat. APPLĬCĀRE (root/stem: PLĬCĀRE)

  Attestation date: 12th century, OL palatalization: yes

  Sources and notes: Georges and OLD (plico, applico); DCECH (llegar); DRAE (allegar); REW (548); DEEH (470); CORDE.

- ***almendra* (OSp.)**

  Etymology: Late Lat. *AMYNDŬLA (root/stem: AMYGDĂLA)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: CRC (259, 269); GCLI (282); DRAE (almendra); CORDE. The exact evolution of the etymon is unclear: Lat. AMYGDĂLAS > AMĬDDŬLAS or *AMYNDŬLA (among other options) > OSp. *almendra* (cf. DEM: 186; DCECH: almendra; FF: 401; REW: 436; DEEH: 463).

- ***amblar* (OSp.)**

  Etymology: Lat. AMBŬLĀRE (root/stem: AMBŬLĀRE)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: LS (ambulo); CRC (256, 262-263); DRAE (amblar); REW (412); DEEH (462). It is unclear if OSp. *andar* came from Lat. AMBŬLĀRE (DCECH: andar; DRAE: andar; see DEHLP: andar) or from Late Lat. *AMBĬTARE (DEEH: 461-2; DEM: 198; REW: 409; DELG: andar).

- ***ambrar* (GP)**

  Etymology: Lat. AMBŬLĀRE (root/stem: AMBŬLĀRE)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: LS (ambulo); FF (394); DEHLP (andar); DEM (184); REW (412); DDGM (ambrar); TMILG (LP). Similarly to OSp. *andar*, it is unclear GP *andar* came from Lat. AMBŬLĀRE (cf. DEHLP: andar) or from Late Lat. *AMBĬTARE (DEM: 198) (for further references, see *amblar* (OSp.)).

- ***ampllo* (Rib. Arag.)**

  Etymology: Lat. AMPLUS (root/stem: AMPLUS)

  OL palatalization: yes

  Sources and notes: GCLI (233); Aragonario (ancho); Viudas Camarasa (1979).

- ***amuñonar* (Ast.)**

  Etymology: Late Lat. *MŬTŬLO, -ŌNIS (root/stem: MŬTŬLUS)

  Other forms: *muñón, moyón*

  OL palatalization: yes

  Sources and notes: With the meaning ‘mark or sign to indicate land boundaries’; CRC (437, 449); GCLI (279); DCECH (mojón II); DEEH (830); DGLA (muñón).

- ***ancho* (GP)**

  Etymology: Lat. AMPLUS (root/stem: AMPLUS)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: FF (330); GCLI (233); DELG (ancho-a); DEHLP (ancho); DEM (190); DDGM (ancho); TMILG (CSM, LP, TC).

- ***ancho* (OSp.)**

  Etymology: Lat. AMPLUS (root/stem: AMPLUS)

  Attestation date: 12th century, OL palatalization: yes

  Sources and notes: CRC (270); GCLI (233); DCECH (ancho); DRAE (ancho, cha); DEEH (462); CORDE.

- ***aneldo* (OSp.)**

  Etymology: Lat. *ANĒTHŬLUM (root/stem: ANĒTHUM)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: CRC (437); DCECH (eneldo); REW (454); DRAE (aneldo); DEEH (464); CORDE.

- ***anello* (GP)**

  Etymology: Lat. ANNĬCŬLUS (root/stem: ANNUS)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: DELG (anello); DCECH (año); REW (481); DCECH (anelho); DDGM (anello); TMILG (CSM, GHCD). DEM (208-9) gave GP *anelia* as a further example (cf. PMH, *Inquisitiones* III: 327), which probably dates from the 13th century.

- ***anglo* (OSp.)**

  Etymology: Lat. ANGŬLUS (root/stem: ANGŬLUS)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: TDHLE (anglo); cf. DEEH (465); CORDE. DCECH (ángulo) considered OSp. *ángulo* (13th century) to be a Lat. borrowing and OSp. *anglo*, which appears in the same text, a semi-popular variant of that word ("forma semipopular"). While this inherited word did not undergo OL palatalization, note that other inherited words from the same etymon did (see *Añavieja* (Sp.), *Anllada* (Gal.) or *Rianno* (Leon.)).

- ***angra* (GP)**

  Etymology: Lat. ANGŬLA (root/stem: ANGŬLUS) (u.o.)

  Attestation date: 15th century

  Sources and notes: DCECH (angra); DEHLP (angra); DEM (205) and DLPC (247) preferred Lat. ANGRA/ANCRAE as etymon; no attestations were found in TMILG; Sp. *angra* may be a Pt. or GP borrowing (DCECH: angra; DRAE: angra).

- ***Anllada* (Gal.)**

  Etymology: Lat. (RĪVĪ) ANGŬLUS (root/stem: ANGŬLUS) (u.e.)

  Other forms: *Anllo, Rianxo*

  OL palatalization: yes

  Sources and notes: CRC (259); cf. REW (464-5); cf. DCECH (cincho); cf. Celdrán (2009: 70-1, 666-7); cf. DELG (allar).

- ***anllar* (Gal.)**

  Etymology: Lat. ANGŬLĀRIS (root/stem: ANGŬLUS)

  Other forms: *allar, unllar, illar*

  Attestation date: 19th century, OL palatalization: yes

  Sources and notes: DELG (allar/anllar/ullar); DEEH (30, 465); DEX (80); TLPGP (anllar, see the entry *ullar* from Lorenzo 1962: 495); DDD (anllar/allar/inllar/illar/unllar, etc); cf. TILG; DCECH (lar) preferred Lat. LĀR, -IS as etymon.

- ***Añavieja* (Sp.)**

  Etymology: Lat. ANGŬLA VĔTŬLA (root/stem: ANGŬLUS)

  OL palatalization: yes

  Sources and notes: CRC (259); cf. Celdrán (2009: 70-1, 666-7).

- ***añejo* (OSp.)**

  Etymology: Lat. ANNĬCŬLUS (root/stem: ANNUS)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: CRC (438-9, 446); DCECH (año); DRAE (añejo/añojo); REW (481); CORDE; for information on Late Lat. ANNŬCŬLUS (alternative form of ANNĬCŬLUS) > (O)Sp. *añojo,* see the given sources (also Georges: anniculus).

- ***aojados* (OSp.)**

  Etymology: Lat. ADŎCŬLĀRE (root/stem: ŎCŬLUS) (u.o.)

  Attestation date: 13th century

  Sources and notes: It is unclear whether OSp. *aojar* came from Latin (REW: 189; cf. 6083; DEM: 1619) or whether it is a derivational form of OSp. *ojo* (DRAE: aojar; Roberts 2014: 139; cf. DCECH: ojo; CRC: 65); CORDE.

- ***aolhasse* (GP)**

  Etymology: Lat. ADŎCŬLĀRE (root/stem: ŎCŬLUS)

  Attestation date: 13-14th centuries, OL palatalization: yes

  Sources and notes: REW (189, cf. 6083); DEHLP (olhar); DEM (1619); TMILG (LP); DDGM (aolhar); cf. DELG (ollo); GP *aolhar* could also be a derivational form of GP *olho* (NDLP: olhar).

- ***aparejo* (Sp.)**

  Etymology: Late Lat. *APPARĬCULĀRE (root/stem: APPARĀRE) (u.o.)

  Sources and notes: It is unclear whether Sp. *aparejo* comes from Lat. *APPARĬCŬLUS (cf. TDHLE: aparejar; DEEH: 469; REW: 537) or whether it is a derivational form from Sp. *parejo* (DRAE: aparejar; DCECH: par). Similarly, it remains uncertain whether Sp. *aparejo* derives from *aparejar* or the other way around.

- ***aparellado* (GP)**

  Etymology: Late Lat. *APPARĬCULĀRE (root/stem: APPARĀRE)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: DELG (aparello); DCECH (aparelho/aparelhar); REW (537); DEM (218); DDGM (aparellar/aparellado, TC); TMILG (CSM, TC, HT). According to DXL (88), Gal. *aparello* is a derivational form from Gal. *parello* (< Lat. *PARICULUS).

- ***aplaudir* (OSp.)**

  Etymology: Lat. APPLAUDĚRE (root/stem: PLAUDĚRE) (BORR)

  Attestation date: 15th century, OL palatalization: no

  Sources and notes: DCECH (aplaudir); DRAE (aplaudir); TDHLE (aplaudir). Apart from the lack of OL palatalization, Lat. /aw/ should have become OSp. /o/ (cf. GCLI: 85-6), so OSp. *aplaudir* was most likely a Latin borrowing.

- ***aplaudir* (Pt.)**

  Etymology: Lat. APPLAUDĚRE (root/stem: PLAUDĚRE) (BORR)

  Attestation date: 17th century, OL palatalization: no

  Sources and notes: DELG (aplaudir); DEM (aplaudir); DEHLP (aplaudir). DCECH (aplaudir); DRAE (aplaudir); TDHLE (aplaudir). Apart from the lack of OL palatalization, Lat. /aw/ should have become GP /ow/ (cf. GCLI: 85-6; FF: 285-9), so GP *aplaudir* was most likely a Latin borrowing.

- ***apusllar* (Ast.)**

  Etymology: Lat. PUSTŬLA (root/stem: PUSTŬLA) (u.o.)

  Sources and notes: DCECH (postilla); REW (6867); DGLA (apusllar); DEEH (894).

- ***arrojar* (OSp.)**

  Etymology: Late Lat. ROTULARE (root/stem: ROTA) (u.e.)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: With the meaning 'to throw, to make roll (downhill)'; CRC (437, 449); DCECH (arrojar/rueda); DRAE (arrojar); REW (7396). DEEH (478) preferred Late Lat. ARROTŬLĀRE as the etymon, which DCECH (arrojar) also considered possible.

- ***arrollar* (Ast.)**

  Etymology: Late Lat. RŎTŬLARE (root/stem: RŎTA) (u.e.)

  OL palatalization: yes

  Sources and notes: With the meaning 'to throw, to make roll downhill'. CRC (437, 449); DCECH (arrojar/rueda); DEEH (478); DGLA (arrollar).

- ***artejo* (OSp.)**

  Etymology: Lat. ARTĬCŬLUS (root/stem: ARTUS)

  Other forms: *artigulo*

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: CRC (236, 438); GCLI (278); DEEH (478); DRAE (artejo). OSp. *artícolo* may be attested in the 10th century (DCECH: artículo) and OSp. *artigulo* in the 11th century (CORDE). Mir. *arteilho* (GCLI: 278).

- ***artillos* (GP)**

  Etymology: Lat. ARTĬCŬLUS (root/stem: ARTUS)

  Other forms: *artigoos*

  Attestation date: 14th century, OL palatalization: yes

  Sources and notes: FF (135, 221); GCLI (278); DCECH (artículo); DEEH (478); DELG (artello/artigo); DEHLP (artelho/artigo); DEM (260-1); DDGM (artillo/artigoo); TMILG (CT; GP *artigo(o)s* is attested in 14th-century ROT and GHCD). GP *artillo* or *artelho* 'ankle' and GP *artigo* 'part or subdivision of a text' also came from Lat. ARTĬCŬLUS 'joint, knot, part, division' (LS and Georges: articulus) but they underwent different evolutions and might have been introduced into GP at different times.

- ***ascla* (Arag.)**

  Etymology: Lat. ASTŬLA (root/stem: AXIS)

  OL palatalization: no

  Sources and notes: GCLI (283); DCECH (astilla); DEEH (481); LS (assula/assis/axis).

- ***asollar* (Ast.)**

  Etymology: Lat. SŬFFLĀRE (root/stem: SŬFFLĀRE)

  OL palatalization: yes

  Sources and notes: GCLI (235); DCECH (soplar); DGLA (asollar); DEEH (1000).

- ***astiprar* (OSp.)**

  Etymology: Lat. STĬPŬLĀRI (root/stem: STĬPŬLUS) (BORR)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: Georges and LS (stipulus); DCECH (estipular). OSp. *astiprar* (Leon. attestation) appears to be an uncommon form since no similar attested forms are found in CORDE before the 15th century (OSp. *stipulatión, stipulacion, estiplanciones* in the 13th century).

- ***ayalga* (Ast.)**

  Etymology: Late Lat. AFFLATĬCUM (root/stem: FLĀRE) (u.o.)

  Sources and notes: GCLI (294); DGLA (ayalga); DEEH (447); no information found in DCECH (hallar).

- ***azetrelio* (OSp.)**

  Etymology: Arab. *saṭl* (root/stem: *saṭl*)

  Attestation date: 11th century, OL palatalization: no

  Sources and notes: From Lat. SĬTŬLA through Arab. *satl* (DRAE: acetre; DCECH: acetre). Corominas (ibid.) mentioned two examples from the 11th century, but I could not locate any examples before the 13th century (*açetres*) in CORDE.

- ***badajo* (OSp.)**

  Etymology: Late Lat. *BATUĀCŬLUM (root/stem: BAT(T)UĔRE)

  Attestation date: 15th century, OL palatalization: yes

  Sources and notes: With the meaning 'bell clapper'; CRC (157); GCLI (278); REW (994); DCECH (badajo); DRAE (badajo); DEEH (502); CORDE.

- ***badalo* (GP)**

  Etymology: Late Lat. *BATUĀCŬLUM (root/stem: BAT(T)UĔRE)

  Other forms: *badalho?*

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: With the meaning 'bell clapper'; GCLI (278); REW (994); DEHLP (badalo); DDGM (badalo); DEEH (502); DXL (144); DEM (297); TLPGP (badalo); TMILG (CSMp). GP /l/ is an unexpected outcome for /k(V)l/ (cf. Section 2.4.1 and Table B.2) and it primarily resulted from Lat. /l:/. Moreover, in the absence of syncope, intervocalic Lat. /l/ should have disappeared in Galician-Portuguese (FF: 367-9). DCECH (badajo) suggested that GP *badalo* could be an alteration of GP *badalho/badallo* due to the influence of *batala*. While Pt. or GP *badalho* were occasionally mentioned in Romance or Hispanic sources (cf. DEEH; DCECH), information on these forms or their descendants is rarely found in Galician or Portuguese sources (DDD: badallo; DELG: badal; DXL: 144; TLPGP: badalo/badal).

- ***bagoo* (GP)**

  Etymology: Lat. BACŬLUM (root/stem: BACŬLUM)

  Attestation date: 14th century, OL palatalization: no

  Sources and notes: FF (221, 357, 362, 390); DELG (báculo); DEHLP (bago 1); DEM (297); REW (874); DEEH (491); DDGM (bagoo); TMILG (MERS, MS).

- ***barata* (Pt.)**

  Etymology: Lat. BLATTA (root/stem: BLATTA)

  Attestation date: 16th century, OL palatalization: no

  Sources and notes: DCECH (fótula); DEEH (510); NDLP (barata); DEHLP (barata 3); DEM (322); TLPGP (barata). REW (1158) claimed that Pt. *barata* and any other descendants of Lat. BLATTA are learned words.

- ***batallo* (Arag.)**

  Etymology: Lat. *BATTŬCŬLUM (root/stem: BAT(T)UĔRE)

  Other forms: *abatojar*

  OL palatalization: yes

  Sources and notes: DCECH (batojar); DEEH (502); Aragonario (badajo).

- ***beldro* (Gal.)**

  Etymology: Lat. BLĬTUM (root/stem: BLĬTUM) (u.e.)

  Attestation date: 18th century, OL palatalization: no

  Sources and notes: LS (blitum); cf. DDD (beldro); DELG (beldro); DXL (166); cf. DEHLP (bredo) and DEM (404); Gal. *beldro* may also come from the diminutive of Lat. BLĬTUM, i.e. BLITULUM (DCECH: beldro).

- ***berrojo* (OSp.)**

  Etymology: Lat. VERŪCŬLUM (root/stem: VERU)

  Other forms: *ferrojo*

  Attestation date: 13th century, OL palatalization: yes

Sources and notes: CRC (439); GCLI (71); DRAE (verrojo); TDHLE (berrojo/cerrojo); Lat. VERŪCŬLUM > OSp. *berrojo* through the intermediate form *VERRŬCŬLUM (DCECH: cerrojo). OSp. ferrojo 'bolt' resulted from the influence of Lat. FERRUM 'iron', while the modern form Sp. *cerrojo* was influenced by Sp. *cerrar* 'to close' (DCECH: cerrojo; TDHLE: ferrojo). According to REW (9260) and DEEH (1060), the etymon is Lat. VERŬCŬLUM (with a short /u/).

- ***betijo* (Sp.)**

  Etymology: Late Lat. VECTĬCŬLUS (root/stem: VECTIS)

  Attestation date: 20th century, OL palatalization: yes

  Sources and notes: CRC (439, 447); DCECH (betijo); DRAE (betijo); DEEH (59, 1069; < *VĬTTĬCŬLUM); no instances of Sp. *betijo* were found in CORDE.

- ***betillo* (Gal.)**

  Etymology: Late Lat. VECTĬCŬLUS (root/stem: VECTIS)

  Attestation date: 18th century, OL palatalization: yes

  Sources and notes: DCECH (betijo); DELG (bitillo); cf. DEHLP (betilho); DDD (betillo/bitillo); no information was found in DEM.

- ***bágoa* (Gal.)**

  Etymology: Lat. BACŬLA (root/stem: BĀCA) (u.e.)

  Attestation date: 18th century, OL palatalization: no

  Sources and notes: With the Lat. meaning 'small berry' (LS: bacula) and the Gal. meaning 'tear'; no information was found in DEHLP or DEM, cf. DDD (bágoa/bagulla). It is unclear whether Gal. *bágoa* comes from Lat. BACŬLA (DELG: bágoa; REW: 873; DEEH: 491) or from a Prerrom. form **bakula* > **baculā* → **baculiare* (DCECH: baga I; DXL: bágoa).

- ***birollo* (Gal.)**

  Etymology: Late Lat. *BĬSŎCŬLUS (root/stem: ŎCŬLUS)

  Attestation date: 19th century, OL palatalization: yes

  Sources and notes: DCECH (bisojo); DXL (175); DELG (birollo-a); DDD (birollo).

- ***bisalho* (GP)**

  Etymology: Late Lat. *BISACŬLU (root/stem: SĀCCUS)

  Attestation date: 14th century, OL palatalization: yes

  Sources and notes: DEM (369); DEHLP (bisalho); DELG (bisallo); cf. DEEH (508); DDGM (bisalho); TMILG (LP); REW (1121) disagreed with this etymology. DCECH (bisalho) and DEM (369) claimed that the first attestation of GP *bisalho* occurred in the 13th century. However, the same text (or a very similar one) from Estêvão da Guarda (GP troubadour) is referenced in TMILG, DDGM, and UC as belonging to the 14th century. This troubadour appears to have been born around 1280, so his literary production would have been concentrated in the 14th century (cf. CMGP).

- ***bisuejo* (OSp.)**

  Etymology: Late Lat. *BĬSŎCŬLUS (root/stem: ŎCŬLUS)

  Attestation date: 15th century, OL palatalization: yes

  Sources and notes: DCECH (bisojo); DRAE (bisojo); TDHLE (bisojo); cf. REW (6038); DEEH (60-1, 1057) preferred Lat. VERSA ŎCŬLUM as etymon; for information on the given inherited form, see DCECH (bisojo); no examples of OSp. *bisuejo(s)* or *(V)visojo(s)* were found before the 16th century (cf. CORDE).

- ***Béjar* (OSp.)**

  Etymology: Lat. BICLĂRA (root/stem: BICLĂRA)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: CRC (252); Celdrán (2009: 126); Morala Rodríguez (2011: 209); Llorente Maldonado de Guevara and Llorente Pinto (2003: 100); also attested as *Beiar* and *Bejar* in several documents from the 13th century (cf. CORDE).

- ***blago* (OSp.)**

  Etymology: Lat. BACŬLUM (root/stem: BACŬLUM)

  Other forms: *baclos*

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: CRC (438); DEEH (491); CORDE; OSp. *baclos* is also attested in the 13th century (DCECH: báculo; cf. CORDE).

- ***blanco* (OSp.)**

  Etymology: Germ. *blank* (root/stem: *blank*)

  Attestation date: 12th century, OL palatalization: no

  Sources and notes: CRC (358); DCECH (blanco); DEEH (510); REW (1152); CORDE.

- ***blando* (OSp.)**

  Etymology: Lat. BLANDUS (root/stem: BLANDUS)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: GCLI (236); DCECH (blando); REW (1151); DRAE (blando); CORDE. Attempted root or stem reconstruction for words like Lat. BLANDŬLUS, SUBBLANDĬOR, ĒBLANDĬOR, BLANDĬCŬLĒ, BLANDĬOR, BLANDĪTUS, BLANDĬTĬA, or BLANDŪMENTUM (see LS for words containing the root -*bland*-): *lland*, *ljand*, *land* (cf. CORDE).

- ***blao* (OSp.)**

  Etymology: OHG *blāo* (root/stem: *blāo*) (BORR?)

  Other forms: *blavo*

  Attestation date: 14th century, OL palatalization: no

  Sources and notes: DRAE (blao); Roberts (2014: 246); TDHLE (blao); DEEH (510); CORDE.

- ***blavo* (OSp.)**

  Etymology: OFr. *blave* (root/stem: *blave*) (BORR?)

  Attestation date: 14th century, OL palatalization: no

  Sources and notes: DCECH (blavo) suggested that OSp. *blavo* came from Medieval French *blave* (DRAE: blavo; Roberts 2014: 247). In contrast, TDHLE (blavo) preferred to locate its origin in OHG *blaw* (as did DEEH: 510). Compare CORDE.

- ***bledos* (OSp.)**

  Etymology: Lat. BLĬTUM (root/stem: BLĬTUM)

  Attestation date: 14th century, OL palatalization: no

  Sources and notes: GCLI (236); LS (blitum); DCECH (bledo); DRAE (bledo); CORDE.

- ***blincu* (Ast.)**

  Etymology: Lat. VĬNCŬLUM (root/stem: VĬNCĪRE)

  OL palatalization: no

  Sources and notes: With the meaning 'ring, jewel'; CRC (259); DCECH (brincar); REW (9341); DGLA (blincu).

- ***bllanco* (Rib. Arag.)**

  Etymology: Germ. *blank* (root/stem: *blank*)

  OL palatalization: yes

  Sources and notes: Aragonario; REW (1152); cf. Viudas Camarasa (1979).

- ***bloca* (OSp.)**

  Etymology: OFr. *boucle* (root/stem: BUCCA)

  Other forms: *broquel*

  Attestation date: 12th century, OL palatalization: no

  Sources and notes: OFr. *boucle* or *bocler* < Lat. BŬCCŬLA; CRC (258-69); DCECH (broquel/bucle); REW (1364); DRAE (broquel); for information on Sp. *buche*, see DCECH (buche I/bochinche/boche).

- ***bochecha* (GP)**

  Etymology: Late Lat. *BŬCCŬLA (root/stem: BUCCA)

  Other forms: *bocha*

  Attestation date: 14th century, OL palatalization: yes

  Sources and notes: DEM (375-6); DXL (179); DEHLP (bochecha/bochach-); cf. DCECH (boche), where the possibility of a Mozarab. origin is also discussed. DELG (bocha 1) preferred Lat. BOTULUS as the etymon. No examples of GP *bocha* were found in the consulted sources. Since GP *bochecha* is probably a derivational form of GP *bocha*, the chronology of GP *bochecha* is given instead (see DEM: 376 and DEHLP: bochecha/bochacro for information on the original source).

- ***Bolpeleiras* (GP)**

  Etymology: Lat. *VŬLPĒCŬLARIAS (root/stem: VŬLPES) (u.o.)

  Other forms: *golpilleira, golpeleira*

  Attestation date: 12th century

  Sources and notes: FF (386, 417); DDGM (golpella); DDD (golpilleira). The given inherited forms may have also been derived from GP *golpella* (DELG: golpe; NDLP: golpelheira; DXL: 634; DEM: 1111).

- ***botija* (OSp.)**

  Etymology: Lat. BŬTTICŬLA (root/stem: BUTTIS)

  Attestation date: 14th century, OL palatalization: yes

  Sources and notes: CRC (438, 447); DEEH (526). Sp. *botella* (and Pt. *botelha*) comes from Fr. *bouteille*, which comes from Lat. BŬTTICŬLA (cf. DCECH: botella/botija; DRAE: botija; REW: 1426; DEHLP: botelha). It is unclear whether the /i/ contained in the etymon was long (cf. DCECH: botija) or short (REW: 1426; DEEH: 526). Pt. *botija* is a Sp. borrowing (see references in DCECH and REW).

- ***branca* (GP)**

  Etymology: Germ. *blank* (root/stem: *blank*)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: FF (331); GCLI (236); REW (1152); DELG (blando); DDGM (branco); DEHLP (branco); DEM (400); DEEH (510); TMILG (LP, CSM, CDMO, TC); GP *blanco* is also attested in the 13th century (TMILG: CSM, TC).

- ***brando* (GP)**

  Etymology: Lat. BLANDUS (root/stem: BLANDUS)

  Other forms: *blandas*

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: FF (331, 394); REW (1151); DDGM (brando, CSM); GCLI (236); DEHLP (brando); DEM (400); TMILG (CT; GP *blandas* also attested in 13th-century CSM); for information on the given inherited form, see DEHLP (brando) and cf. DDGM (brando). Attempted root or stem reconstruction for words like Lat. BLANDŬLUS, SUBBLANDĬOR, ĒBLANDĬOR, BLANDĬCŬLĒ, BLANDĬOR, BLANDĪTUS, BLANDĬTĬA, or BLANDŪMENTUM (see LS for words containing the root -*bland*-): *chand*, *land*, *jand*, *gand*, *blland* (cf. TMILG, DDGM).

- ***brata* (Sp.)**

  Etymology: Lat. BLATTA (root/stem: BLATTA)

  OL palatalization: no

  Sources and notes: DCECH (fótula); DEEH (510). Only one example of Sp. *brata* was found in CORDE (19th century), and it is unclear whether it has the meaning 'cockroach'; no information was found in TDHLE or NTLLE.

- ***bredo* (Pt.)**

  Etymology: Lat. BLĬTUM (root/stem: BLĬTUM)

  Attestation date: 16th century, OL palatalization: no

  Sources and notes: GCLI (236); LS (blitum); DCECH (bledo); DEHLP (bredo); DEM (404); cf. DDD (beldro).

- ***brial* (GP)**

  Etymology: Occ./Prov. *blial(t)* (root/stem: **blidalt*) (u.e.)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: DCECH (brial); DDD (brial); REW (1169); DRAE (brial); DEEH (510); DEHLP (brial); DEM (406); DDGM (brial, especially TC); TMILG (LP, CSM, TC, CT).

- ***brial* (OSp.)**

  Etymology: Occ./Prov. *blial(t)* (root/stem: **blidalt*) (u.e.)

  Attestation date: 12th century, OL palatalization: no

  Sources and notes: DCECH (brial); cf. DDGM (brial, especially TC); REW (1169); DRAE (brial); DEEH (510); CORDE.

- ***bribia* (Leon.)**

  Etymology: Lat. BIBLIA (root/stem: BIBLIA)

  Attestation date: 14th century, OL palatalization: no

  Sources and notes: In this example, taken from DCECH (bribón), Leon. *bribia* has the meaning 'Holy Scriptures' (cf. CORDE). For other meanings with the same etymology, see DCECH (bribón) and DRAE (bribia/briba). Leon. *bribia* < BLIBIA < Lat. BIBLIA (ibid.).

- ***briuia* (GP)**

  Etymology: Lat. BIBLIA (root/stem: BIBLIA)

  Other forms: *Bibria*

  Attestation date: 14th century, OL palatalization: no

  Sources and notes: DEHLP (bíblia); DELG (bíblia); DDD (e.g., Cuveiro Piñol 1876) with the meaning of 'Holy Scriptures'. Most inherited forms of Lat. BIBLIA exhibit rhotacism and metathesis of the liquid (see GP *bribiario* and *bribia* in TMILG; cf. DDGM: bibria/briujajro). The given inherited form is found in DDGM (bibria/briujajro, CVGP). DELG (biblia) provided Late Lat. BRIBIAM as 13th-century example (see CODOLGA), and GP *briuial* is attested in the 13th century (TMILG: HGPg).

- ***broca* (GP)**

  Etymology: OFr. *boucle* (root/stem: BUCCA)

  Attestation date: 14th century, OL palatalization: no

  Sources and notes: OFr. *boucle* or *bocler* < Lat. BŬCCŬLA; REW (1364); DEHLP (broca 1); TMILG (HT, CT); DDGM (broca); DEM (376).

- ***brouca* (Gal.)**

  Etymology: Germ. **blauka* (root/stem: **blauka*) (u.o.)

  Attestation date: 18th century

  Sources and notes: DCECH (bloque); DELG (broucar); DDD (brouca/broucar); no (etymological) information was found in DXL (194), DRAG, DEHLP, TLPGP, and DEM.

- ***bucaros* (OSp.)**

  Etymology: Lat. PŌCŬLUM (root/stem: PŌCŬLUM) (BORR)

  Attestation date: 15th century, OL palatalization: no

  Sources and notes: CRC (438). It is probable that Sp. *búcaro* comes from Lat. PŌCŬLUM through Mozarabic or that it is a Portuguese borrowing (DCECH: búcaro; DRAE: búcaro); cf. DEEH (881), where most inherited words are either Galician, Portuguese, or Asturian; CORDE.

- ***burujo* (OSp.)**

  Etymology: Late Lat. *VŎRŪCLUM (root/stem: VOLVERE) (u.e.)

  Attestation date: 14th century, OL palatalization: yes

  Sources and notes: CRC (439, 446); DRAE (borujo); cf. REW (9435); CORDE. The evolution of the etymon might have been as follows: Lat. (IN)VOLŪCRUM > VOLŪCLUM or *VORŪCLUM > OSp. *borujo* > Sp. *orujo* (DCECH: barullo/orujo).

- ***cabildo* (OSp.)**

  Etymology: Lat. CAPĬTŬLUM (root/stem: CAPUT)

  Attestation date: 12th century, OL palatalization: no

  Sources and notes: CRC (437); DCECH (cabildo); TDHLE (cabildo). CRC (ibid.) and DCECH (ibid.) gave the year 1202 as the first attestation of this form, but CORDE (cabildo) contains several instances from one text from 1196 (Fuero de Soria). In this text, OSp. *cabildo* is used with the approximate meaning 'meeting of municipal officers' ("el cabildo de los alcaldes"), which is one of its meanings (cf. DCECH; DRAE: cabildo). For later borrowings, see DCECH (capítulo). DCECH (capellar) and DRAE (capellar) suggested that Mozarb. *capellar* would come from Late Lat. CAPĬTŬLĀRE.

- ***cabillo* (GP)**

  Etymology: Lat. CAPĬTŬLUM (root/stem: CAPUT)

  Other forms: *cabidoo*

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: FF (221, 362, 367); TDHLE (cabildo); DDGM (cabido); DEHLP (cabido); DEM (430). Mariño Paz (FF: 134) mentioned that *capitulum non capiclum* appears in the Appendix Probi. If the syncopated form with /kl/ is in such an old text, it should be possible to find inherited words from this etymon exhibiting OL palatalization. In line with the meanings of OSp. *cabildo* (cf. DCECH and DRAE: cabildo), there are several instances of GP *cabillo* exhibiting OL palatalization. The two instances found are attested in the same text (TMILG: FCR) and seem to be used with the same meaning as GP *cabido(o)*, i.e. 'meeting of municipal officers or members of a union' (cf. DRAG: cabido; DXL: 204; cf. DDD: cabillo).

- ***cacha* (OSp.)**

  Etymology: Late Lat. *CAPPŬLA (root/stem: CAPĔRE)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: CRC (258); no information was found in DRAE (cacha 1). The etymon's evolution would have been as follows: Late Lat *CAPPŬLA < Lat. CAPŬLA (plural) ← CAPŬLUM (singular) (DCECH: cacha; cf. DEHLP: cacha 1/cacho 1). REW (1666) claimed that it would be difficult to locate the origin of Sp. *cachas* 'pieces forming a knife's handle' in Lat. CAPŬLUM 'kind of rope'. However, Lat. CAPŬLUM also had the meaning 'sword or knife handle' (LS and Georges: capulus). DCECH placed the first example of OSp. *cacha* in the 13th century, but I could not find any example from before the 15th century in CORDE. For information on Sp. *cable* < Fr. *câble* < Late Lat. CAPŬLUM, see DCECH (cable). It is unclear whether the Lat. etymon had /p/ (DEEH: 554; TDHLE: cacha; cf. DELG: cachas) or /p:/ (DCECH: cacha; DXL: 205; cf. DEHLP: cacha 1).

- ***cachas* (GP)**

  Etymology: Late Lat. *CAPPŬLA (root/stem: CAPĔRE)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: GCLI (280); DELG (cachas); DEHLP (cacha 1) appeared to imply that GP *cacha* was an OSp. borrowing; DDGM (cachas); TMILG (CSM, LP); cf. REW (1666); DXL (205). DEM (439-40) gave two etymologies for Pt. *cacha,* but neither of these words has the meaning 'sword or knife handle'. It is unclear whether the Lat. etymon had /p/ (DEEH: 554; TDHLE: cacha; cf. DELG: cachas) or /p:/ (DCECH: cacha; DXL: 205; cf. DEHLP: cacha 1). Given that all OL clusters containing /pkf/, except in secondary postvocalic /VO(V)L/ clusters, are expected to have resulted in /ʧ/ in GP, the reconstruction of /p:/ may be justified (cf. DCECH: cacha).

- ***cacho* (GP)**

  Etymology: Lat. CAPŬLUM (root/stem: CAPĔRE)

  Attestation date: 15th century, OL palatalization: yes

  Sources and notes: DELG (cacho 3/cf. cacho 1/cachar 3/cachaza 1); see DEHLP (cacho 1/cachola); no information was found in REW (1666); DLPC (616); DEM (437); DXL (207). DCECH (cacha) and DEEH (554) appeared to suggest that GP *cacho* was a derivational form from GP *cacha(s)*. DEHLP (cacho 1) stated that GP *cacho* 'neck' was attested in the 13th century, but GP *cacho* 'group or bundle of flowers or fruits' was attested in the 15th century.

- ***cacho* (Sp.)**

  Etymology: Late Lat. *CACCULUS (root/stem: CACCABUS)

  Attestation date: 16th century, OL palatalization: yes

  Sources and notes: Lat. CĀCĂBUS had the meaning 'cooking-pot' (LS: cacabus) which is similar to Sp. *cacho* 'pot, pan, piece of something' (DCECH: cacho I); CRC (258); GCLI (283); DRAE (cacho 1). REW (1445) preferred Lat. CACCABUS as the etymon, but TDHLE preferred Lat. CAPŬLUM. Given the evolution of etyma containing OL clusters with geminate obstruents in Spanish, e.g., Lat. AFFLĀRE, ACCLAMĀRE > OSp. *fallar, allamare*, the outcome/ʧ/is unexpected.

- ***cacho* (Gal.)**

  Etymology: Late Lat. *CACCŬLUS (root/stem: CACCABUS)

  Attestation date: 17th century, OL palatalization: yes

  Sources and notes: Lat. CĀCĂBUS meant 'cooking-pot' (LS: cacabus) and Gal. *cacho* means, among other things, 'pan to cook chestnuts, piece, part of shellfish shells' (DRAG: cacho; DELG: cacho 1 and 2); DCECH (cacho); cf. REW (1445, 6941a). This word is attested in the 17th century at the latest (TILG). There is one example of GP *cacho* and several of *cachon* in TMILG (SVP), but it is difficult to discern their meaning. The word family of *cachon* is disputed; while DELG (cachar) suggested Gal. *cachar* < Lat. CAPULĀRE, DCECH (cacho I) suggested that it is a derivational form of *cacho*. In the sense of 'fragments of shellfish shells', Gal. *cacho* was reconstructed by Sarmiento (1970, DDD: cacho) as coming from Lat. CASCULUS < CASCUS 'old, worn out'. Interestingly, Ríos Panisse (1977, DDD: cacho) suggested the etymology *CACCULUM for a similar meaning of Gal. *cacho*, i.e., 'shell of crustacean animals'. DELG proposed different etymologies for Gal. *cacho* depending on the meaning: Gal. *cacho* 'pan, pot' would come from Lat. *CACCULUS (DELG: cacho 2), while Gal. *cacho* 'piece of something' would be a derivational form of Gal. *cachar* (< Late Lat. CAPULARE) (DELG: cacho 1/cachar 3). DXL (207) made a similar distinction.

- ***cachorro* (OSp.)**

  Etymology: Late Lat. *CATTŬLUS (root/stem: CATŬLUS) (u.e.)

  Attestation date: 15th century, OL palatalization: yes

  Sources and notes: CRC (258); DCECH (cachorro); DRAE (cachorro/cacho 2); Roberts (2014: 282); CORDE. DEEH (566) and TDHLE (cachorro) proposed Lat. CATŬLUS (> Late Lat. *CATTŬLUS) as etymology. OSp. *cacho* seems not to be directly attested, but there are several words, like *cachorro* or *cachondo*, that prove its existence in Old Spanish (DCECH: cachorro). Therefore, the etymon's evolution would have been as follows: Lat. CATŬLUS > *CATTŬLUS > OSp. *cacho* → OSp. *cachorro* (ibid.). REW (1711, 8959a) stated that Sp. *cachorro* comes from Basq. *txakur*.

- ***cachorro* (GP)**

  Etymology: Late Lat. *CATTŬLUS (root/stem: CATŬLUS) (u.e.)

  Attestation date: 14th century, OL palatalization: yes

  Sources and notes: DCECH (cachorro); DEHLP (cachorro); DELG (cacho 4/cachorro/cacheiro); no information was found in DEM; TLPGP (cachorro); DXL (207, Gal. *cachorro* < Late Lat. *CATULU-); DLPC (616, Pt. *cachorro* < Lat. CATŬLUS). GP *cacho* or *cachorro* generally meant 'puppy, whelp', which makes Lat. CATŬLUS 'young animal or dog, whelp' (cf. LS and Georges) a semantically probable origin. The reduplication in *CATTŬLUS would have had an affective and diminutive meaning (cf. DCECH). Since the expected outcome for secondary postvocalic O(V)L clusters was typically /ʎ/ in

Galician-Portuguese, the long obstruent might explain the outcome /ʧ/ in the inherited word (cf. Section 1.2). The given inherited form may not coincide with the attestation date because the original source could not be consulted (cf. DEHLP: cachorro for more information).

- ***caco* (Pt.)**

  Etymology: Late Lat. *CACCŬLUS (root/stem: CACCABUS) (u.o.)

  Attestation date: 16th century

  Sources and notes: It is unclear whether Pt. *caco* comes from Late *CACCŬLUS (DCECH: cacho 1), from Lat. CACCABUS (REW: 1445), or from a related form **cacu-* (cf. DLPC: 617; DEM: 440; DEHLP: caco). With regard to Pt. *cacho*, Lat. CĀCĂBUS meant 'cooking-pot' (LS: cacabus), and Pt. *cacho* means 'bunch, cluster, piece' (DLPC: 616; DEHLP: cacho 1). Generally, Pt. *cacho* is said to come from Lat. CAPŬLUS 'handle, holder' (LS: capulus; DEHLP: cacho 1; DLPC: 616; DEM: 437; other possibilities in DCECH: cacho 1, and REW: 6941a). However, as the main meaning of Pt. *cacho* is 'cluster, bunch', it is more likely that it comes from Lat. CAPŬLUS than from Late Lat. *CACCULUS (as Gal. *cacho* and Pt. *caco*), which do have the meaning 'pan, pot'.

- ***carbũche* (GP)**

  Etymology: Lat. CARBŬNCŬLUS (root/stem: CARBO, ŌNIS)

  Other forms: *carbuncho*

  Attestation date: 14-15th centuries, OL palatalization: yes

  Sources and notes: Georges and LS (carbunculus); DCECH (carbunco); REW (1677). With the meaning of 'reddish precious stone', there is one attestation of GP *carbũche* in the *Miragres de Santiago* (14th-15th centuries) (see DDD and TMILG: MS). With the meaning 'tumor, abscess, boil', see DCECH (carbunco), REW (1677), DELG (carbunco), and DXL (carbuncho). Gal. *carafuncho* may be a mixture of Lat. CARBUNCULUS and Lat. FŪRŬNCŬLUS (cf. DELG: carafuncho; DCECH: carbunco/hurto; REW: 3607; and TLPGP: carafuncho).

- ***carbunclas* (OSp.)**

  Etymology: Lat. CARBŬNCŬLUS (root/stem: CARBO, ŌNIS) (BORR)

  Other forms: *carbunclo, carbunco, carbúncol*

  Attestation date: 12th century, OL palatalization: no

  Sources and notes: Georges and LS (carbunculus); DCECH (carbunco); DRAE (carbunco/carbunclo); DEEH (557-8); CORDE.

- ***cardenchas* (OSp.)**

  Etymology: Lat. *CARDĬNCŬLUS (root/stem: CARDUUS) (u.e.)

  Other forms: *cardoncho, cardoncha, cardincha*

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: It is unclear whether OSp. *cardenchas* came from Lat. *CARDŬNCŬLUS (DCECH: cardo/carlina/cebolla) or from Lat. *CARDINCŬLUS (DRAE: cardencha; DEEH: 558). REW (1687) and TDHLE (cardencha) considered Sp. *cardencha* as a derivational form from Sp. *cardo* (< Lat. CARDUUS). DRAE (cardancho) also derived OSp. *cardancho* from Sp. *cardo*; see Georges for examples of CARDUNCULUS; cf. CORDE.

- ***carrejo* (OSp.)**

  Etymology: Lat. CŬRRĬCŬLUM (root/stem: CURRĔRE)

  Attestation date: 14th? century, OL palatalization: yes

  Sources and notes: Georges (curriculum); DRAE (carrejo); TDHLE (carrejo); DEEH (616). Also Alav. and Sant. *carrejo* and Leon. (Bierzo region) *corrillo* (DCECH: corral; REW: 2415a). It is unclear whether the two instances of OSp. *carrejo* before the 19th century (two instances in a 1352 document, see Hernández 1866 in CORDE) had the meaning 'corridor, hallway'. Were that not to be the case, the first attestation would be in the 19th century (cf. CORDE).

- ***caruncho* (Sp.)**

  Etymology: Lat. *CARIUNCŬLA (root/stem: CARIES) (u.e.)

  Attestation date: 19th century, OL palatalization: yes

  Sources and notes: CRC (259, 439) (other possible etymologies include CARBŬNCŬLU); DRAE (< *CARIUNCŬLA); TDHLE (caroncho/caruncho); DCECH (caroncho, Sp. *caroncho* < *CŬRIŬNCLU < *CURCURIUNCLU < Lat. CURCULIUNCULUS); DEEH (559-60, < *CARIŬNCŬLA). For different inherited dialectal forms, see DCECH (carboncho). The approximate meaning of the Spanish forms is 'woodworm, ergot affecting cereals', but the Latin meaning varies depending on whether the etymon came from Lat. CARIES 'decay, dry-rot' or Lat. CURCULIO 'corn-worm, weevil' (LS: caries/curculio). The etymology of this etymon is unclear. However, it will be taken into account in the corpus analysis in Chapter 2 because all the possible etymologies contain the cluster -ncul-. For information on Leon. forms like *caronjo*, see DEEH (559-60; also DCECH: caroncho).

- ***caruncho* (Gal.)**

  Etymology: Lat. CURCULIUNCULUS (root/stem: CURCULIO) (u.e.)

  Attestation date: 19th century, OL palatalization: yes

  Sources and notes: DCECH (Gal. *caruncho* < *CŬRIŬNCLU < *CURCURIUNCLU < Lat. CURCULIUNCULUS); DEEH (559-60, < *CARIŬNCŬLA); REW (1677, < LAT. CARBŬNCULUS) and

REW (1692, < Lat. CARIES); DELG (Gal. *caruncho* < *CARIŬNCŬLU); DEHLP (Pt. *caruncho* < *CŬRIŬNCLU); DXL (245) (< *CŬRIŬNCLU). The approximate meaning of the Gal. and Pt. forms is 'woodworm, ergot affecting cereals' but the Latin meaning varies depending on whether the etymon came from Lat. CARIES 'decay, dry-rot' or Lat. CURCULIO 'corn-worm, weevil' (LS: caries/curculio). The etymology of this etymon is unclear. However, it will be taken into account in the corpus analysis in Chapter 2 because all the possible etymologies contain the cluster -ncul-.

- ***caruncho* (Pt.)**

  Etymology: Lat. CURCULIUNCULUS (root/stem: CURCULIO) (u.e.)

  Attestation date: 16th century, OL palatalization: yes

  Sources and notes: DCECH (Pt. *caruncho* < *CŬRIŬNCLU < *CURCURIUNCLU < Lat. CURCULIUNCULUS); DEEH (559-60, < *CARIŬNCŬLA); REW (1677, < LAT. CARBŬNCULUS) and REW (1692, < Lat. CARIES); DEHLP (Pt. *caruncho* < *CŬRIŬNCLU); DEM (501). DLPC (718) claimed that Pt. *caruncho* is a Spanish borrowing. The approximate meaning of the Gal. and Pt. forms is 'woodworm, ergot affecting cereals' but the Latin meaning varies depending on whether the etymon came from Lat. CARIES 'decay, dry-rot' or Lat. CURCULIO 'corn-worm, weevil' (LS: caries/curculio). The etymology of this etymon is unclear. However, it will be taken into account in the corpus analysis in Chapter 2 because all the possible etymologies contain the cluster -ncul-.

- ***castra* (GP)**

  Etymology: Lat. CLAUSTRA (root/stem: CLAUDĔRE) (BORR)

  Attestation date: 15th century, OL palatalization: no

  Sources and notes: FF (394); DELG (caustra); DDGM (crasta); REW (1972); DEHLP (claustra); DEEH (584); TMILG (CSMp; GP *caustra* attested in TC). In comparison to the inherited words from Lat. CLAUDĔRE, GP *crastra* or *castra* were quite probably learned words. Regardless of the absence of OL palatalization, Lat. /aw/ should have become GP /ow/ (cf. GCLI: 85-6; FF: 285-9), like in Lat. AURUM > Gal. *ouro* or Lat. CLAUSA > GP *chousa*. DEM (577) gave GP *chostra* (< Lat. CLOSTRA, alternative to Lat. CLAUSTRA) as an example, but I could not find this inherited form in any other source.

- ***casula* (GP)**

  Etymology: Late Lat. CASUBLA (root/stem: CASA) (u.e.)

  Other forms: *casebre, casulo*

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: With the meaning 'ecclesiastical hooded robe' (cf. Georges: casubla/casula; LS: casula); DCECH (casulla); REW (1752); DELG (casulla); DEEH (565); DXL (246, casulla 2); DEHLP (casula); TMILG (GP *casula* is attested in CSM, one instance of *casulla* is found in 15th-century CI with the meaning 'small house, type of construction'); DDGM (casula, especially CVGP); DDD (casula); TLPGP (casula). According to DCECH (casulla), GP *casula/casulo* 'ecclesiastical hooded robe' may have been influenced by Lat. CUCULLA. With the meaning 'legume pod', it may have been semantically influenced by Lat. CAPSULA. In this regard, Lat. /lː/ > GP /l/ and Lat. /l/ > GP /∅/ were regular sound changes (FF: 367-9). Therefore, while the evolution /bl/ > /l/ would not have been impossible (Lat. BLASPHĒMĀRE > GP *lastimar*), it is more likely that the outcome /l/ in GP *casula* was due to the influence of Lat. CUCULLA. REW (1752) suggested that GP *casula* came from Lat. CASŬLA, and DEM (523-4) appeared to share this opinion. However, GP *casula/casulo* can only be borrowings of Lat. CASŬLA, and not inherited forms, because Lat. /l/ was preserved, when it should have been lost instead. DELG (casula-o 1/casulla) suggested that Gal. *casula* and *casulla* come from two different Lat. etyma, i.e., Lat. CASUBLA < CAPSULA, and CASUBLA < CASUBULA. The status of Gal. *casulla* with the meaning of 'ecclesiastical robe' is unclear as it does not appear in DRAG or DDD (casulla) with that meaning, while Gal. *casula* does (ibid.). While there are a couple of examples of GP *casulla* in TMILG and DDGM, <ll> could represent either /l/ or /ʎ/ (HGP: 305ff, 497ff). In some cases, <ll> could be used to reflect a cognate from a different variety or the original Latin word.

- ***casullas* (OSp.)**

  Etymology: Late Lat. CASUBLA (root/stem: CASA)

  Attestation date: 9th century, OL palatalization: unclear

  Sources and notes: CRC (433); DRAE (casulla); TDHLE (< CASŬLA); CORDE; DEEH (565). It is possible that OSp. *casulla* < Lat. CASUBLA < *CASŬPŬLA ← CASŬLA was influenced by Lat. CUCULLA > Sp. *cogulla*, as both meant 'ecclesiastical hooded robe' (DCECH: casulla; REW: 1752; see Georges: casa). Consequently, it is difficult to discern whether the outcome /ʎ/ came from Lat. /bl/ or from /lː/. However, it should be noted that, while Lat. /lː/ > OSp. /ʎ/ was a regular sound change, Lat. /bl/ > OSp. /ʎ/ was not (GCLI: 225-8). Moreover, the usual outcome of secondary postvocalic O(V)L clusters was /ʒ/, and not /ʎ/, in Old Spanish. In CORDE, there are examples of *casulla* in a Latin text from the 13th century with the meaning 'piece of clothing'.

- ***cõelio* (GP)**

  Etymology: Lat. CUNĬCŬLUS (root/stem: CUNĬCŬLUS)

  Other forms: *coenlo*

  Attestation date: 12th century, OL palatalization: yes

  Sources and notes: FF (354); GCLI (278); TMILG (GP *cõello* is attested in CSM and DGS13-16); DELG (coello); DEHLP (coelho); see DEM (627) or PMH (*Leges* III: 422) for the context of the given inherited form. Both *coenllo* and *coello* are accepted forms for 'rabbit' in Galician (cf. DDD: coenllo; DRAG: coello), but *coello* is more widely used (cf. TLPGP: coello/coenllo). Mir. *cuneilho* (GCLI: 278).

- ***cello* (OSp.)**

  Etymology: Lat. CĬNGŬLUM (root/stem: CINGERE)

  Other forms: *cincho, ceño, cejo*

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: CRC (259, 262, 269); GCLI (282); DEEH (580-1); DRAE (ceño 1/cejo 2); CORDE. Contrary to REW (1926-8), DCECH (cello/cincho) claimed that both OSp. *cello* and *cincho* come from Lat. CINGULUM but underwent slightly different evolutions (see also DRAE: cello/cincho). DCECH (cellisca) suggested that Sp. *cellisca* could come from **cellar*, which would be a derivational form of Lat. CINGULUM.

- ***ceñiglo* (OSp.)**

  Etymology: Late Lat. CINISCŬLUS (root/stem: CĬNĬS) (u.o.)

  Other forms: *ceñilgo*

  Attestation date: 11th century

  Sources and notes: Georges (cinisculus); CRC (259, 263, 269-270); Roberts (2014: 347); no etymological information on (O)Sp. *ceñiglo* was found in REW (1929), DRAE (ceñiglo/cenizo), or TDHLE (ceñiglo); CORDE. The evolution of the etymon might have been as follows: Late Lat. CINISCŬLUS > *CINICLO > OSp. *ceñiglo* (see DCECH: cenizo for the attestation of the inherited form). Both DCECH (ibid.) and DEEH (581) mentioned the form *jenijo* (regions of Salamanca and Segovia), but I could not find any further information on this word in TDHLE, NTLLE, or DRAE. For information on the etymology of Sp. and Pt. *cisco*, see DEHLP and DELG (cisco), DCECH (cisco), and REW (1929). For information on the etymology of Gal. *saincho*, see DCECH (ceñiglo/cenizo, < CINISCŬLUS) and DELG (< *SANICULUM).

- ***cerceta* (OSp.)**

  Etymology: Late Lat. CĔRCĒDŬLA (root/stem: QUĔRCĒDŬLA)

  Attestation date: 15th century, OL palatalization: no

  Sources and notes: With the meaning 'type of duck' (cf. LS: querquedula; Georges: querquedula; DRAE: cerceta); CRC (33-34, 438); DRAE (cerceta 1); REW (6952); cf. DELG (cerceta); cf. CORDE. Also Pt. *cerceta*, but DEHLP (cerceta) proposed a different etymology: Pt. *cerceta* < *CERQUĒTA < QUERQUĒTUM. The Spanish ending /ta/ could be due to a suffix change, from *CERCELLA to *CERCITTA (cf. DCECH: cerceta).

- ***cercha* (OSp.)**

  Etymology: Lat. CĬRCŬLĀRE (root/stem: CĬRCŬLUS)

  Attestation date: 13th century, OL palatalization: yes

Sources and notes: DCECH (cercha) considered OSp. *cercha* and *cerchar* as French borrowings. Related to OSp. *cerchar*, Corominas argued that it can very well be an inherited form from Lat. CĬRCŬLĀRE, but the late attestation date and the meaning pertaining to architecture and carpentry point to a French origin (ibid.). Other sources preferred Lat. CĬRCŬLĀRE as the etymon (GCLI: 284; DEEH: 582; REW: 1946; TDHLE: cerchar; DRAE: cerchar). With (one) of the original meanings 'to encircle, to enclose' (LS: circulo), there are several examples in CORDE, one from the 13th century and at least another from the 15th century. With regard to OSp. and Gal. *cercha*, it is generally agreed that they go back to OFr. *cerche* (Late Lat. *CĬRCA) (DCECH: cercha; DRAE: cercha; TDHLE: cercha; DELG: cercha; DXL: 263; cf. DEEH: 582 for a different opinion).

- ***cerneja* (OSp.)**

  Etymology: Late Lat. *CERNĬCŬLA (root/stem: CERNERE)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: With the meaning 'lock of hair, mane'; CRC (438); DCECH (cerneja); REW (1833); DRAE (cerneja). OSp. *cerniclo*, *cernígolo* (attested in the 13th century) came from the singular form CERNĬCŬLUM with the meaning 'sieve, type of bird'. DCECH (cernícalo) suggested that Sp. *cernícalo* was introduced into the language either through Mozarabic or through a learned or literary form (cf. DEEH: 571).

- ***cerniyu* (Ast.)**

  Etymology: Lat. CERNĬCŬLUM (root/stem: CERNERE)

  OL palatalization: yes

  Sources and notes: With the meaning 'lock of hair, mane'; DCECH (cerneja); DGLA (cerneyu).

- ***cerraja* (OSp.)**

  Etymology: Lat. SERRACŬLUM (root/stem: SERRARE) (u.o.)

  Attestation date: 11th century

  Sources and notes: CRC (438) (< Lat. SERRACŬLA); REW (7862, 7865) (< Lat. SĔRRACŬLUM 'type of bolt' or < Lat. SĔRRALIA/SARRACLA 'type of vegetable'); DCECH (cerraja); DELG (Gal. *cerralla* < Lat. SERRACULUM, Gal. *cerraxa* < Lat. SERRALIA). DEHLP (serralha) and DEM (1979) preferred Late Lat. SARRALĬA as the etymon for Pt. *serralha*, which only has the meaning 'type of plant'. DRAE and TDHLE proposed different etymologies for Sp. *cerraja* depending on its meaning: Sp. *cerraja* 'bolt' < Late Lat. SERACŬLUM, and Sp. *cerraja* 'plant species' < SERRALĬA. Similarly, DEEH (968) considered Lat. SERRALIA to be the etymon for Sp. *cerraja* 'vegetable', but Lat. *SERUCŬLUS for Sp. *cerrojo* 'bolt'. Cf. OLD (1743-5) or Georges (serratula/serralia) for information on the Latin words.

- ***chagas* (GP)**

  Etymology: Lat. PLĀGA (root/stem: PLĀGA)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: FF (329); GCLI (230); REW (6562); DDGM (chaga, especially TC); DEEH (878); DELG (chaga); DEHLP (chaga); DEM (564-5); TMILG (CSM, LP, HT).

- ***chagou* (GP)**

  Etymology: Late Lat. PLAGĀRE (root/stem: PLĀGA)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: DEHLP (chagar); DDGM (chagar); DEM (564-5); REW (6562); DEEH (878); DEHLP (chagar); TMILG (CSM, LP, HT). DELG (chaga) and DDGM (chaga, TC) derived GP *chagar* from GP *chaga*.

- ***chaira* (Gal.)**

  Etymology: Late Lat. PLĀNĀRIA (root/stem: PLĀNUS)

  Other forms: *cheira*

  Attestation date: 18th century, OL palatalization: yes

  Sources and notes: It is unclear whether Gal. *chaira/cheira* 'cobbler's knife, level, plateau' are derivational forms of Gal. *chan* (DEHLP: chaira; DXL: 268) or whether they come from Lat. PLĀNĀRIUS or PLĀNĀRIA (REW: 6569; DELG: chaira 1/2; DEEH: 878). DCECH (chaira) appeared to support Lat. PLĀNĀRIA as the etymon. Corominas argued that Gal. *chaira* and *cheira* are different results from the evolution Lat. /ajɾ/ > GP /aejɾ/ (ibid.). However, at the beginning of the entry, Corominas seemed to suggest that it was a derivational form from Gal. *chan*. See DDD (chaira) and TLPGP (chaira) for information on the different Galician forms, where *chaeira* and *cheeira* are also found.

- ***chama* (GP)**

  Etymology: Lat. FLAMMA (root/stem: FLAMMA)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: FF (329, 357, 359); GCLI (230); DEEH (683); DEHLP (chama); DELG (chama); TMILG (CSM,TC). GP *chamiça* (Gal. *chamiza* and Pt. *chamiça*) came from GP *chama* (DCECH: chamiza; DEHLP: chamiço/chamiça; DRAE: chamiza; DEM: 566), and (O)Sp. *chamiza* was a borrowing from either Galician, Portuguese, or Galician-Portuguese. GP *chamuscar* (TMILG: CSM, 13th century) was also derived from GP *chama* (DCECH: chamuscar; DEHLP: chamuscar; cf. DELG: chamuscar; DEM: 566), and (O)Sp. *chamuscar* was also a borrowing.

- ***chaman* (GP)**

  Etymology: Lat. CLĀMĀRE (root/stem: CLĀMĀRE)

  Attestation date: 12th century, OL palatalization: yes

  Sources and notes: FF (329); GCLI (230); DCECH (llamar); DELG (chamar); DDGM (chamar); DEM (567); DEHLP (chamar); REW (1961); CODOLGA; TMILG (examples from the 13th century in LP, CSM, LP). Root or stem reconstruction was attempted for words like Lat. CLĀMĀTOR, CLĀMĀTŌRĬUS, CLĀMĬTĀTĬO, CLĀMOR, ACCLĀMĀTĬO, SUCCLĀMO, CONCLĀMĀTĬO, CONCLĀMO, EXCLĀMĀTĬO, EXCLĀMO, INCLĀMO, PRAECLĀMO, PROCLĀMĀTĬO, PROCLĀMO, RĒCLĀMĀTĬO, RĒCLĀMO, DĒCLĀMĀTŌRĬUS, DĒCLĀMO, and DĒCLĀMĀTĬUNCŬLA (see LS for words containing the root -*clam*-): *cham*, *l?am*, *gam* (<g> = <g i j>, see "Asociacións gráficas" in TMILG) (TMILG, DDGM). Several examples of GP *acham* + verbal suffix were found but these probably derive from *a + chamar* rather from Lat. ACCLĀMĀRE. For information on Pt. *chamariz*, which probably comes from GP *chamar* and not from Lat. CLAMĀTRIX, ĪCIS, see DCECH (chamariz), DEHLP (chamariz), NDLP (chamariz), and DEM (567).

- ***chamor* (GP)**

  Etymology: Lat. CLĀMOR, -ŌRIS (root/stem: CLĀMĀRE)

  Attestation date: 13-14th centuries, OL palatalization: yes

  Sources and notes: DDGM (chamor, especially TC); DELG (chamor); TMILG (two examples of *chamor* are attested in TC and FMST, 13-14th centuries; two examples of *clamor* are attested in XH and CI, 14-15th centuries; no examples of GP *cramor* were found); no information was found in REW (1961).

- ***chanca* (Pt.)**

  Etymology: Lat. PLANCA (root/stem: PLANCA)

  Attestation date: 18th century, OL palatalization: yes

  Sources and notes: DEHLP (chanca); DELG (chanca); DEM (568); TLPGP (chanca); DLPC (782).

- ***chanca* (Gal.)**

  Etymology: Lat. PLANCA (root/stem: PLANCA)

  Attestation date: 19th century, OL palatalization: yes

  Sources and notes: DELG (chanca); cf. DEHLP (chanca) and DEM (568); DDD (chanca); TLPGP (chanca); DXL (269).

- ***changer* (GP)**

  Etymology: Lat. PLANGĔRE (root/stem: PLANGĔRE)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: FF (326, 329); DCECH (llanto); REW (6572); DDGM (changer); DEEH (879); DEM (570-1); TMILG (LP, CSM).

- ***Chano* (GP)**

  Etymology: Lat. PLĀNUS (root/stem: PLĀNUS)

  Attestation date: 8-10th centuries, OL palatalization: yes

  Sources and notes: Georges (plānus); REW (6581); DELG (chan, see also chainada); DEEH (879); DEHLP (chão); DEM (571); DDGM (chão); GP *chã(a)o* is also attested in TMILG (TC, XH, HT) and in DDGM (chão, CSM); for information on the given inherited form, see FF (329-30).

- ***chantage* (Gal.)**

  Etymology: Lat. PLANTĀGŌ, -ĬNIS (root/stem: PLANTA)

  Other forms: *chantaxe*

  Attestation date: 18th century, OL palatalization: yes

  Sources and notes: DEEH (879); DCECH (planta); DELG (chantaxe); DDD (chantaxe/chantage); TLPGP (chantaxe); cf. DEHLP (chantagem 2/tanchagem) and DEM (570).

- ***chantagem* (Pt.)**

  Etymology: Lat. PLANTĀGŌ, -ĬNIS (root/stem: PLANTA)

  Attestation date: 16th century, OL palatalization: yes

  Sources and notes: GCLI (230); DCECH (planta); cf. REW (6577); DEHLP (chantagem 2/tanchagem); DEM (570); cf. DELG (chantaxe/chantar) and DDD (chantaxe). It is unclear whether GP *chantão* came from Lat. *PLANTO, -ŌNE (REW: 6579; DELG: chanto) or whether it derived from GP *chantar* (DEHLP: chantão; DCECH: planta).

- ***chanto* (GP)**

  Etymology: Lat. PLĀNCTUS (root/stem: PLANGĔRE)

  Other forms: *pranto*

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: GCLI (231); cf. REW (6570); Georges (planctus); DEEH (879); DDGM (chanto); DEHLP (chanto); DEM (570-1); TMILG (CSM, TC).

- ***chantou* (GP)**

  Etymology: Lat. PLANTĀRE (root/stem: PLANTA)

  Other forms: *prantar*

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: FF (329); cf. DCECH (planta) and REW (6578); DDGM (chantar); DELG (chantar) mentioned one example from the 12th century; DEM (570); TMILG (CSM, CDMO); cf. DEHLP (chantar). FF (329) provided the example Lat. (VĪLLA) PLANTATA > *Chantada* (13th century), which might have earlier attestations in CODOLGA.

- ***chanzo* (Gal.)**

  Etymology: Late Lat. PLĀNĀCEUS (root/stem: PLĀNUS) (u.e.)

  Attestation date: 18th century, OL palatalization: yes

  Sources and notes: DCECH (llano); DELG (*chanzo* < *PLANICIUS); DDD (chanzo); DXL (270).

- ***chapas* (OSp.)**

  Etymology: u.o. **klappa* (root/stem: **klappa* (u.e.)) (u.e.)

  Attestation date: 14th century, OL palatalization: yes

  Sources and notes: With the meaning 'metal or wood sheet'; CORDE. Most sources hypothesized an etymological base **klapp-* or **clapp* of uncertain origin (DCECH: chapa; DEHLP: chapa; TDHLE: chapa; DELG: chapa; REW: 4706a). Other sources (DEEH: 123, 551; DEM: 495, 572; see also DEHLP: chapa) preferred Lat. CAPPA as the etymon (arguments against this in DCECH: chapa). DCECH (chapa) argued that /ʧ/ is not an unexpected outcome in this case: since OSp. *chapas* would have been usually used in the plural form, sandhi rules at word-boundaries would have applied, so that OSp. *chapas* would have been preceded by a consonant. Therefore, the OL cluster would have been understood as postconsonantal, where /ʧ/ is the expected outcome, instead of word-initial, where /ʎ/ would have been expected (cf. Section 2.4.1).

- ***chapas* (GP)**

  Etymology: u.o. **klappa* (root/stem: **klappa* (u.e.)) (u.e.)

  Attestation date: 14th century, OL palatalization: yes

  Sources and notes: Most sources hypothesized an etymological base **klapp-* or **clapp* of uncertain origin (DCECH: chapa; DEHLP: chapa; TDHLE: chapa; DELG: chapa; REW: 4706a). Other sources (DEEH: 123, 551; DEM: 495, 572; see also DEHLP: chapa) preferred Lat. CAPPA as the etymon (arguments against this in DCECH: chapa); see also DDGM (chapa) and TMILG (HT, CT).

- ***chato* (Gal.)**

  Etymology: Late Lat. *PLATTUS (root/stem: PLATUS)

  Other forms: *prato*

  Attestation date: 18th century, OL palatalization: yes

  Sources and notes: GCLI (231); DELG (chato-a/tacho/prato); cf. DEHLP (chato); DDD (chato); TLPGP (chato); DXL (272).

- ***chato* (Pt.)**

  Etymology: Late Lat. *PLATTUS (root/stem: PLATUS)

  Other forms: *prato*

  Attestation date: 17th century, OL palatalization: yes

  Sources and notes: GCLI (231); DCECH (chato); DEM (575); DEHLP (chato); REW (6586).

- ***chato* (Sp.)**

  Etymology: Late Lat. *PLATTUS (root/stem: PLATUS)

  Other forms: *plato*

  Attestation date: 17th century, OL palatalization: yes

  Sources and notes: GCLI (231); REW (6586); TDHLE (chato). According to DCECH (chato), it is also possible that Sp. *chato* is a borrowing from Pt. *chato* (also DEEH: 880; cf. DRAE: chato), since /ʧ/ was the usual outcome in GP for word-initial /pl/ (cf. Section 2.4.1). However, it is possible that the word-initial cluster was understood as postconsonantal due to sandhi effects at the word boundary, as words preceding *chato* often end with consonants, e.g., 'los chatos', 'es chato'. Also from *PLATTUS is Sp. *plato* 'plate'. According to DCECH (ibid.), Sp. *plato* did not undergo OL palatalization and had a learned pronunciation because common folk did not use that kind of dinnerware (a similar explanation is given for Sp. *plata*). REW (6586) suggested that Sp. *plata* was borrowed from Prov. *plata*.

- ***chauella* (GP)**

  Etymology: Lat. CLĀVĬCŬLA (root/stem: CLĀVIS)

  Other forms: *caravilla, cravelha*

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: FF (329); GCLI (232); REW (1979); DCECH (llave); TMILG (VFD); DEHLP (chavelha); DELG (chavella/caravilla). Pt. *cavilha* also comes from Lat. CLAVĬCŬLA (< CAVICLA) but through an intermediate, maybe Prov., form *cavilha* (cf. REW: 1979; DCECH: cabilla; DEM: 578).

- ***Chaues* (GP)**

  Etymology: Lat. (AQUIS) FLAVĬĪS (root/stem: FLAVĬUS)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: FF (329); Fernandes (2023, Toponomasticon Hispaniae).

- ***chave* (GP)**

  Etymology: Lat. CLĀVIS (root/stem: CLĀVIS)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: GCLI (230); DELG (chave); DEHLP (chave); REW (1981); DEM (576-9); DDGM (chave); TMILG (CSM, TC, VFD); cf. CODOLGA.

- ***chaveiro/a* (GP)**

  Etymology: Lat. *CLĀVARIA (root/stem: CLĀVUS) (u.e.)

  Attestation date: 18th century, OL palatalization: yes

  Sources and notes: According to REW (1984), Pt. *chaveira* would come from Lat. CLĀVUS, but DEHLP (chaveira) derived it from Pt. *chave* (DEM: 576 tentatively suggested that GP *chaveira* may be related to GP *chaveiro*, which came from Lat. CLĀVIS). DCECH (clavo) mentioned that Gal. *chaveiro* or *herba chaveira* 'type of plant' might also come from Lat. CLĀVUS (DELG: cravo/chaveira; cf. NDLP: chaveira, where Late Lat. CLAVELUS is tentatively given as etymon for Pt. *chaveira*); see also DDD (chaveiro/chaveira, Sarmiento 1746-1755c). Even though it is unclear from which etymon GP *chaveiro/a* comes, it seems more probable that the etymon goes back to Lat. CLĀVUS 'nail, tumor, wart' and not to Lat. CLĀVIS 'key' (LS, Georges). The reason for this is that Pt. *chaveira* (NDLG, DEHLP) and Gal. *chaveira* (DDD) are often associated with illnesses causing tumor-like growths, such as cysticercosis or Sp. Gal. *lobado* 'tumor affecting animal's chest' ('smallpox' in the case of REW). Pt. *chaveira* seems to be attested in the 17th century (DEHLP: chaveira). Even though there is no medieval documentation, since both Gal. and Pt. seem to have the word *chaveira*, the word will be considered of GP origin.

- ***Chedas* (GP)**

  Etymology: Gaul. *CLĒTA (root/stem: *CLĒTA)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: REW (1988); DCECH (cleda); DEHLP (cheda); see DEM (579) for information about the text where the given inherited word is attested; DELG (chedas). In TMILG (GHCD) and DDGM (CVGP, chedeiro), only examples of GP *chedeiro* were found (15th century), which was derived from GP *cheda* (cheda, TLPGP: Freitas 1948 and TLPGP: Salgueiro 1945; DEHLP: chedeiro); *Cheda* is attested in CODOLGA (11th and 12th centuries) but the meaning is unclear.

- ***chegou* (GP)**

  Etymology: Late Lat. PLĬCĀRE (root/stem: PLĬCĀRE)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: FF (329); Georges and OLD (plico, applico); DELG (chegar); DCECH (llegar); DDGM (chegar, see especially TC and Tato Plaza 1999); REW (6601); DEM (579); DEHLP (chegar); TMILG (LP, CSM, TC).

- ***chenlo, chaelo* (Gal.)**

  Etymology: Late Lat. *PLĀNELLUM (root/stem: PLĀNUS)

  Other forms: *chaela*

  Attestation date: 20th century, OL palatalization: yes

  Sources and notes: DCECH (llano); DELG (chelo); DDD (chenlo); TLPGP (chaela); TMILG (*Chaelo* is attested in 15th-century MSPT); DXL (267) considered Gal. *chaela* a synonym of Gal. *chá*. The arguments of DCECH (llano) seem convincing, i.e., Gal. *chenlo* and **chãelo* come from an -ellum diminutive of Lat. PLĀNUS. Given that intervocalic /l/ disappeared in Galician-Portuguese, it seems more likely that Gal. *chenlo* comes directly from Latin than to consider it a later derivational form.

- ***cheyra* (GP)**

  Etymology: Late Lat. FLAGRĀRE (root/stem: FLAGRĀRE)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: Late Lat. FLAGRĀRE < Lat. FRAGRĀRE (cf. LS and Georges: fragro) 'to smell'; FF (329); GCLI (230); DELG (cheirar); DCECH (fragante); DEHLP (cheirar); DEEH (690); DEM (581); DDGM (cheyrar/cheirar, especially TC); TMILG (LP, CSM, TC).

- ***chilrar* (Pt.)**

  Etymology: Lat. FISTŬLĀRE (root/stem: FĬSTŬLA) (u.o.)

  Other forms: *chirlar*

  Attestation date: 15th century

  Sources and notes: CRC (256); DDD (chilrar/chilar/chirlar, cf. with chillar); DEHLP (chilrar); no information on Pt. *chilrar* or *chirlar* was found in REW (3333, 7890); DCECH (chilrar/chilido). DEM (584), DXL (276), DELG (chirlar), DLPC (797) and DXL (275) assumed an onomatopoeic origin. According to NDLG (chilrar), Pt. *chilrar* is a Sp. borrowing.

- ***chirlar* (OSp.)**

  Etymology: Lat. FISTŬLĀRE (root/stem: FĬSTŬLA) (u.o.)

  Other forms: *chillar*

  Attestation date: 15th century

  Sources and notes: CRC (256, 269), DCECH (chillar) and DRAE (chillar) proposed that OSp. *chillar* (< *chirlar*) came from Lat. FISTŬLĀRE. In contrast, GCLI (281), REW (7890, cf. 3333), TDHLE (chillar) and DEEH (970-1) preferred Lat. SĪBĬLĀRE as the etymon, which DCECH (chillar) criticized. The evolution of the etymon could have been as follows: Lat. FISTŬLĀRE > *CISCLARE > **chislar* > OSp. *chirlar* (ibid.). As Sp. *chillar* seems to come from OSp. *chirlar*, it is unclear where /ʎ/ comes from: /ʎ/ could be an unusual outcome of secondary postconsonantal clusters, instead of the expected /ʧ/ (cf. Section 2.4.1), or the palatalization may be due to other factors, such as the presence of the word-initial /ʧ/ (cf. DCECH).

- ***chẽo* (GP)**

  Etymology: Lat. PLĒNUS (root/stem: PLĒNUS)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: FF (329); REW (8596); DELG (cheo); DEHLP (cheio); DDGM (cheo, especially TC); TMILG (CSM, LP, TC).

- ***choça* (OSp.)**

  Etymology: Lat. PLŬTĔUS (root/stem: PLŬTĔUS)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: GCLI (232); REW (6619); DEEH (881). Sp. *choza* could be a Pt. borrowing (DRAE: choza), but DCECH (choza) argued that this word is unlikely to be a borrowing because it was already attested in the 13th century (cf. CORDE). According to DCECH, Sp. *choza* would have been built from Sp. *chozo*, which comes from Lat. PLŬTĔUS.

- ***choça* (GP)**

  Etymology: Lat. PLŬTĔUS (root/stem: PLŬTĔUS)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: GCLI (232); TMILG (CSM); DDGM (CSM); DELG (choza); DEEH (881); DEHLP (choça); REW (6619); DEM (588).

- ***choca* (GP)**

  Etymology: Late Lat. *CLŎCCA (root/stem: *CLŎCCA) (u.e)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: With the meaning 'brooding hen, stagnant water, spoiled (egg)'; FF (329); GCLI (232); DELG (chocar 2); DEHLP (choco); DDGM (choca/chocar); DXL (276, chocar 1/choco 2); TMILG (LP). DEM (588-590, chocar 1/choca 1) seemed to imply that both GP *choca/chocalho* 'cowbell' and GP *choca* 'brooding hen, stagnant water, spoiled (egg)' came from Lat. *CLŎCCA- (also DEEH: 584-5). Conversely, DEHLP (choca 1/choco), DCECH (chocallo/clueca) and DXL (276-7, choca/choco 2) proposed two different etymologies: Late Lat. CLOCCA 'bell' (perhaps of Celtic origin) for GP *choca/chocallo*, and *CLŎCCA (of onomatopoeic origin) for GP *choca* 'brooding hen' (see root = CLOCCA).

- ***chocallo* (Leon.)**

  Etymology: Late Lat. CLOCCACULUM (root/stem: CLOCCA) (u.o.)

  Attestation date: 16th century

  Sources and notes: With the meaning '(cow)bell, earring'; DCECH (chocallo); no information was found in REW (1995). However, DEHLP (choca/chocalho) and DEM (588, choca 1) derived Pt. *chocalho* from Pt. *choca* (similarly, DXL: 276). A different etymology is given in TDHLE (chocallo).

- ***chocas* (GP)**

  Etymology: Late Lat. CLOCCA (root/stem: CLOCCA)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: With the meaning '(cow)bell'; Georges (clocca); DEHLP (choca); no information was found in REW (1995); DELG (choca 2); DDD (choca); DEHLP (choca/chocalho) derived Pt. *chocalho* from Pt. *choca* (also DEM: 588, choca 1; DXL: 276).

- ***chocho* (Pt.)**

  Etymology: Late Lat. *CLOCIA (root/stem: *CLŎCCA) (u.o.)

  Attestation date: 18th century

  Sources and notes: With the meaning 'doddering, feeble, dried up, spoiled (egg)'. It is possible that Sp. *chocho* is a Pt. borrowing (DCECH: chocho; cf. Roberts 2014: 475). DCECH (chocho) and DELG (chochear) proposed an etymon that went back to Late Lat. *CLŎCCA. DEHLP (chocho) preferred Lat. FLŬXUS as the origin, as did DEM (589), while NDLP (chocho) preferred Lat. SUCTUS. DXL (276) and DRAE (chocho 2) suggested an onomatopoeic origin for Gal. and Sp. *chocho* (cf. *froixo* (GP)).

- ***chomacio* (GP)**

  Etymology: Lat. PLŪMĀCIUM (root/stem: PLŪMA)

  Attestation date: 9th century, OL palatalization: yes

  Sources and notes: FF (330); Georges (plūmācium); both *chomacio* and *chomazo* are attested in 9th century documents (cf. CODOLGA); GP *chumaço(s), chomazo* and *chumazo* are also found in the 13th and 14th centuries (TMILG: VFD, GHCD, HGPg); DDGM (chumaço, CVGP); DELG (chumaceiras); REW (6611); DCECH (chumacera); DEHLP (chumaço), DEM (595). Sp. *chumacera* seems to be a borrowing from Pt. *chumaceira*, which was derived from *chumaço* (DCECH: chumacera; DEHLP: chumaceira, DEEH: 881).

- ***chombu* (Ast.)**

  Etymology: Lat. PLŬMBUM (root/stem: PLŬMBUM)

  Other forms: *plomu, llombu*

  OL palatalization: yes

  Sources and notes: GCLI (232); DGLA (chombu/plomu); DALLA (chombu/plomu).

- ***chopa* (Sp.)**

  Etymology: Lat. CLŬPĔA (root/stem: CLŬPĔA) (u.o.)

  Attestation date: 18th century

  Sources and notes: With the meaning 'king of small (river) fish' (LS and Georges: clupea). It is unclear whether Sp. *chopa* comes from Gal. or Pt. *choupa* (DRAE: chopa; DCECH: chopa I; Roberts 2014: 476) or directly from Lat. CLŬPĔA (TDHLE: chopa; REW: 1998; maybe also DEEH: 585). DCECH suggested that the phonetic development is unexpected for a Spanish word and that Pt. words for fish names were often borrowed into Spanish. In addition, /ʧ/ is the usual outcome for word-initial OL clusters in GP, while /ʎ/ would be expected in Spanish (cf. Section 2.4.1).

- ***chopo* (Gal.)**

  Etymology: Lat. *PLŌPPUS (root/stem: PŌPŬLUS)

  Attestation date: 18th century, OL palatalization: yes

  Sources and notes: With the meaning 'poplar-tree' (LS: populus; DXL: 277); GCLI (232, 279); DELG (chopo 3/choupo negro/pobo 2); DXL (277); REW (6655); DCECH (chopo); cf. DEHLP (choupo) and DEM (593); DDD (chopo).

- ***chopo* (OSp.)**

  Etymology: Lat. *PLŌPPUS (root/stem: PŌPŬLUS)

  Attestation date: 14th century, OL palatalization: yes

Sources and notes: With the meaning ‘poplar-tree’ (LS: populus; DRAE: chopo); GCLI (232, 279); REW (6655); DEEH (883); DCECH (chopo). The unexpected /ʧ/ outcome for word-initial /pl/ could be explained by sandhi effects with the previous word ending in a consonant (ibid.) (cf. *chato* (Sp.) and *chapas* (OSp.)).

- ****chor* (GP)**

  Etymology: Lat. FLŌS, -RIS (root/stem: FLŌS)

  Other forms: *frol, fror*

  Attestation date: 15th century, OL palatalization: yes

  Sources and notes: DEHLP (flor); DEM (1002-3); REW (3382); DCECH (flor); DEEH (683); DDGM (flor, especially TC); DELG (chora). GP *chor* is not very well attested in comparison with GP *flor* (TMILG: CSM/LP, 13th century), *frol* (TMILG: LP/CDMO/TC, 13-14th centuries) or *fror* (TMILG: CSM/LP, 13th century). As FF (331) stated, the only attestation in TMILG of an GP word from the Lat. root FLŌS with OL palatalization is the toponym *Chorente* (VFD, 15th century). This date will be used as reference, even though it does not correspond to the date of an actual attestation of GP **chor* (cf. TLPGP: chor/chorir for evidence of actual usage of Gal. Pt. *chor*). Pt. *chorume* (16th century) can be a derivation of Pt. *chor* (DCECH: chirumen; DEHLP: chorume/flor, REW: 3382) or can come from Late Lat. *FLORUMEN (DEHLP: chorume; DDD: chorume, Otero Álvarez (1951); DEM: 592) or from Lat. *FLORIMINE (DELG: chorima/chorume). The most usual modern word is Pt. *flor* but *chor* is still used in Trasmont. Pt. (see the given references in DCECH and DEHLP).

- ***chorar* (GP)**

  Etymology: Lat. PLŌRĀRE (root/stem: PLŌRĀRE)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: FF (329); REW (6606); DELG (chorar 2); DEHLP (chorar); DEEH (881); DDGM (chorar); DEM (591); TMILG (CSM, LP, TC).

- ***Chorente* (GP)**

  Etymology: Lat. FLŌRĒRE (root/stem: FLŌS) (u.e.)

  Attestation date: 15th century, OL palatalization: yes

  Sources and notes: FF (331); cf. RELG (chorar 1); DEEH (683); DEHLP (flor); DEM (592). The toponym *Chorente* probably comes from GP *chorear* or *churir* (cf. DDD: churir; FF: 331; TLPGP: chorir).

- ***choupa* (Gal.)**

  Etymology: Lat. CLŬPĔA (root/stem: CLŬPĔA)

  Other forms: *xouba*

  Attestation date: 20th century, OL palatalization: yes

Sources and notes: DCECH (chopa I); DDD and TLPGP (xouba/choupa, Ríos Panisse 1977); DXL (278); REW (1998); DELG (xouba/choupa-o-ón); DEEH (585). Gal. *xoubas* is attested in the 18th century (cf. DDD). The evolution of the etymon might have been as follows: Lat. CLŬPĔA > CLUPIA > *choipa* > GP *choupa* (cf. DCECH: chopa I; DEHLP: choupa; DEM: 593). Some sources claimed that GP *choupa* came from Lat. SALPA (see discussion in DCECH: chopa I; DEM: 593; DDD: choupa). For information on Gal. *xouba*, see DCECH (chopa I), DXL (1275), DDD (xouba).

- ***choupana* (Pt.)**

  Etymology: Lat. CLŬPĔUS (root/stem: CLŬPĔUS) (u.o.)

  Other forms: *choupa*

  Attestation date: 16th century

  Sources and notes: With the Lat. meaning 'round shield, protection' (LS and Georges: clupeus/clipeus) and the Pt. and Gal. meaning 'small wooden house or hut' (DEHLP and DDD: choupana); different etymologies in DCECH (chopa II) and DEEH (585, < Lat. CLŬPĔUS), DELG (Gal. *choupana* < Celt. **clop*, Gal. *chopa* < Lat. CLUPEA), DEHLP (*choupana* ← *choupo* or Lat. *PLOPPU-), and DXL (278, < Lat. PLUTEU(M)). According to DCECH (chopa II), Sp. *chopa* 'shed in the stern of a ship for the pilot' is either a GP or Basq. borrowing (cf. DEEH: 585). See also DELG (chopo 2) for other possible inherited forms from Lat. CLŬPĔUS. DEM (593) left open whether Pt. *choupana* is related to *choupa* (< Lat. CLŬPĔA).

- ***choupas* (Pt.)**

  Etymology: Lat. CLŬPĔA (root/stem: CLŬPĔA)

  Attestation date: 16th century, OL palatalization: yes

  Sources and notes: DCECH (chopa I); TLPGP (choupa, Netto 1949: 114); NDLP (choupa). The evolution of the etymon might have been as follows: Lat. CLŬPĔA > CLUPIA > *choipa* > GP *choupa* (cf. DCECH: chopa I; DEHLP: choupa; DEM: 593). Some sources claimed that GP *choupa* came from Lat. SALPA (see discussion in DCECH: chopa I; DEM: 593; DDD: choupa).

- ***choupo* (Pt.)**

  Etymology: Lat. *PLŌPPUS (root/stem: PŌPŬLUS)

  Attestation date: 18th century, OL palatalization: yes

  Sources and notes: With the meaning 'poplar-tree' (LS: populus, DEHLP: choupo); GCLI (232, 279); REW (6655); DEHLP (choupo); DCECH (chopo); DEM (593); DEEH (883).

- ***chousura* (GP)**

  Etymology: Lat. CLAUSŪRA (root/stem: CLAUDĔRE)

  Attestation date: 13th century, OL palatalization: yes

Sources and notes: FF (329); DCECH (clausura); cf. DELG (choer-se/chousa); cf. DEHLP (chousura/chous-); DDGM (chousura); no information was found in REW (1974); TMILG (ROT, CDMO); DEM (577) preferred to derive GP *chousura* from GP *chouso*.

- ***Chouzan* (GP)**

  Etymology: Lat. CLAUSA (root/stem: CLAUDĔRE)

  Attestation date: 12th century, OL palatalization: yes

  Sources and notes: FF (329, 362); GCLI (230); DELG (chousa); DDGM (chousa, especially CVGP and Tato Plaza 1999); cf. DEHLP (chousa); DEM (576); no information was found in REW (1973); CODOLGA; GP *chousa* is also attested in TMILG (e.g., CDMO and VFD, 13th century).

- ***chover* (GP)**

  Etymology: Late Lat. PLŎVĔRE (root/stem: PLŎVĔRE)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: GCLI (230); cf. REW (6610); DCECH (llover); DDGM (chover, especially TC); DELG (chover); TMILG (LP, CSM, XH); DEHLP (chover); DEEH (881); DEM (594).

- ***choyr* (GP)**

  Etymology: Lat. CLAUDĔRE (root/stem: CLAUDĔRE)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: FF (287); DCECH (clausura); DELG (choer-se); REW (1967); DDGM (choer/choir/choyr); DEEH (583); TMILG (CSM, THCS); for information on GP *enchoir*, see DDGM (enchoir).

- ***chuflar* (Arag.)**

  Etymology: Late Lat. *SŪFILĀRE (root/stem: SĪBĬLUS)

  OL palatalization: no

  Sources and notes: Georges (sibilo); CRC (431); DCECH (silbar); Aragonario (silbar).

- ***chumbo* (GP)**

  Etymology: Lat. PLŬMBUM (root/stem: PLŬMBUM)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: FF (329); DCECH (plomo); REW (6615); cf. DEHLP (chumbo); DEM (595); DDGM (chumbo, TC); TMILG (HCIM, CDMO). DELG (chumbar) seemed to imply that Gal. *chumbar* comes from Lat. PLUMBARE (also DEEH: 881), while DEHLP (chumbar) and REW (6615) preferred to derive it from Gal. *chumbo*.

- ***chus*** **(GP)**

  Etymology: Lat. PLŪS, -RIS (root/stem: PLŪS, -RIS)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: FF (329); DELG (chus); cf. DCECH (chozno) and REW (6618); DDGM (chus); DEEH (881); DEM (596); TMILG (LP, CSM). DCECH (plural/chozno) seemed to imply that OSp. *chus* 'more' existed. However, the usual outcome for word-initial clusters is /ʎ/ in Old Spanish (cf. Section 2.4.1), which makes it probable that OSp. *chus* was borrowed from GP *chus* (cf. DEM: 596).

- ***chuvia*** **(GP)**

  Etymology: Lat. PLŬVĬA (root/stem: PLŬVĬA)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: FF (329); DCECH (llover); DEEH (881); REW (6620); DELG (chuvia); DDGM (chovia/chuvia, see especially TC); TMILG (CSM, XH, HT, other forms are attested in CT or TC); DEHLP (chuva); DEM (594).

- ***cincha*** **(OSp.)**

  Etymology: Lat. CĬNGŬLA (root/stem: CINGERE)

  Other forms: *cencha*

  Attestation date: 12th century, OL palatalization: yes

  Sources and notes: GCLI (283); Georges (cingula); DCECH (cincho); DRAE (cincha/cencha); CRC (259, 262, 269); DEEH (580); CORDE.

- ***Cizercha*** **(OSp.)**

  Etymology: Lat. CICERCŬLA (root/stem: CICERA)

  Attestation date: 15th century, OL palatalization: yes

  Sources and notes: CRC (272); DEEH (579); DRAE (cicercha); DCECH (almorta); cf. CORDE; REW (1902) considered Sp. *cicercha* to be an Italian borrowing.

- ***claridad*** **(OSp.)**

  Etymology: Lat. CLĀRĬTĀS, -ĀTIS (root/stem: CLĀRUS) (BORR?)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: DRAE (claridad); TDHLE (claridad); no information was found on (O)Sp. *claridad* in DEEH; no information was found in REW (1962-3). DCECH (claro) seemed to consider Sp. *claridad* to be a derivational form of Sp. *claro*.

- ***claro* (OSp.)**

  Etymology: Lat. CLĀRUS (root/stem: CLĀRUS)

  Attestation date: 12th century, OL palatalization: no

  Sources and notes: DEEH (583); DRAE (claro); CORDE. REW (1963) considered Sp. and Pt. *claro* to be technical or perhaps learned words ("Buchwort"). DCECH (claro) claimed that Sp. *claro* cannot be considered a learned word or borrowing even though the OL cluster had a conservative evolution: "Pertenece al segundo estrato de palabras castellanas, con tratamiento retrasado y conservador del grupo inicial CL-, pero no puede considerarse voz culta ni semiculta." (ibid.). Root or stem reconstruction was attempted for words such as Lat. CLĀRĔO, CLĀRESCO, CLĀRĬFĬCO, CLĀRĬFĬCĀTĬO, CLĀRĬTUS, ACCLĀRO, INCLĀRUS, DĒCLĀRĀTĬO, DĒCLĀRO, and PRAECLĀRUS (see LS for words containing the root -*clar*-): *l?ar*, *char*, *iar*, *gar*, *yar* (CORDE, until 1600); sequences containing the change Lat. /are arj ari/ > OSp. /ajr/ > /er/ were only searched in NTLLE.

- ***clauar* (GP)**

  Etymology: Late Lat. CLĀVĀRE (root/stem: CLĀVUS)

  Other forms: *cravar*

  Attestation date: 15th century, OL palatalization: no

  Sources and notes: DELG (clavar); DEHLP (cravar); TMILG (VFD); DELG (clavar). DEM (578) claimed that GP *clauos* was attested in the 12th century. According to DCECH (cabruñar), Gal. *carabuñar* would come from **cravuñar*, which is a derivational form of GP *clavar/cravar* (also DELG: cravuñar). Other forms of the word include Gal. *crabuñar* and *cravuñar* (cf. DDD: crabuñar/cravuñar).

- ***clava* (Sp.)**

  Etymology: Lat. CLĀVA (root/stem: CLĀVA) (BORR)

  Attestation date: 16th century, OL palatalization: no

  Sources and notes: DRAE (clava). REW (1976) gave Sp. *chabasca* and *chaborra* as inherited words. According to DRAE (chavasca), Sp. *chavasca* is a synonym for Sp. *chasca* 'small firewood', which would have an onomatopoeic origin (similarly in DEEH: 573-4 but cf. DCECH: chamiza). No further etymological information could be found on these inherited words, but the word-initial OL clusters are expected to become /ʎ/ and not /ʧ/ in Spanish. Attempted root or stem reconstruction for words such as Lat. CLĀVŬLA and CLĀVĀTOR (see LS for words containing the root -*clava*- 'club, cudgel, rough stick'): *l?ava*, *l?aua* (CORDE).

- ***clava* (OSp.)**

  Etymology: Late Lat. CLĀVĀRE (root/stem: CLĀVUS)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: DCECH (clavo); DRAE (clavar); TDHLE (clavar); DEEH (584); CORDE. According to DCECH (cabruñar), Ast. *cabruñar* comes from **clavuñar*, which is a derivational from of *clavar*.

- ***clavos* (OSp.)**

  Etymology: Lat. CLĀVUS (root/stem: CLĀVUS)

  Attestation date: 12th century, OL palatalization: no

  Sources and notes: GCLI (232); DRAE (clavo); DEEH (584); CORDE. As in the case of Sp. *claro* (see *claro* (OSp.)), DCECH (claro) claimed that Sp. *claro* cannot be considered a learned word or borrowing even though the OL cluster had a conservative evolution: "Palabra de evolución retrasada, con tratamiento conservador del grupo inicial CL-, pero difícilmente podrá considerarse voz culta ni semiculta." (ibid.). REW (1984) considered Sp. *claro* a technical or learned word ("Buchwort"). Root or stem reconstruction was attempted for words such as Lat. CLĀVŬLUS, CLĀVO, CLĀVĀRĬUM, CLĀVĀTUS, CONCLĀVO, PRAECLĀVĬUM, and PRAECLĀVĬUM (see LS for words containing the root -clav- 'nail'): *l?av*, *l?au* (CORDE).

- ***clemencia* (OSp.)**

  Etymology: Lat. CLĒMENS,-TIS (root/stem: CLĒMENS) (BORR?)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: DCECH (clemente); REW (1984a); DRAE (clemente); CORDE.

- ***clerigo* (OSp.)**

  Etymology: Late Lat. CLĒRĬCUS (root/stem: CLĒRUS)

  Attestation date: 12th century, OL palatalization: no

  Sources and notes: CRC (345); GCLI (232); DEEH (584); no information was found in REW (1987). There might be one example of *clerigo* in a Latin document from the 11th century (CORDE). DCECH (clero) seemed to imply that Late Lat. CLĒRĬCUS was introduced into the language at a later time.

- ***clima* (OSp.)**

  Etymology: Lat. CLIMA (root/stem: CLIMA) (BORR?)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: DCECH (clima); REW (1989); TDHLE (clima); DRAE (clima); CORDE.

- ***cllaro* (Rib. Arag.)**

  Etymology: Lat. CLĀRUS (root/stem: CLĀRUS)

  OL palatalization: yes

  Sources and notes: Aragonario. Viudas Camarasa (1979) gave the following OArag. forms for the Sp. counterparts: Sp. *aclarar* ~ OArag. *acllarir*, *escllarir*, Sp. *esclarecer* ~ OArag. *entrecllarir*, Sp. *declaración* ~ OArag. *decllaració*, Sp. *declarar* ~ OArag. *decllará*, Sp. *claror* or *claridad* ~ OArag. *cllaror*.

- ***cllau* (Rib. Arag.)**

  Etymology: Lat. CLĀVIS (root/stem: CLĀVIS)

  OL palatalization: yes

  Sources and notes: FF (329); GCLI (231); DEEH (584); Aragonario (llave).

- ***cloaca* (Pt.)**

  Etymology: Lat. CLOĀCA (root/stem: CLOĀCA) (BORR)

  Attestation date: 16th century, OL palatalization: no

  Sources and notes: DEHLP (cloaca); DEM (619). Root or stem reconstruction was attempted for words such as Lat. CLŎĀCŬLA, CLŎĀCĀRĬUM, and CLOĀCĀRE (see LS for words containing the root -*cloac*-): choac*, choag*, chuac*, chuag* (TMILG).

- ***cloaga* (OSp.)**

  Etymology: Lat. CLOĀCA (root/stem: CLOĀCA)

  Other forms: *colaga*

  Attestation date: 14th century, OL palatalization: no

  Sources and notes: No information on Spanish was found in REW (1994); DEEH (584). According to DCECH (cloaca), OSp. *cloaga* (semi-popular or semi-learned form) is attested already in the 14th century (see TDHLE: cloaga for the context and source) but no examples could be found before the 15th century (cf. CORDE). Sp. *colaga* may also be used in Salamanca, Spain (DCECH; DEEH) (see also *colaga*). Root or stem reconstruction was attempted for words such as Lat. CLŎĀCŬLA, CLŎĀCĀRĬUM, and CLOĀCĀRE (see LS for words containing the root -*cloac*-): l?oac*, l?oag*, l?uac*, l?uag* (also with only <l> instead of <l?>) (CORDE).

- ***coalla* (Sp.)**

  Etymology: Lat. COACŬLA (root/stem: COACŬLA) (BORR?)

  Attestation date: 17th century, OL palatalization: no

  Sources and notes: CRC (438); DEEH (585); DRAE (coalla); no etymological information was found in TDHLE (coalla). DCECH (coalla) argued that Lat. COACŬLA would not explain Cat. *guatlla* or Gascon *catla*, which are cognates with Sp. *coalla* and Fr. *caille*, and added that it could be an Italian borrowing. REW (2004) preferred to consider it a Prov. borrowing. /ʎ/ is an unexpected outcome, since /ʒ/ is the usual result of secondary postvocalic clusters in Old Spanish (cf. Section 2.4.1). Consequently, it is probable that Sp. *coalla* is a borrowing.

- ***cobra*** **(GP)**

  Etymology: Lat. cōpŭla (root/stem: apiscor)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: With the Lat. meaning 'bond, tie, connection' (LS and Georges: copula/apiscor); DCECH (copla); DDGM (cobra, especially CSM and Rodrigues Lapa 1970); TMILG (LP, CSM, AT); DELG (copla); DEEH (599-600); DEM (621). REW (2209) suggested that Pt. *cobra* is a borrowing from Cat. *cobla*. DEM (621) claimed that Pt. *cocha* (attested in the 19th century) also comes from Lat. cōpŭla. As DEHLP (cocha) argued, /ʧ/ is an unexpected outcome for secondary postvocalic OL clusters in Galician-Portuguese, /ʎ/ would be expected instead (cf. Section 2.4.1).

- ***coella*** **(Gal.)**

  Etymology: Late Lat. caulĭcŭla (root/stem: caulis)

  Other forms: *covella, cobella*

  Attestation date: 18th century, OL palatalization: yes

  Sources and notes: With the Lat. meaning 'the small stalk or stem of a plant' (LS: cauliculus) and the Gal. meaning 'small cabage, young collard' (DDD: coella); DEEH (567); TLPGP (coella); no information on Ibero-Romance forms was found in REW (1777); no inherited words were found in DEM (535-6). DXL (299) claimed that Gal. *coella* was derived from Gal. *col*.

- ***colaga*** **(Pt. Trasm.)**

  Etymology: Lat. cloāca (root/stem: cloāca)

  OL palatalization: no

  Sources and notes: REW (1994); DEEH (584); cf. DEHLP (cloaca) and DEM (619).

- ***colleja*** **(Sp.)**

  Etymology: Late Lat. caulĭcŭla (root/stem: caulis)

  Attestation date: 16th century, OL palatalization: yes

  Sources and notes: CRC (438, 446); DEEH (567); DRAE (colleja 1); no information on Ibero-Romance forms was found in REW (1777); CORDE. Mozarab. forms like *qualîya* are already attested in the 12th century (DCECH: colleja). OSp. *colleja* might be attested in the 16th century (ibid.), but I could not find any example earlier than the 19th century in CORDE.

- ***complejos* (OSp.)**

  Etymology: Lat. COMPLĔXUS (root/stem: COMPLECTOR) (BORR)

  Attestation date: 15th century, OL palatalization: no

  Sources and notes: DCECH (complejo); DRAE (complejo); Georges (complexus); CORDE.

- ***comprir* (GP)**

  Etymology: Lat. COMPLĒRE (root/stem: PLĒRE)

  Other forms: *cumprir*

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: GCLI (234); DDGM (comprir); DCECH (cumplir); DELG (comprir/cumplir); DEHLP (cumprir); DEM (645); TMILG (LP, CSM); REW (2101) considered Pt. *cumprir* to be a technical or learned word ("Buchwort") (cf. *cumplir* (OSp.)).

- ***concha* (GP)**

  Etymology: Late Lat. CŎNCHŬLA (root/stem: CŎNCHA)

  Attestation date: 14th century, OL palatalization: yes

  Sources and notes: FF (330); GCLI (282); REW (2113); DDGM (concha); TMILG (MS, VFD in 14-15th centuries); DELG (concha 1). DCECH (concha) and DEM (648) provided one example from the 14th century; see DELG (caracol), DXL (233) or DEM (500-1) for a possible origin in the Lat. root CŎNCHA.

- ***concha* (OSp.)**

  Etymology: Late Lat. CŎNCHŬLA (root/stem: CŎNCHA)

  Attestation date: 12th century, OL palatalization: yes

  Sources and notes: CRC (259, 269); GCLI (282); DCECH (concha); DRAE (concha); REW (2113); CORDE. As a toponym, it is already attested in the 11th century (see DCECH: concha; cf. CORDE); see DCECH (caracol) for a possible origin in the Lat. root CŎNCHA.

- ***conchavado* (Pt.)**

  Etymology: Lat. CONCLAVĀRI (root/stem: CLĀVIS)

  Attestation date: 16th century, OL palatalization: yes

  Sources and notes: GCLI (233); DCECH (conchabarse); DDGM (CVGP, conchavado); DELG (conchavello); DEM (576-9). DEHLP (conchavar) and REW (2116a) suggested Late Lat. CONCLAVĀRE (< CUM-CLAVO) as the etymology. Given that Pt. *conchavar* means 'to agree on something, to gather', the etymon more likely originated in Lat. CONCLĀVE '(private) room, chamber' rather than in Lat. CONCLAVĀRE 'to nail together' (cf. LS; Georges; OLD), as DCECH argued.

- ***conchavarse* (OSp.)**

  Etymology: Lat. CONCLAVĀRI (root/stem: CLĀVIS)

  Attestation date: 15th century, OL palatalization: yes

  Sources and notes: CRC (270); GCLI (233); DCECH (conchabarse); DEEH (594); cf. CORDE. DRAE (conchabar) and REW (2116a) suggested that Sp. *conchabar* comes from Late Lat. CONCLAVĀRE (< CUM-CLAVO). Given that Sp. *conchabar means 'to agree on something, to gather', the etymon more likely originated in Lat. CONCLĀVE '(private) room, chamber' rather than in Lat. CONCLAVĀRE 'to nail together' (cf. LS; Georges; OLD), as DCECH argued.

- ***conchegar* (Pt.)**

  Etymology: Lat. COMPLICĀRE (root/stem: PLĬCĀRE)

  Attestation date: 16th century, OL palatalization: yes

  Sources and notes: DEEH (593); DEHLP (conchegar); REW (2102a); DEM (650); TLPGP (aconchegar).

- ***conchouso* (GP)**

  Etymology: Lat. CONCLAUSUM (root/stem: CLAUDĔRE)

  Attestation date: 12th century, OL palatalization: yes

  Sources and notes: REW (2115); DELG (conchouzo); DEEH (594); see DEM (578) or PMH (*Inquisitiones* V: 679) for the context of the given inherited form; several examples of GP *conchousa* or *conchoouso* are found in TMILG (DTT, MSMDFP).

- ***concluida* (OSp.)**

  Etymology: Lat. CONCLŪDĔRE (root/stem: CLAUDĔRE)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: Georges (cludo/claudo); CRC (62); DCECH (clausura); DRAE (concluir); TDHLE (concluir); CORDE. DCECH (clausura) seemed to imply that Sp. *concluir* is a learned word.

- ***coneio* (OSp.)**

  Etymology: Lat. CUNĬCŬLUS (root/stem: CUNĬCŬLUS)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: CRC (438); GCLI (278); DCECH (conejo); REW (2397); DEEH (614); CORDE.

- ***contemplación* (OSp.)**

  Etymology: Lat. COMTEMPLĀTIO (root/stem: TEMPLUM) (BORR)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: DCECH (contemplar); Georges and LS (contemplor/contemplatio); DRAE (contemplación); cf. CORDE.

- ***copla* (OSp.)**

  Etymology: Lat. CŌPŬLA (root/stem: APISCOR) (BORR)

  Attestation date: 12th century, OL palatalization: no

  Sources and notes: With the Latin meaning 'bond, tie, connection' (LS and Georges: copula/apiscor); CRC (432); DCECH (copla); DEEH (599-600); cf. CORDE. OSp. *copla* is already attested in *Cantar de Mio Cid* (12th century). For this reason, it is unexpected that /p/ was not voiced due to lenition, given how early the first attestation was. The lack of voicing indicates that OSp. *copla* was likely a borrowing. It is unclear whether Ast. (and Cat.) *colla* comes from Lat. CŌPŬLA (DEEH: 599-600; DRAE: colla 2; REW: 2209) or from Cat. *coll* or Lat. COLLUM (DCECH: colla).

- ***corneja* (OSp.)**

  Etymology: Lat. *CORNĬCŬLA (root/stem: CORNIX)

  Attestation date: 12th century, OL palatalization: yes

  Sources and notes: CRC (438, 447); DCECH (corneja); REW (2238); DEEH (601-2); CORDE.

- ***cornejo* (Sp.)**

  Etymology: Lat. CORNĬCŬLUS (root/stem: CORNUS) (u.o.)

  Attestation date: 17th century

  Sources and notes: DEEH (602); DRAE (cornejo). TDHLE (cornejo) and DCECH (cornejo) seemed to suggest that Sp. *cornejo* is a derivational form from CORNUS.

- ***cornelha* (GP)**

  Etymology: Lat. *CORNĬCŬLA (root/stem: CORNIX)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: DDGM (cornella/cornelha, especially TC); DEEH (601-2); DEM (679); no information on the Gal. or Pt. forms was found in REW (2238); TMILG (LP, TC); see DDD (cornella, TC) for the context and source of the given inherited form.

- ***cornelho* (Pt.)**

  Etymology: Lat. CORNĬCŬLUM (root/stem: CORNŪ)

  Attestation date: 19th century, OL palatalization: yes

  Sources and notes: DEHLP (cornelho); DEM (680); TLPGP (cornello/cornelho); DEEH (602); no information on Ibero-Romance forms was found in REW (2239).

- ***cornello* (Gal.)**

  Etymology: Lat. CORNĬCŬLUM (root/stem: CORNŪ)

  Attestation date: 19th century, OL palatalization: yes

  Sources and notes: DELG (cornecelo/conella); DEHLP (cornelho); DEM (680); DEEH (602); DDD (cornello); TLPGP (cornello/cornelho); no information on Ibero-Romance forms was found in REW (2239).

- ***cornijal* (OSp.)**

  Etymology: Lat. CORNĬCŬLUM (root/stem: CORNŪ)

  Attestation date: 14th century, OL palatalization: yes

  Sources and notes: DEEH (602); DRAE (cornijal); DCECH (cuerno); no information on Ibero-Romance forms was found in REW (2239); CORDE.

- ***coyunda* (OSp.)**

  Etymology: Late Lat. *CONJŬNGŬLA (root/stem: CONJŬNGĔRE)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: CRC (259, 269); DCECH (sencillo/uncir); REW (2150-1); DRAE (coyunda); TDHLE (coyunda); DEEH (596); CORDE. /ng(V)l/ seems to have resulted in a variety of outcomes, not only in Spanish, but also in other Romance varieties. The evolution Lat. /ngl/ > Sp. /nd/ seems to have been rather common: apart from Late Lat. *CONJŬNGŬLA > OSp. *coyunda*, other examples are Late Lat. *SPONGULA > Sp. *espundia*, Lat. SĬNGŬLOS > Sp. *sendos* (see *seños* (OSp.)) (cf. DCECH: sencillo/uncir; García de Diego 1925: 7). A similar development can perhaps be found in Nav. *cendea* (< Lat. CĬNGŬLUM and in Sp. *escand(i)a* (< Lat. SCANDŬLA) (ibid.). García de Diego (1925: 7) gave several possible reasons for the outcome variety in /ng(V)l/: geographical circumstances, different sound change chronology, etc.

- ***cópano* (OSp.)**

  Etymology: Lat. CAUPŬLUS (root/stem: CAUPŬLUS)

  Attestation date: 15th century, OL palatalization: no

  Sources and notes: With the meaning 'small boat'; CRC (432); REW (1780); CORDE (cópano); DRAE (cópano); DEEH (567). The change /l/ > /n/ seems to be also attested in

Genovese (13th century) and Venetian (15th century) documents, e.g. *copano, copanus, coppano*, but the motivation for this change is unclear (cf. DCECH: cópano).

- ***craridades* (GP)**

  Etymology: Lat. CLĀRĬTĀS, -ĀTIS (root/stem: CLĀRUS)

  Other forms: *claridade*

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: DEHLP (claridade); DEM (613-4); DDGM (craridade, especially TC); no information was found in REW (1962-3); DXL (292); cf. DCECH (claro) and DELG (claro-a); DLPC (836); TMILG (CSM, TC, XH, HT). The given sources did not mention that GP *claridade* and *craridade* were Lat. borrowings or learned words. However, given that this word does not appear in REW and that GP *craro* seems to have had a learned or conservative evolution (see *craro* (GP)), GP *craridade* may also have had a conservative or learned evolution or be a later borrowing.

- ***craro* (GP)**

  Etymology: Lat. CLĀRUS (root/stem: CLĀRUS)

  Other forms: *claro*

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: FF (331); DDGM (craro, especially TC); DCECH (claro); DEHLP (claro); DELG (claro-a); TMILG (CSM, TC, XC, HT). REW (1963) considered Sp. and Pt. *claro* to be technical or perhaps learned words (“Buchwort”). DEM (613-4) and DDGM (craro, TC) considered it a (semi) learned word or having been influenced by the most conservative form of the word. Root or stem reconstruction was attempted for words such as Lat. CLĀRĔO, CLĀRESCO, CLĀRĬFĬCO, CLĀRĬFĬCĀTĬO, CLĀRĬTUS, ACCLĀRO, INCLĀRUS, DĒCLĀRĀTĬO, DĒCLĀRO, and PRAECLĀRUS (see LS for words containing the root -*clar*-): *char*, *cheir*, *l?ar*, *l?eir*, *jar*, *jeir*, *xar*, *xeir* (i = <i j y>, j = <j g>, see “Asociacións gráficas” in TMILG) (TMILG; DDD).

- ***crava* (GP)**

  Etymology: Lat. CLĀVA (root/stem: CLĀVA) (BORR)

  Attestation date: 16th century, OL palatalization: no

  Sources and notes: Attested in the 16th century in Portuguese (DEHLP: clava; DEM: 576). Attempted root or stem reconstruction for words like Lat. CLĀVŬLA and CLĀVĀTOR (see LS for words containing the root -*clava*- ‘club, cudgel, rough stick’): *chava*, *chaua* (TMILG; DDD).

- ***cravo* (GP)**

  Etymology: Lat. CLĀVUS (root/stem: CLĀVUS)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: GCLI (232); cf. DCECH (clavo); DELG (clavo/cravo); DEHLP (cravo); DEM (576-9); DDGM (cravo); TMILG (CSM, TC). REW (1984) considered Pt. *craro* to be a technical or learned word ("Buchwort"). Similarly, DEM (578) argued that GP *cravo* came from Lat. CLĀVUS through a conservative or learned evolution ("por via culta"). Root or stem reconstruction was attempted for words such as Lat. CLĀVŬLUS, CLĀVO, CLĀVĀRĬUM, CLĀVĀTUS, CONCLĀVO, PRAECLĀVĬUM, and PRAECLĀVĬUM (see LS for words containing the root -*clav*- 'nail'): *chav*, *chau* (TMILG).

- ***crego* (GP)**

  Etymology: Late Lat. CLĒRĬCUS (root/stem: CLĒRUS)

  Other forms: *crerigo, creligo,*

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: FF (394); CRC (345); GCLI (232); DCECH (clero); DDGM (crerigo, especially TC); TMILG (GP *crerigo* is attested in CSM, and GP *crego* in GHCD/PSVD); DELG (crego); DEHLP (clérigo); DEM (615); no information was found in REW (1987).

- ***crencha* (OSp.)**

  Etymology: Lat. *CRĪNĪCŬLĀRE (root/stem: CRINIS) (u.o.)

  Attestation date: 15th century

  Sources and notes: No etymological information was found in DRAE (crenchar); CORDE. DCECH (crencha) claimed that OSp. *crencha* could only come from Lat. CRĪNĬCULA if it was borrowed from Portuguese. However, as the Spanish word is attested approximately 150 years earlier, DCECH also suggested the etymology Lat. *CRĪNĪCŬLĀRE > OSp. *crenchar* → *crencha*. REW (2328) gave Lat. CRĬSPŬLUS as the etymology for Gal. *crencho* and Sp. and Pt. *crencha*. Roberts (2014: 442) gave no etymology (origin uncertain), TDHLE (chencha) preferred Lat. CRENAE as the etymon, and DEEH (607) preferred Lat. *CRENICULĀRE.

- ***crenchas* (Gal.)**

  Etymology: Lat. *CRĪNĬCŬLA (root/stem: CRINIS) (u.e.)

  Attestation date: 16-17th centuries, OL palatalization: yes

  Sources and notes: DCECH (crencha); DEHLP (crencha); DEM (698); DELG (crecha); REW (2328) gave Lat. CRĬSPŬLUS as the etymology for Gal. *crencho* and Sp. and Pt. *crencha*, but DEEH (607) preferred Lat. *CRENICULĀRE; see DDGM (crencha, CVGP) for the context and source of the given inherited form.

- ***crenchas* (Pt.)**

  Etymology: Lat. *CRĪNĬCŬLA (root/stem: CRINIS) (u.e.)

  Attestation date: 16th century, OL palatalization: yes

  Sources and notes: DCECH (crencha); DEHLP (crencha); DEM (698); DELG (crecha); DDGM (crencha, CVGP attested in *Auto da Lusitânia*); DEM (698); REW (2328) gave Lat. CRĬSPŬLUS as the etymology for Gal. *crencho* and Sp. and Pt. *crencha*, but DEEH (607) preferred Lat. *CRENICULĀRE.

- ***cris* (Sp.)**

  Etymology: Lat. ECLIPSIS (root/stem: ECLIPSIS)

  Attestation date: 17th century, OL palatalization: no

  Sources and notes: DCECH (eclipse/clisos); DEEH (638); DRAE (eclipse); cf. CORDE. According to DCECH (eclipse), Sp. *eclipse* is a learned word (or perhaps borrowing) and Sp. *cris* is a more popular, though probably not entirely inherited, form (cf. REW: 2826).

- ***cristel* (OSp.)**

  Etymology: Lat. CLYSTER (root/stem: CLYSTER) (BORR)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: DCECH (clister); DRAE (clister); TDHLE (cristel); CORDE.

- ***criznejas* (Sp.)**

  Etymology: Lat. *CRĪNĬCŬLA (root/stem: CRINIS) (u.o.)

  Attestation date: 16th century

  Sources and notes: CRC (438, 446); Roberts (2014: 446); DEEH (608); CORDE. DRAE (crizneja) and TDHLE (crizneja) gave Lat. CRINIS as the etymology. DCECH (crizneja) suggested that both Lat. *CRĪNĬCULA and Lat. *CRINICELLA are possible etymologies for Sp. *crizneja*.

- ***crys* (GP)**

  Etymology: Lat. ECLIPSIS (root/stem: ECLIPSIS)

  Attestation date: 15th century, OL palatalization: no

  Sources and notes: DCECH (eclipse); DDD (cris); DEHLP (cris/eclipse); DELG (eclipse); for the context and source of the given original form, see DEM (705). REW (2826) only gave one inherited word from Lat. ECLIPSIS apart from Pt. *cris* and both are considered learned or technical words (“Buchwörter”).

- ***cuajada* (OSp.)**

  Etymology: Late Lat. COAGŬLĀRE (root/stem: COAGŬLUM)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: CRC (114); GCLI (279); DCECH (cuajo); REW (2005); CORDE.

- ***cuchar* (OSp.)**

  Etymology: Lat. COCHLEAR, -ĀRIS (root/stem: COCHLEAR, -ĀRIS)

  Attestation date: 13th century, OL palatalization: unclear

  Sources and notes: GCLI (278); DCECH (cuchara); DRAE (cuchar 1); REW (2012); TDHLE (cuchara/cuchar); CORDE. /ʧ/ is an unusual outcome in this context, since it is only the usual outcome of postconsonantal OL clusters in (Old) Spanish (cf. Section 2.4.1) (see *culiares* (GP)).

- ***cuenya* (Ast.)**

  Etymology: Late Lat. CONCHŬLA (root/stem: CŎNCHA)

  OL palatalization: yes

  Sources and notes: GCLI (282); DCECH (concha); DGLA (cuandia).

- ***culiare* (Leon.)**

  Etymology: Lat. COCHLEAR, -ĀRIS (root/stem: COCHLEAR, -ĀRIS)

  Attestation date: 10th century, OL palatalization: unclear

  Sources and notes: DCECH (cuchara); cf. Ast. *cuyar* (GCLI: 278; DALLA: cuyar; DGLA: cuyar) (see *culiares* (GP)).

- ***culiares* (GP)**

  Etymology: Lat. COCHLEAR, -ĀRIS (root/stem: COCHLEAR, -ĀRIS)

  Attestation date: 10th century, OL palatalization: unclear

  Sources and notes: FF (354); DCECH (cuchara); REW (2012); DELG (cuchara/cullar); DXL (368); DEHLP (colher); DDGM (colher, TC); CODOLGA. Given that hiatuses became diphthongs in Late Latin and that Lat. /i e/ became Late Lat. /j/, it is unclear whether the palatalization of the cluster or of the lateral actually came from OL palatalization or from /lj/ > /ʎ/. Compare: Lat. ARĀNĔA > Sp. Gal. *araña*, Lat. VĪNĔA > Sp. Gal. *viña*, Lat. CŬNĔUS > Sp. Gal. *cuño*, Lat. CASTANĔA > Sp. Gal. *castaña*, or Lat. LĪNĔA > Sp. Gal. *liña* (Penny 2002: 49-50,60-5; FF: 272-3, 350-3; cf. DRAG and DRAE).

- ***cumplir* (OSp.)**

  Etymology: Lat. COMPLĒRE (root/stem: PLĒRE)

  Attestation date: 12th century, OL palatalization: no

  Sources and notes: GCLI (234); DCECH (cumplir); DRAE (cumplir); DEEH (593); CORDE. REW (2101) considered Sp. *cumplir* to be a technical or learned word ("Buchwort") but DCECH (cumplir) preferred to describe it as semi-learned: "*Cumplir* no es cultismo, aunque la comparación con *henchir* IMPLERE nos enseña que tampoco sufrió la evolución fonética más popular; pertenece al mismo nivel lingüístico que *plegar*, *plañir*, *claro*, *flor* y análogos, voces que no pueden considerarse cultas, sino resultantes de una tendencia ortoépica más conservadora, que predominaba en las clases altas de la sociedad." (ibid.)

- ***cumpllir* (Rib. Arag.)**

  Etymology: Lat. COMPLĒRE (root/stem: PLĒRE)

  OL palatalization: yes

  Sources and notes: GCLI (234); Aragonario; Viudas Camarasa (1979).

- ***curriellu* (Ast.)**

  Etymology: Lat. CŬRRĬCŬLUM (root/stem: CURRĔRE)

  OL palatalization: yes

  Sources and notes: Georges (curriculum); DGLA (curriellu); DALLA (corriellu); DCECH (corral); cf. REW (2415a).

- ***damendoas* (GP)**

  Etymology: Late Lat. *AMYNDŬLA (root/stem: AMYGDĂLA)

  Attestation date: 12th century, OL palatalization: no

  Sources and notes: GCLI (282); DELG (améndoa); see DEM (for the context of the given attested form); TMILG (GP *amendooas* is attested in 15th-century TA); DCECH (amêndoa/almendra). The exact evolution of the etymon is unclear: Lat. AMYGDĂLAS > AMĬDDŬLAS or *AMYNDŬLA (among other options) > GP *amendoas* (cf. DEM: 186; DCECH: almendra; FF: 224, 401; REW: 436; DEEH: 463).

- ***deciplos* (OSp.)**

  Etymology: Lat. DĬSCĬPŬLUS (root/stem: DĪSCĔRE) (BORR?)

  Other forms: *di(s)ciplos*

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: DCECH (discípulo); CORDE. There is no lenition of /p/ but the syncope of the intervocalic vowel is fairly common in the text (cf. CORDE), in contrast to the

Galician-Portuguese evidence where syncope is rare (see *dicipolos* (GP)). Furthermore, there is often the change Lat. /i/ > OSp. /e/ and Lat. /u/ > OSp. /o/. The status of this word as borrowing is, as a result, unclear. The modern word is Sp. *discípulo*.

- ***desmayar* (Leon.)**

  Etymology: Lat. MACŬLA (root/stem: MACŬLA)

  Other forms: *mangra*

  Attestation date: 14th century, OL palatalization: yes

  Sources and notes: cf. DEEH (789); DGLA (maya 2). DCECH (mancha I/malla) suggested that the extension of the nasality to the syllable coda resulted in a form *MANGLA or *MANCLA (cf. CRC: 271, 438).

- ***diablo* (OSp.)**

  Etymology: Late Lat. DIABŎLUS (root/stem: DIABŎLUS)

  Other forms: *dianche, diaño*

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: CRC (236, 433); REW (2622); DRAE (diablo/diaño/dianche); DEEH (629); OSp. *diábolo* is already attested in the 10th century (DCECH: diablo). OSp. *diaño* or *dianche* were probably not a result of OL palatalization but euphemisms used to avoid using a taboo word (cf. DCECH: diablo; DEHLP: diabo; DDGM: TC). See DGLA (diañu), DCECH (diablo), and DALLA (diañu) for information on Ast. *diañu*, where palatalization is probably also due to the avoidance of Ast. *diablu*.

- ***diaboo* (GP)**

  Etymology: Late Lat. DIABŎLUS (root/stem: DIABŎLUS)

  Other forms: *diaño, diabro, diacho, dialho*

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: With the meaning 'devil'; FF (222) (same source CSM); REW (2622); DELG (diabo); DEM (777); DDGM (diabro, especially TC); DEHLP (diabo); TMILG (GP *diaboos, diabos, diabres, diablos* are attested in CSM, GP *diaboo* in TC, GP *diabro* in XH). Gal. and Pt. forms like *diaño* or *dialho* are probably not the result of OL palatalization but euphemisms used to avoid using a taboo word (cf. DCECH: diablo; DEHLP: diabo; DDGM: TC).

- ***dicipolos* (GP)**

  Etymology: Lat. DĬSCĬPŬLUS (root/stem: DĪSCĔRE) (BORR)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: DEM (786); DDGM (discipulo); DELG (disciplina); DEHLP (discípulo). GP *discipllo* is attested in the 15th century but the grapheme <ll> probably represented /l/ and not /ʎ/ (cf. HGP: 494-97); TMILG (GP *discipulos* is also attested in CSM, GP *dicipulus* in CI). As there is no lenition of /p/ or /l/, this word is probably a direct Latin borrowing, even if the word was introduced a long time ago.

- ***doblado* (OSp.)**

  Etymology: Lat. DŬPLĀRE (root/stem: DŬPLUS)

  Attestation date: 12th century, OL palatalization: no

  Sources and notes: GCLI (234); DCECH (dos); REW (2800); DEEH (636); DRAE (doblar); TDHLE (doblar); CORDE.

- ***doblegela* (OSp.)**

  Etymology: Lat. DŬPLĬCĀRE (root/stem: DŬPLUS)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: With the meaning 'to bend or bow, to double' (LS: duplico); DRAE (doblegar); DEEH (636); TDHLE (doblegar); Roberts (2014: 561); no information on Spanish inherited words was found in REW (2801). DCECH (dos) argued that Sp. *doblegar* may be a 15th-century Cat. borrowing due to the lack of this word in GP and the late attestation date in Spanish. However, there are multiple examples of OSp. *doblegar* before the 15th century (cf. CORDE).

- ***doblo* (OSp.)**

  Etymology: Lat. DŬPLUS (root/stem: DŬPLUS)

  Other forms: *doble*

  Attestation date: 12th century, OL palatalization: no

  Sources and notes: DEEH (636); DRAE (doblo); TDHLE (doblo/doble); Roberts (2014: 561); CORDE. For further information on Sp. *doble*, see DRAE (Sp. *doble* < Lat. DUPLEX; -ICIS), REW (2802), and DCECH (dos). REW (2802) considered Sp. *doble* to be a technical or learned word ("Buchwort"). DCECH (dos) mentioned that OSp. *doblo* is only attested as a legal term or as currency name, so that OSp. *doblo* could be a partial adaptation of the OSp. learned word *duplo*.

- ***dobrava* (GP)**

  Etymology: Lat. DŬPLĀRE (root/stem: DŬPLUS)

  Other forms: *dublados*

  Attestation date: 9th century, OL palatalization: no

  Sources and notes: GCLI (234); DELG (dobre/dobro-a); DCECH (dos); DEHLP (dobrar); DDGM (dobrar, especially TC); REW (2800); DEEH (636); DELG (dobro-a); GP *dublados* is attested in the 9th century (see DEM: 790; DDGM); TMILG (CSM, LP, TC).

- ***dobro* (GP)**

  Etymology: Lat. DŬPLUS (root/stem: DŬPLUS)

  Other forms: *dublo*

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: DEHLP (dobro/dobre); DDGM (dobro); DELG (dobro-a); DEM (790). GP *dublo* is attested in the 10th century (see DDGM: dobro, TC and CVGP; or PMH, *Diplomata et Chartae* I: 29); cf. TMILG (TC, CDMO). REW (2802) considered Pt. *doble* to be a technical or learned word ("Buchwort"). Tato Plaza (1999), following DCECH (dos), suggested that GP *dobro* could be a partial adaptation of the GP learned word *duplo* because GP *dobro* is only attested as a legal term.

- ***egleja* (GP)**

  Etymology: Late Lat. ECLĒSĬA (root/stem: ECCLĒSĬA)

  Other forms: *eigreja, eyreja*

  Attestation date: 10th century, OL palatalization: no

  Sources and notes: Lat. ECCLĒSIA > Late Lat. ECLĒSIA (cf. DCECH: iglesia; REW: 2823); FF (333, 361); GCLI (234); DEHLP (igrexa); DEM (1207-8); TMILG (GP *eigreja, egreja, yreja*, and *igreja* are also attested in 13th-century CSM, GP *igreja* in LP, and GP *eyreja* in VFD); DDGM (eglleia/igreja: CVGP, TC, CSM); DELG (eirexa); DDD (eirexa). DEHLP (igrexa) described the evolution /kl/ > /gɾ/ as semi-learned ecclesiastical influence. Attempted root or stem reconstruction for words like Lat. ECCLĒSĬŎLA and ECCLĒSĬASTĬCUS (see LS for words containing the root -*eccles*-): *l?esi*, *chesi*, *jesi* and *jesy* (s = <s ç ʃ σ>, i = <j i y>, j = <j g>, see "Asociacións gráficas" in TMILG). Several instances of GP *egllesia, igllesia*, etc., written with <ll>, are attested (TMILG: ONOM, LCS, LCP, etc.; see also DDGM: eglleia/igreja). However, this should not be understood as evidence of OL palatalization, as /l/ could be written both as <l> and <ll> (HGP: 494-97). The following front vowel could have also conditioned the presence of the <ll> grapheme. For information on GP *frigesia, fregesia* (Lat. FĪLIUS ECCLĒSIAE) posibly containing a post-alveolar segment, see *feegres* (GP).

- ***eglesia* (OSp.)**

  Etymology: Late Lat. ECLĒSĬA (root/stem: ECCLĒSĬA)

  Other forms: *ilesia*

  Attestation date: 9th century, OL palatalization: no

  Sources and notes: Lat. ECCLĒSIA > Late Lat. ECLĒSIA (cf. DCECH: iglesia; REW: 2823); CRC (214, 481, 498, 530); GCLI (234); DRAE (iglesia); DEEH (638); cf. CORDE (few instances of OSp. *elesia(s)* are attested in the 14th century). DCECH (iglesia) considered Sp. *iglesia* a semi-learned inherited word ("descendiente semiculto"). Attempted root or stem reconstruction for words like Lat. ECCLĒSĬŎLA and ECCLĒSĬASTĬCUS (see

LS for words containing the root -*eccles*-): *chesi*, *llesi*, *xesi* (s = <s ç>, i = <j i y>) (cf. CORDE).

- ***elisar* (AL)**

  Etymology: Lat. ECLIPSIS (root/stem: ECLIPSIS)

  OL palatalization: no

  Sources and notes: DCECH (eclipse/clisos); DGLA (clisar/clis); DALLA (clis/clisar).

- ***emdro* (Pt.)**

  Etymology: Lat. *ANĒTHŬLUM (root/stem: ANĒTHUM)

  Attestation date: 16th century, OL palatalization: no

  Sources and notes: DCECH (eneldo); REW (454); DEEH (464); DEHLP (endro); DEM (842). Gal. *enllo* could come from Lat. *ANĒTHŬLUM (DCECH) or from Lat. ANNICULU (DELG). The modern form is Pt. *endro*.

- ***emplegar* (Ast.)**

  Etymology: Lat. ĬMPLĬCĀRE (root/stem: PLĬCĀRE)

  Other forms: *empliegar*

  OL palatalization: no

  Sources and notes: DCECH (emplear); DEEH (737); DGLA (emplear). According to DCECH (emplear), DRAE (emplear) and Roberts (2014: 594), Sp. *emplear* is a borrowing of Fr. *empleiier*, which comes from Lat. ĬMPLĬCĀRE (see also DEEH: 737).

- ***empleita* (OSp.)**

  Etymology: Lat. PLĔCTA (root/stem: PLĔCTA) (BORR?)

  Attestation date: 15th century, OL palatalization: no

  Sources and notes: cf. DEEH (880). DCECH (pleita) argued that Sp. *pleita* must have come through Mozarab. *pléǩta* due to the lack of OL palatalization. In addition, the unusual evolution of /ekt/ should have been /etʧ/ in OSp (DRAE: pleita). DCECH claimed that OSp. *empleita* is attested in Nebrija (15th century) but the found attestation in CORDE dates from the 16th century. Notably, none of the inherited words given by REW (6591a) shows traces of OL palatalization.

- ***empreita* (GP)**

  Etymology: Lat. PLĔCTA (root/stem: PLĔCTA) (u.e.)

  Attestation date: 15th century, OL palatalization: no

  Sources and notes: REW (6591a, cf. 4313); cf. DCECH (pleita); no information was found in DELG, DDGM or TMILG; DLPC (1381); NDLP (Pt. empreita < Lat. IMPLICITA). DEHLP (empreita) mentioned the possibility of Pt. *empreita* being an inherited word from Lat. **IMPLICTA (DEM: 839) or being a borrowing from Sp. (ibid.) depending on the source. It may be possible that the lack of OL palatalization was caused by Mozarab. influences, as in the case of Sp. *empleita* (see *empleita* (OSp.)). DLPC (1381) seemed to suggest that Pt. *empreita* was more widely used in Southern Portugal, as two of the four given meanings are specific of the Algarve region.

- ***encanijarse* (Sp.)**

  Etymology: Lat. CANĪCŬLA (root/stem: CANIS) (u.e.)

  Other forms: *canijo*

  Attestation date: 17th century, OL palatalization: yes

  Sources and notes: CRC (439, 447); DCECH (canijo). REW (1586) proposed the etymology Sp. *caneja* ‘shark, dogfish’ < Lat. CANĪCULA. DEEH (547) and TDHLE (canijo) preferred Lat. CANNICŬLA as etymon, which has the Latin root CANNA. DCECH (canijo) suggested that Sp. *encanijarse* is a direct descendant of Lat. CANICULA, while Sp. *canijo* would have been built from Sp. *encanijarse*. The reason behind it is that Sp. *encanijarse* is attested earlier (Sp. *canijo* in the 18th century).

- ***encarrujado* (Sp.)**

  Etymology: Late Lat. *CORRŎTŬLĀRE (root/stem: RŎTA) (u.o.)

  Other forms: *carrujado*

  Attestation date: 16th century

  Sources and notes: CRC (437, 449); DCECH (encarrujarse); DRAE (encarrujarse); Roberts (2014: 325).

- ***encher* (GP)**

  Etymology: Lat. ĬMPLĒRE (root/stem: PLĒRE)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: FF (330); GCLI (233); DCECH (henchir); DELG (encher); DDGM (encher); TMILG (CSM, TC, XH); DEHLP (encher); REW (3410); DEM (581).

- ***enclinar* (OSp.)**

  Etymology: Lat. ĬNCLĪNĀRE (root/stem: CLĪNĀRE) (BORR)

  Attestation date: 12th century, OL palatalization: no

  Sources and notes: No information on Ibero-Romance was found in REW (4359-60) or in DEEH; DRAE (inclinar). DCECH (inclinar) argued that the Ibero-Romance descendants from Lat. ĬNCLĪNĀRE, even those without nasal loss in Galician-Portuguese, cannot be entirely considered learned words because of the meaning they took in the Middle

Ages. However, the preservation of the intervocalic /n/ and the scarcity of old examples with rothacism compared to the original OL cluster in Galician-Portuguese suggests that Gal. and Pt. *inclinar* (DDGM: enclinar; DEM: 616-7) are learned or literary words that were introduced too late to undergo OL palatalization. Attempted root or stem reconstruction for words like Lat. CLĪNO, ACCLĪNO, SUCCLĪNO, DĒCLĪNĀTĬO, DĒCLĪNIS, DĒCLĪNO, RĒCLĪNO, PRŌCLĪNO, CONDĒCLĪNO, INDĒCLĪNĀBĬLIS, TRĪCLĪNĬUM, INCLĪNĀBĬLIS, INCLĪNĀTĬO, and INCLĪNĀTUS (see LS for words containing the root -*clin*-): *chin* (for postconsonantal clusters), *l?in* (for word-initial and postvocalic clusters),*gli* (for possible descendants with lenition), agin* and *ogin* (additional reconstructed forms for Lat. SUCCLĪNO and ACCLĪNO) (all these regular expressions were also searched in CORDE with <j y> instead of <i>) (CORDE).

- ***enclinou* (GP)**

  Etymology: Lat. ĬNCLĪNĀRE (root/stem: CLĪNĀRE) (BORR)

  Other forms: *incrinar*

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: No information on Ibero-Romance was found in REW (4359-60); DEHLP (inclinar); DDGM (enclinar, especially TC); TMILG (CSM, TC, TA). DCECH (inclinar) argued that the Ibero-Romance descendants from Lat. ĬNCLĪNĀRE, even those without nasal loss in Galician-Portuguese, cannot be entirely considered learned words because of the meaning they took in the Middle Ages. However, the preservation of the intervocalic /n/ and the scarcity of old examples with rothacism compared to the original OL cluster in Galician-Portuguese (DDGM: TC, DEM: 616-7) suggests that Gal. and Pt. *inclinar* are learned or literary words that were introduced to late to undergo OL palatalization. Attempted root or stem reconstruction for words like Lat. CLĪNO, ACCLĪNO, SUCCLĪNO, DĒCLĪNĀTĬO, DĒCLĪNIS, DĒCLĪNO, RĒCLĪNO, PRŌCLĪNO, CONDĒCLĪNO, INDĒCLĪNĀBĬLIS, TRĪCLĪNĬUM, INCLĪNĀBĬLIS, INCLĪNĀTĬO, and INCLĪNĀTUS (see LS for words containing the root -*clin*-): *chi*, *l?i*, agi* and *ogi* were reconstructed for Lat. SUCCLĪNO and ACCLĪNO (i = <j y i> in TMILG). No information on Galician or Portuguese was found in REW (77-8, 1990-3).

- ***encloír* (OSp.)**

  Etymology: Lat. INCLŪDĔRE (root/stem: CLAUDĔRE)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: Georges (cludo/claudo); CRC (62); DRAE (incluir); no information was found in DEEH or REW; DCECH (clausura) seemed to imply that OSp. *encloír* or *incluir* are learned words.

- ***endeble* (Sp.)**

  Etymology: Late Lat. *ĬNDĒBĬLIS (root/stem: DĒBĬLIS) (BORR?)

  Attestation date: 17th century, OL palatalization: no

Sources and notes: DRAE (endeble); DEEH (630, 740); no information on Spanish was found in REW (4369); DCECH (endeble) and CRC (433) preferred to consider Sp. *endeble* to be as a Fr. borrowing.

- ***engrude* (GP)**

  Etymology: Late Lat. GLŪS, -TIS (root/stem: GLŪS, -TIS) (u.e.)

  Other forms: *grudo*

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: Georges (glus/gluten); DCECH (engrudo); DEHLP (grude); TMILG (CSM, HT, CT); CVGP (198; also in DDGM); REW (3806); GCLI (236). DELG (engrudo/grudo) seemed to imply that Gal. *engrudo* and Gal. *grudo* (both with the Pt. cognate *grude*) come from different etymons, i.e., GLŪTEN, -INIS and Lat. GLŪS, -TEM. Attempted root or stem reconstruction for words like Lat. GLUO, GLŪTEN, GLŪTĬNĀTĬO, GLŪTĬNĔUS, GLŪTĬNO, GLŪTĬNŌSUS, AGGLŪTĬNO, CONGLŪTĬNO, CONGLŪTĬNŌSUS, DĒGLŪTĬNO, and INGLŪTĬNĀTUS (see LS for words containing the root *-glut-* with the meaning '(to) glue'): *chud*, *lud*, *xud*, *iud* (for all the given regular expressions, <t> was also searched in the corpora instead of <d>; <g> = <g i j> in TMILG) (also DDGM).

- ***engrudo* (OSp.)**

  Etymology: Late Lat. GLŪS, -TIS (root/stem: GLŪS, -TIS) (u.e.)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: CRC (193); cf. GCLI (236). Given the <r> in the Spanish attestations, Lat. GLŪS was probably confused in Spanish with Germ. **grūts* , which also had a similar meaning (DCECH: engrudo). See DCECH (gluten) for more learned words from that etymon. More information on the Lat. etymon in Georges (glūs/glūten) and OLD. Attempted root or stem reconstruction for words like Lat. GLUO, GLŪTEN, GLŪTĬNĀTĬO, GLŪTĬNĔUS, GLŪTĬNO, GLŪTĬNŌSUS, AGGLŪTĬNO, CONGLŪTĬNO, CONGLŪTĬNŌSUS, DĒGLŪTĬNO, and INGLŪTĬNĀTUS (see LS for words containing the root *-glut-* with the meaning '(to) glue'): *l?ud*, *lud*, *gud*, *iud* (for all the given regular expressions, <t> was also searched instead of <d> in CORDE).

- ***enlloer* (Ast.)**

  Etymology: Lat. CLAUDĔRE (root/stem: CLAUDĔRE)

  OL palatalization: yes

  Sources and notes: DGLA (enlloer); DALLA (enlloer); GCLI (233) proposed Lat. INCLAUDĔRE as etymon for Ast. *enlloer*. However, /ʧ/ is the usual outcome for postconsonantal OL cluster in Ibero-Romance (cf. GCLI: 233). For this reason, it is possible that Ast. *enlloer* is a derivational form from Ast. **lloer* (< Lat. CLAUDĔRE).

- ***enpregar* (GP)**

  Etymology: Lat. ĭmplĭcāre (root/stem: plĭcāre)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: GCLI (234); DELG (emprega-o); DDGM (enpregar/empregar, especially TC); DCECH (emplear); DEHLP (empregar); TMILG (CSM but also LP, TC).

- ***ensancha* (OSp.)**

  Etymology: Lat. examplāre (root/stem: amplus)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: DCECH (ancho); DRAE (ensanchar); no information was found in REW; DEEH (651); CORDE.

- ***ensancham* (GP)**

  Etymology: Lat. examplāre (root/stem: amplus)

  Attestation date: 15th century, OL palatalization: yes

  Sources and notes: DDD (ensanchar); no information was found in TLPGP; TMILG (TA); DXL (493); DEM (845); DCECH (ancho); DEEH (451). Some sources preferred to consider GP *ensanchar* to be a Spanish borrowing (DEHLP: ensanchar; cf. DDGM: emanchar/enanchar).

- ***enssiemplo* (OSp.)**

  Etymology: Lat. exĕmplum (root/stem: exĭmĕre)

  Other forms: *exiemplo, enxiemplo, exemplo*

  Attestation date: 12th century, OL palatalization: no

  Sources and notes: DEEH (655); no information on Spanish was found in REW (3003). CRC (495) and DCECH (ejemplo) described OSp. *enssiemplo* or *enxiemplo* as semi-learned words ("palabra semiculta"), which were then replaced by the more conservative form: OSp. *exemplo* > Sp. *ejemplo*. This means that the word was borrowed from Latin but still underwent some sound changes, but not all of those common in inherited words. In the given examples, there is diphthongization of Lat. /e/, which is the usual evolution in Spanish (cf. CORDE). The modern word, Sp. *ejemplo*, is more faithful to the Latin form.

- ***ensullo* (Gal.)**

  Etymology: Lat. ĭnsūbŭlum (root/stem: ĭnsūbŭlum) (u.o.)

  Attestation date: 19th century

  Sources and notes: GCLI (281); DELG (ensullo); DDD (ensullo/enxullo); no information was found in DXL, DRAG, DEEH (745), DEHLP and DEM.

- ***ensullo* (OSp.)**

  Etymology: Lat. ĬNSŪBŬLUM (root/stem: ĬNSŪBŬLUM)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: CRC (433-4); GCLI (281); DCECH (enjullo); REW (4474); DRAE (ensullo); DEEH (745); cf. Georges (insubulum); cf. CORDE. The quantity of the /i/ and stressed /u/ varies depending on the source; DCECH argued that Italian and Spanish evidence support a long /u/. For the discussion on /bl, bul/ > /ʎ/ in Spanish see *trillo* (OSp.).

- ***envurullar* (GP)**

  Etymology: Late Lat. *(IN)VŎRŪCLUM (root/stem: VOLVERE) (u.e.)

  Other forms: *embrulho, barulho*

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: DCECH (orujo/barullo); DEEH (1070); DEHLP (especially embrulhar, see also embrulho/barulho/barulhar); DELG (brullo/embrullo/borullo/barullo/envocullar); DXL (160); DDGM (envurullar); TMILG (CSM). The evolution of the etymon may might have been as follows: Lat. (IN)VOLŪCRUM > INVOLŪCLUM or *INVORŪCLUM > Pt. *embrullo* (DCECH: barullo/orujo; DEM: 835). DEM (1428) tentativelly suggested that Pt. *barulho* is an alternative form of Pt. *marulho* (⟵ Pt. *mar* < Lat. MĂRE) (also DLPC: 493).

- ***çernella* (GP)**

  Etymology: Late Lat. *CERNĬCŬLA (root/stem: CERNERE)

  Attestation date: 15th century, OL palatalization: yes

  Sources and notes: With the meaning ‘highest part of the back of an animal’; DELG (cernella); DDGM (cernella, CVGP); DEHLP (cernelha); DCECH (cerneja); REW (1833); DEEH (571); DEM (558); TMILG (TA). DCECH (cerneja) suggested that Gal. *cerengo* ‘summit or crest of a mountain’ (cf. DDD: cerengo) also comes from Lat. CERNĬCŬLUM, the singular form of CERNĬCŬLA (cf. DELG).

- ***esbullar* (GP)**

  Etymology: Late Lat. *EXBOTULARE (root/stem: BŎTŬLUS) (u.o.)

  Attestation date: 13th century

  Sources and notes: DCECH (desbullar) claimed that Sp. *desbullar* was borrowed from Gal. or Port. *esbulhar*. For GP *esbulhar*, he preferred the etymology Late Lat. *EXBOTULARE (also Roberts 2014). However, other sources gave Lat. SPŎLIĀRE (or a derivational form from the verb) as etymology (cf. DEHLP: esbulhar; RELG: esbillar/debullar; NDLP: debulhar/esbulhar; DEM: 738).

- ***escabollirse* (OSp.)**

  Etymology: Late Lat. *EXCAPŬLĀRE (root/stem: CAPĔRE) (u.e.)

  Attestation date: 14th century, OL palatalization: no

  Sources and notes: CRC (432); DCECH (escabullirse); DRAE (escabullir); DEEH (552) preferred Late Lat. *CAPPUBŬLUM as etymon.

- ***escalla* (Arag.)**

  Etymology: Lat. SCANDŬLA (root/stem: SCANDŬLA) (u.e.)

  OL palatalization: yes

  Sources and notes: With the meaning 'kind of wheat'; DCECH (escanda); Aragonario; DEEH (956).

- ***escambuñeyro* (Gal.)**

  Etymology: Lat. *SCRABRUNCŬLUS (root/stem: *SCRABRO) (u.o.)

  Attestation date: 18th century

  Sources and notes: Different sources gave different etymologies or none, cf. DCECH (escaramujo), DEHLP (escambrulheiro/escambroeiro/caramujo), DDD (escambrueiro/escaramuxo), DEM (503), DELG (escalambrón/caramuxo).

- ***escanda* (GP)**

  Etymology: Lat. SCANDŬLA (root/stem: SCANDŬLA) (u.e.)

  Other forms: *escanla*

  Attestation date: 12-13th centuries, OL palatalization: no

  Sources and notes: DCECH (escanda); DEEH (956); DEM (867); DEHLP (escândea); REW (7650-52, < Lat. SCANDĂLA); both given forms are attested in TMILG (TL, also in CODOLGA).

- ***escaña* (OSp.)**

  Etymology: Lat. SCANDŬLA (root/stem: SCANDŬLA) (u.e.)

  Other forms: *escanda*

  Attestation date: 15th century, OL palatalization: yes

  Sources and notes: With the meaning 'kind of wheat'; CRC (259, 480); DCECH (escanda); DRAE (escaña/escalla/escanda/escandia). According to REW (7650-52), Sp. *escanda* comes from Lat. SCANDĂLA (also DEEH: 956). Sp. *escanda* is attested in the 14th century (CORDE) but OSp. *scanda* is already attested in the 9th-10th centuries (DCECH: escanda).

- ***escaramujo* (OSp.)**

  Etymology: Lat. *SCRABRUNCŬLUS (root/stem: *SCRABRO) (u.o.)

  Attestation date: 15th century

  Sources and notes: This is the etymology given by DCECH (escaramujo) and by Roberts (2014: 644). No (etymological) information was found in DEEH, DRAE (escaramujo) or REW.

- ***escaravaio* (OSp.)**

  Etymology: Late Lat. SCARABAECŬLU (root/stem: SCĂRĂBEUS) (u.o.)

  Other forms: *escarabajo*

  Attestation date: 13th century

  Sources and notes: CRC (445); DEEH (957); DRAE (escarabajo), DCECH (escarabajo) and REW (7658) preferred Late Lat. *SCARAFAIUS or SCARABAIUS as etymon.

- ***escaravello* (GP)**

  Etymology: Late Lat. *SCARABĬCŬLU (root/stem: SCĂRĂBEUS)

  Attestation date: 15th century, OL palatalization: yes

  Sources and notes: FF (136); DEEH (957, < *SCARABAECŬLUS); DEHLP (Pt. *escaravelho* < * SCARABĬCULU); DEM (868, < *SCARABICLU); DLPC (1492); DELG (escarabello); TLPGP (escaravello). DCECH (escarabajo), REW (7658) and DXL (511) preferred Late Lat. *SCARAFAIUS or SCARABAIUS as etymon. The sources cited in DEHLP (escaravelho) for the dating of the inherited word could not be consulted, so the inherited form listed there does not necessarily correspond to the example found in the 15th century.

- ***escolho* (Pt.)**

  Etymology: Lat. SCŎPŬLUS (root/stem: SCŎPŬLUS) (u.o.)

  Attestation date: 16th century, OL palatalization: no

  Sources and notes: It is unclear whether Pt. *escolho* comes directly from Lat. SCŎPŬLUS (REW: 7738; GCLI: 279; DEEH: 959) or whether it was borrowed from It. *scoglio*, which through Late or Vulgar Lat. *SCŎCLU ultimately comes from Lat. SCŎPŬLUS (DCECH: escollo; DEHLP: escolho; DEM: 872-3; DELG: escollo).

- ***escollo* (Sp.)**

  Etymology: Lat. SCŎPŬLUS (root/stem: SCŎPŬLUS) (u.o.)

  Attestation date: 17th century, OL palatalization: no

  Sources and notes: It is unclear whether Sp. *escollo* comes directly from Lat. SCŎPŬLUS (GCLI: 279; DEEH: 959) or whether it was borrowed from It. *scoglio*, which through Late or Vulgar Lat. *SCŎCLU ultimately comes from Lat. SCŎPŬLUS (DCECH: escollo;

Roberts 2014: 649; DRAE: escollo). According to REW (7738), Sp. *escollo* is a Portuguese borrowing.

- ***espalda* (OSp.)**

  Etymology: Lat. SPATŬLA (root/stem: SPATHA)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: CRC (437); GCLI (280) (Sp. *espalda* < Late Lat. SPATHŬLA); DRAE (Sp. *espalda* < Late Lat. SPATHŬLA); REW (8130); DCECH (espalda); DEEH (984). There is one example of OSp. *espaldas* in the 12th century but its meaning is not entirely clear (CORDE).

- ***espeilho* (Mir.)**

  Etymology: Lat. SPĔCŬLUM (root/stem: SPĔCĔRE)

  OL palatalization: yes

  Sources and notes: GCLI (278); DCECH (espejo).

- ***espello* (GP)**

  Etymology: Lat. SPĔCŬLUM (root/stem: SPĔCĔRE)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: FF (135, 354, 392); GCLI (278); DELG (espello); REW (8133); DEHLP (espelho); DEM (889); DEEH (984-5); DDGM (espello/espelho, specially TC); TMILG (CSM, LP, TC, CT, HT).

- ***espiello* (Arag.)**

  Etymology: Lat. SPĔCŬLUM (root/stem: SPĔCĔRE)

  OL palatalization: yes

  Sources and notes: GCLI (278); DCECH (espejo); Aragonario.

- ***espligo* (Arag.)**

  Etymology: Lat. SPĪCŬLUM (root/stem: SPĪCUM)

  Attestation date: 14th century, OL palatalization: no

  Sources and notes: CRC (438); DCECH (espliego); Aragonario; cf. DEEH (985).

- ***espligo* (OSp.)**

  Etymology: Lat. SPĪCŬLUM (root/stem: SPĪCUM)

  Attestation date: 14-15th centuries, OL palatalization: no

  Sources and notes: CRC (438); DCECH (espliego); REW (8147); DRAE (espliego); Roberts (2014: 662); DEEH (985); cf. CORDE.

- ***esprego* (Gal.)**

  Etymology: Lat. SPĪCŬLUM (root/stem: SPĪCUM) (BORR?)

  Attestation date: 19th century, OL palatalization: no

  Sources and notes: DCECH (espliego); DEEH (985); DDD (esprego); no information was found on Gal. *esprego* and similar Pt. or GP forms in DELG, DRAG, DEHLP, DEM. The only example of Gal. *esprego* in TLPGP (esprego) is Gal. *espliego*, which may be a Spanish borrowing.

- ***espreita* (GP)**

  Etymology: Lat. *EXPLICITĀRE (root/stem: EXPLĬCĀRE) (u.e.)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: DCECH (explotar); TMILG (CSM, also LP and GHCD); DDGM (espreitar); DEHLP (espreit-). DELG (espreitar) preferred the etymology Lat. SPECTĀRE > Gal. *espreitar*, and REW (3053) claimed that Pt. *espreitar* is a borrowing from Prov. *espleitar*. DEEH (658) preferred the given etymology *EXPLICITĀRE but acknowledged that GP *espreitar* could be a Prov. borrowing. The lack of voicing of /t/ is noteworthy but it could be explained with the following evolution: Lat. *EXPLICITĀRE > *EXPLICTĀRE > GP *espreitar* (DEHLP: espreitar; DEM: 897).

- ***estrujar* (OSp.)**

  Etymology: Late Lat. *EXTŎRCŬLĀRE (root/stem: TORQUĒRE)

  Attestation date: 15th century, OL palatalization: yes

  Sources and notes: CRC (256, 260, 269); DCECH (estrujar/trulla I); DRAE (estrujar); REW (8792, > TŎRCŬLUM); Roberts (2014: 679); DEEH (662); CORDE.

- ***estrulloulle* (GP)**

  Etymology: Late Lat. *EXTŎRCŬLĀRE (root/stem: TORQUĒRE)

  Attestation date: 14-15th centuries, OL palatalization: yes

  Sources and notes: DCECH (estrujar); TMILG (MS); DDD (estruchar/estrullar); TLPGP (estrullar/estruchar). DCECH argued that Gal. *estruchar* represents a later metathesis of /r/, in contrast to GP *estrullar*: Lat. EXTŎRCŬLĀRE > **estorchar* > Gal. *estruchar* vs. Lat. EXTŎRCŬLĀRE > Late Lat. *EXTROCLARE > GP *estrullar* (cf. DCECH: trulla I).

- ***estruyar* (Ast.)**

  Etymology: Late Lat. *EXTŎRCŬLĀRE (root/stem: TORQUĒRE)

  OL palatalization: yes

  Sources and notes: DCECH (estrujar); DEEH (662); DGLA (estuyar).

- ***excludir* (OSp.)**

  Etymology: Lat. EXCLŪDĔRE (root/stem: CLAUDĔRE)

  Other forms: *excluir*

  Attestation date: 15th century, OL palatalization: no

  Sources and notes: Georges (cludo/claudo); CRC (62); DRAE (excluir); no Ibero-Romance inherited words found in REW (2974); DCECH (clausura) seemed to imply that Sp. *excluir* is a learned word.

- ***excludir* (GP)**

  Etymology: Lat. EXCLŪDĔRE (root/stem: CLAUDĔRE)

  Other forms: *excluir*

  Attestation date: 15th century, OL palatalization: no

  Sources and notes: Georges (cludo/claudo); DELG (escluir); DEHLP (excluir); DXL (548); DLPC (1632); no Ibero-Romance inherited words are found in REW (2974). For information on the given inherited form, see DEHLP (excluir). DEM (805) considered GP *excluir* to have had a conservative or learned evolution.

- ***exempro* (GP)**

  Etymology: Lat. EXĔMPLUM (root/stem: EXĬMĔRE)

  Other forms: *emxemplo, eixẽplo, enxẽplo*

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: FF (408); DELG (exemplo); DEHLP (exemplo); no information on Galician-Portuguese was found in REW (3003); see DDGM (exemplo, especially TC and CVGP for the context and source of the given inherited form); TMILG (all given forms are attested in TC; GP *enxẽplo, emxẽplo* and *enxemplo* are also attested in XH). It is unclear if DEM (820) only described GP *exemplo* as a learned word or all forms from EXĔMPLUM (ibid.).

- ***fabla* (OSp.)**

  Etymology: Lat. FABŬLA (root/stem: FABŬLA)

  Attestation date: 12th century, OL palatalization: no

  Sources and notes: GCLI (281); DCECH (hablar); Roberts (2014: 6 (II)); DEEH (665); DRAE (habla); cf. CORDE. REW (3124-5) preferred to derive OSp. *habla* from OSp. *hablar*, and not from Lat. FABŬLA.

- ***fablar* (OSp.)**

  Etymology: Lat. FABŬLĀRI (root/stem: FABŬLA)

  Attestation date: 12th century, OL palatalization: no

  Sources and notes: CRC (433); REW (3125, < Lat. FABŬLĀRE); Roberts (2014: 6 (II)); DRAE (hablar); DEEH (666); cf. CORDE. OSp. *fabulado* is also attested in the 12th century (DCECH: hablar).

- ***fachas* (GP)**

  Etymology: Lat. *FASCUL.A (root/stem: FAX, -CIS)

  Attestation date: 14th century, OL palatalization: yes

  Sources and notes: With the meaning '(little) torch, large candle' in Galician, Portuguese, and Latin (LS: facula, DDGM: facha). GP *facha* came from Lat. *FASCŬLA (FF: 330), which is the result of Lat. FACŬLA being influenced by Lat. FASCIS (DEHLP: fagulha/faúlha; REW: 3137; DEEH: 667; DDGM: facha; DEM: 941-2; DELG: facha 2; DLPC: 1675; DXL: 558); TMILG (HT, CT, VFD). DCECH (ajar) rejected the hypothesis that Pt. *falha* comes from Lat. FACŬLA as REW (3137) or DXL (561) suggested (cf. DEHLP: falha; DEM: 946).

- ***faja* (OSp.)**

  Etymology: Lat. FACŬLA (root/stem: FAX, -CIS)

  Other forms: *facha*

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: With the meaning '(little) torch' in Spanish and Latin (LS: facula; DEEH: 667); CRC (438); TDHLE (acha); DCECH (ajar); cf. CORDE. OSp. *facha* could come from Lat. *FASCŬLA, which is the result of Lat. FACŬLA being influenced by Lat. FASCIS (DCECH: hacha I; REW: 3137; DRAE: hacha 1). DEEH (667) preferred Lat. FACŬLA as etymology for OSp. *facha*.

- ***fala* (GP)**

  Etymology: Lat. FABŬLA (root/stem: FABŬLA)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: GCLI (281); TMILG (LP, CSM); DDGM (fala, especially TC); DEEH (666); DELG (falar). DEHLP (fala), DEM (945) and REW (3124-5) preferred to derive GP *fala* from GP *falar*. See DCECH (hablar) or DDGM (ibid.) for a possible etymological difference between GP *fala* 'story, tale' (< Lat. FABŬLA) and GP *fala* 'speech, voice, conversation' (← GP *falar*).

- ***falaren* (GP)**

  Etymology: Lat. FABŬLĀRI (root/stem: FABŬLA)

  Attestation date: 12-13th centuries, OL palatalization: no

  Sources and notes: Lat. FABŬLĀRE is also a possible etymon; DCECH (hablar); cf. REW (3125); DELG (falar); DEHLP (falar); DDGM (falar); TMILG (GP *falar*, among other forms, is attested in LP, CSM and TC); for the context and source (PMH, *Leges* VI: 813) of the given inherited word, see DEM (944-5).

- ***faúlha* (Pt.)**

  Etymology: Lat. *FACUCŬLA (root/stem: FAX, -CIS) (u.o.)

  Other forms: *fagulha*

  Attestation date: 17th century

  Sources and notes: DEHLP (fagulha/faúlha); DEM (943); DLPC (1679); NDLP (fagulha) preferred Lat. FAVILLA as etymon (also DELG: fagulla/faila).

- ***fallar* (OSp.)**

  Etymology: Lat. AFFLĀRE (root/stem: FLĀRE)

  Attestation date: 12th century, OL palatalization: yes

  Sources and notes: CRC (431); GCLI (235); DCECH (hallar); REW (261). OSp. *fall-* may be attested before the 12th century (cf. CORDE). Lat. AFFLĀRE became Sp. *hallar* possibly through Lat. *APPLĀRE (cf. DCECH: soplar).

- ***fallazgo* (OSp.)**

  Etymology: Late Lat. AFFLATĬCUM (root/stem: FLĀRE) (u.o.)

  Attestation date: 13th century

  Sources and notes: GCLI (294); no etymological information was found in DRAE (hallazgo) or in REW (261); DEEH (447). DCECH (hallar) seemed to imply that Sp. *hallazgo* is a derivational form from Sp. *hallar*. While DCECH (ibid.) gave the first attestation of OSp. *fallazgo* in the 15th century, there appear to be several examples of OSp. *fallazgo* and *falladgo* in the 13th century (cf. CORDE).

- ***febre* (Gal.)**

  Etymology: Fr. *faible* (root/stem: FLĒBILIS) (u.o.)

  Attestation date: 14th century

  Sources and notes: DDGM (febre); DEM (1000); TMILG (CT, HCIM). DCECH (feble) claimed that Sp. *feble* (attested from the 12th century onward, see CORDE) was borrowed from Cat. *feble*, while REW (3362) argued that Sp. *feble* and Pt. *febre* were borrowed from Fr. *faible* (cf. DEHLP: febre 2).

- ***fechadas* (GP)**

  Etymology: Late Lat. PĔSTŬLUS (root/stem: PĔSSŬLUS)

  Other forms: *pechar*

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: LS and Georges (pessulus); FF (134); CRC (260); GCLI (283); REW (6441); DEHLP (fecho); DEEH (869); DCECH (pestillo); DXL (922); DDGM (pechar, TC); TMILG (LP, CSM, TC); GP *pechada/o* is attested in the 15th century (TMILG: VFD). The evolution of the etymon could have been as follows: Lat. PĔSSŬLUS > (PĔSTŬLUS) > PESCULUM > PESCLUM > GP *pecho* (cf. DCECH: pestillo; REW: 6441; DEM: 965). Except for DEEH (869), all sources considered GP *pechar* to be a derivational form of GP *pecho*.

- ***feegres* (GP)**

  Etymology: Late Lat. FĪLIUS E(C)CLĒSIAE (root/stem: ECCLĒSIA) (u.e.)

  Other forms: *fiigresses, frigesia, friguesia*

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: DCECH (feligrés); CVGP (186); TMILG (CSM, CDMO); REW (3303); DELG (freigués); DEHLP (freguês); DEM (1030); DDGM (fregesia/freges/fiigresia/freigesía). GP *filiigleses* and *fiigrigia* are already attested in the 10th, and GP *feligreses* in the 12th century (cf. DCECH; CVGP; DDGM: Tato Plaza 1990). There is one example of GP *frigiesia* in the 14th century (TMILG: MB) and numerous examples of GP *fre(e)gesya*, *fri(i)gesya* and other similar forms (TMILG: PRMF, MSCDR, SVP, LTP, 14-15th centuries) such as GP *friigesia, fregesia, freygesia, frigesia*, and *frigiesia* (TMILG: CDMO, MSCDR, ROT, GHCD, and MB, among others, 13th-15th centuries; see also DDGM: fregesia/freges). <g> could refer to /g/ or /ʤ ʒ/. In the case of representing /ʤ ʒ/, it may not be the result of OL palatalization since the result of Lat. /VgeV/ in Galician-Portuguese could also be /ʤ ʒ/ (cf. GCLI: 244-246; FF: 325-6, 333-4). Most sources provided Lat. FĪLIUS ECCLĒSIAE as the etymon, with a geminate stop. However, given that /k:/ underwent voicing like in GP *eigreja/egleja* (< Late Lat. ECLĒSĬA), then either /k:/ became short or the original consonant was influenced by GP *eigreja/egleja*.

- ***feligres* (OSp.)**

  Etymology: Late Lat. FĪLIUS E(C)CLĒSIAE (root/stem: ECCLĒSIA) (u.e)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: DCECH (feligrés); DRAE (feligrés); DEEH (680); REW (3303); CORDE. Most sources provided Lat. FĪLIUS ECCLĒSIAE as the etymon, with a geminate stop. However, given that /k:/ underwent voicing like in OSp. *iglesia* (< Late Lat. ECLĒSĬA), then either /k:/ became short or the original consonant was influenced by OSp. *iglesia*.

- ***ferrollo* (GP)**

  Etymology: Lat. VERŪCŬLUM (root/stem: VERU)

  Attestation date: 13-14th centuries, OL palatalization: yes

  Sources and notes: DEHLP (ferrolho); TMILG (TC, LCS); DCECH (cerrojo); DELG (cerrollo); DDGM (ferrollo, TC). Through the intermediate form *VERRŬCŬLUM or *FERRŬCLU, influenced by GP *ferro* or Lat. FERRUM (DEM: 975; DCECH: cerrojo). According to REW (9260) and DEEH (1060), the etymon was Lat. VERŬCŬLUM (with a short /u/).

- ***ficheira* (GP)**

  Etymology: Lat. FĬSTŬLA (root/stem: FĬSTŬLA)

  Other forms: *fecha*

  Attestation date: 12th century, OL palatalization: yes

  Sources and notes: No information on Ibero-Romance was found in REW (3332); DCECH (fístula); DELG (fecha); DEEH (682); DDD (fecha); TLPGP (fecha); DXL (568). Gal. *fecha* has the meaning 'small quantity, drop or sip of a liquid' from Lat. FĬSTŬLA 'water pipe, tube' (LS: fistula). DEHLP (fecho), DEM (965) and DDGM (fecho, TC) suggested etymologies for Pt. *fecho* 'bolt, lock', which might come from Lat. FĬSTŬLA or from Lat. PESTŬLU, but Pt. *fecho* and GP *fecha* may be different words with different etymologies. See DCECH (fístula) for information on the given inherited form.

- ***finojo* (OSp.)**

  Etymology: Late Lat. FĒNŬCŬLUM (root/stem: FĒNUM)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: With the Spanish meaning ''kind of plant'; CRC (439-46); GCLI (278); DCECH (hinojo I); REW (3246); DEEH (675); CORDE.

- ***fistra* (Sp.)**

  Etymology: Lat. FĬSTŬLA (root/stem: FĬSTŬLA)

  Other forms: *fistola*

  Attestation date: 19th century, OL palatalization: no

  Sources and notes: No information on Ibero-Romance was found in REW (3332); CRC (259, 269); DCECH (fístula); DEEH (682); DRAE (fistra). OSp. *fistola* (learned word or borrowing) is already attested in the 13th century (cf. CORDE) but I could not find any attestation of Sp. or Leon. *fistra* before the 19th century (cf. DCECH; NTLLE: fistra; CORDE). DCECH (fístula) considered OSp. *fistra* to be a semi-popular word.

- ***flaco* (OSp.)**

  Etymology: Lat. FLĂCCUS (root/stem: FLĂCCUS)

  Attestation date: 12th century, OL palatalization: no

  Sources and notes: GCLI (232); DEEH (683); DRAE (flaco); CORDE. DCECH (flaco) described OSp. *flaco* as a semi-learned word ("descendiente semiculto"), and REW (3343) considered Sp. *flaco* a technical or learned word ("Buchwort").

- ***flagrante* (OSp.)**

  Etymology: Lat. FLAGRANS, -TIS (root/stem: FLAGRĀRE) (BORR)

  Attestation date: 15th century, OL palatalization: no

  Sources and notes: DCECH (flagrar); REW (3348); DRAE (flagrante); DEHLP (flagrante). Attempted root or stem reconstruction for words like Lat. FLĀGRANTĬA, FLĀGRANTER, AFFLĀGRANS, DĒFLĀGRO, DĒFLĀGRĀTĬO, and CONFLĀGRO (see LS for words containing the root -*flagr*-): *chagr*, *llagr*, *ller* (cf. CORDE).

- ***flagrante* (Gal.)**

  Etymology: Lat. FLAGRANS, -TIS (root/stem: FLAGRĀRE) (BORR)

  Attestation date: 20th century, OL palatalization: no

  Sources and notes: DEHLP (flagrante, Pt. *fragante* is attested in the 16th century); cf. REW (348). According to DELG (chafrar-se), Gal. *chafrar-se* comes from Lat. FLAGRĀRE (cf. DDD: chafrar; no further information was found in DXL, DEM or DEHLP). Attempted root or stem reconstruction for words like Lat. FLĀGRANTĬA, FLĀGRANTER, AFFLĀGRANS, DĒFLĀGRO, DĒFLĀGRĀTĬO, and CONFLĀGRO (see LS for words containing the root -*flagr*-): *chagr*, *fragr*, *flagr*, *cheir* (for the similarity to Lat. FRAGRĀRE > FLAGRĀRE > GP *cheirar*) (cf. TMILG, DDGM).

- ***flauta* (OSp.)**

  Etymology: Occ. FLAUTA (root/stem: FLAUTA) (BORR?)

  Attestation date: 14th century, OL palatalization: no

  Sources and notes: DCECH (flauta); DRAE (flauta); REW (3360); no information was found in DEEH; CORDE.

- ***fllama* (Rib. Arag.)**

  Etymology: Lat. FLAMMA (root/stem: FLAMMA)

  OL palatalization: yes

  Sources and notes: GCLI (231); Aragonario; DEEH (683).

- ***fllor* (Arag.)**

  Etymology: Lat. FLŌS, -RIS (root/stem: FLŌS)

  OL palatalization: yes

  Sources and notes: GCLI (232); Viudas Camarasa (1979); Aragonario (flor).

- ***florido* (OSp.)**

  Etymology: Lat. FLŌRĒRE (root/stem: FLŌS) (u.e.)

  Attestation date: 14th century, OL palatalization: no

  Sources and notes: DCECH (flor); cf. REW (3380, < *FLORĪRE); cf. DEEH (683); DRAE (florido/florescer); for information on OSp. *florecer*, see the given sources.

- ***floronco* (OSp.)**

  Etymology: Lat. FŪRŬNCŬLUS (root/stem: FŪR)

  Attestation date: 15th century, OL palatalization: no

  Sources and notes: DCECH (hurto); REW (3607); DEEH (698); CORDE.

- ***floxo* (OSp.)**

  Etymology: Lat. FLŬXUS (root/stem: FLŬĔRE)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: CRC (494); GCLI (232); DCECH (flojo/flujo); DEEH (684); DRAE (flojo); CORDE. Sp. *flujo* may be a semi-learned word from Lat. FLŬXUS but with a different meaning (DCECH: flujo). According to GCLI (169, 232), the Occ. Aran. cognate is *hloish*. DCECH (flojo) argued that the lack of OL palatalization came from the prevalence of the conservative form of the word, which would have come from the moral character associated with the word: "[…] la conservación del grupo FL- se debe al carácter moral del vocablo, que explica el triunfo de la pronunciación de las clases educadas […]" (ibid.).

- ***flueco* (OSp.)**

  Etymology: Lat. FLŎCCUS (root/stem: FLŎCCUS)

  Attestation date: 14th century, OL palatalization: no

  Sources and notes: GCLI (232); REW (3375); DEEH (683); DRAE (lleco); cf. CORDE. It is uncertain whether Sp. *lleco* 'uncultivated land, virgin soil' also comes from Lat. FLŎCCUS 'wool flock', which would make it cognate with OSp. *flueco*, or has a different (uncertain) origin (cf. REW: 3375; DCECH: lleco; Roberts 2014: 147). No information was found on Sp. *lleco* in DEEH. DCECH (fleco) described OSp. *flueco* as a semi-learned word ("descendiente semiculto") and suggested that the prevalence of aconservative word form could have been due to an ecclesiastical Latin influence.

- ***folhelho* (GP)**

  Etymology: Lat. FOLLĬCŬLUS (root/stem: FOLLIS)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: Georges and LS (folliculus); CRC (438); DEEH (686); REW (3419); DRAE (hollejo); DEHLP (folhelho); DDGM (folhelho); TMILG (LP; GP *follello* is attested in TA).

- ***fraco* (GP)**

  Etymology: Lat. FLĂCCUS (root/stem: FLĂCCUS)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: FF (394); GCLI (232); DDGM (fraco); DEHLP (fraco); DEM (998); DELG (fraco-a); TMILG (CSM, also LP, TC, CT); REW (3343) considered Pt. *fraco* to be a technical or learned word ("Buchwort").

- ***frasca* (GP)**

  Etymology: Got. **flaskô* (root/stem: **flaskô*) (u.e.)

  Attestation date: 15th century, OL palatalization: no

  Sources and notes: DCECH (frasco); DEHLP (frasco/frasca); REW (3355); DEEH (683); DEM (1028-9); DXL (601); DLPC (1815). Pt. *frasco* is attested in the 16th century (DEM: 1028-9; DEHLP: frasco) but, according to DCECH (frasco), GP *frasca* is perhaps already attested in the 14th century. *flascas* is attested in a Cantabrian document from the 9th century (cf. CODOLGA).

- ***frasca* (OSp.)**

  Etymology: Got. **flaskô* (root/stem: **flaskô*) (u.e.)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: DRAE (frasco); DEEH (683); cf. CORDE. DCECH (frasco) claimed that Sp. *frasco* (attested in the 16th century) and OSp. *frasca* are inherited forms but admitted that they could possibly be Galician-Portuguese borrowings. REW (3355) considered Sp. and Pt. *frasco* to be Italian borrowings. For information on the given inherited word, see DCECH (enfrascarse/frasco).

- ***frauta* (GP)**

  Etymology: Occ. *flauta* (root/stem: *flauta*) (BORR)

  Attestation date: 15th century, OL palatalization: no

  Sources and notes: DCECH (flauta); REW (3360); DEHLP (flauta); DELG (frauta); DEM (999-1000). The later introduction of this word into Galician-Portuguese is apparent in the lack of vowel changes, since Lat. /aw/ should have become GP /ow/ (cf. GCLI: 85-6; FF: 285-9).

- ***frocos* (GP)**

  Etymology: Lat. FLŎCCUS (root/stem: FLŎCCUS)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: GCLI (232); DCECH (fleco); REW (3375); DEHLP (froco); DEEH (683); TMILG (CSM); DDGM (froco). DEM (1002) seemed to imply that Pt. *froco/floco* had a learned or conservative evolution ("por via culta").

- ***froixo* (GP)**

  Etymology: Lat. FLŬXUS (root/stem: FLŬĔRE)

  Other forms: *chocho?*

  Attestation date: 14th century, OL palatalization: no

  Sources and notes: GCLI (232); DDGM (froxo, CVGP); DELG (frouxo); DEHLP (frouxo); DEM (590); DCECH (flojo/flujo); DEEH (684); REW (3394). It is uncertain whether Pt. *chocho* 'dry, unenergetic, dispirited' also comes from Lat. FLŬXUS or from a different etymon (cf. DEHLP: chocho; DCECH: chocho; NDLP: chocho 1; DEM: 589; DLPC: 801). For information on the given inherited word, see DDGM (froxo, CVGP). DCECH (flojo) argued that the lack of OL palatalization comes from the prevalence of a conservative form of the word, which would have come from the moral character associated with the word (cf. *chocho* (Pt.)).

- ***fruncho* (GP)**

  Etymology: Lat. FŪRŬNCŬLUS (root/stem: FŪR)

  Other forms: *forũcho*

  Attestation date: 14th century, OL palatalization: yes

  Sources and notes: DCECH (hurto); DELG (foruncho/furuncho); DEHLP (fruncho); DEM (1049); REW (3607, cf. 1677); DDD (furuncho). The given inherited word is attested in *Livro de Falcoaria de Pero Menino*, see Rodrigues Lapa (1931: 29) for the full text. Gal. *carafuncho* may be a mixture of Lat. CARBUNCULUS and Lat. FŪRŬNCŬLUS (cf. DELG: carafuncho; DCECH: carbunco/hurto; REW: 3607).

- ***fótula* (Andal. Sp.)**

  Etymology: Late Lat. *BLATTŬLA (root/stem: BLATTA)

  Other forms: *bétula, fatula*

  Attestation date: 16th century, OL palatalization: no

  Sources and notes: DEEH (510); DRAE (fatula). DCECH (fótula) claimed that Andal. Sp. *fótula* may be of Mozarab. origin because the variants *bétula* and *fátula* also exist. No information on the given forms was found in REW (1159).

- ***funcho* (GP)**

  Etymology: Late Lat. FĒNŬCŬLUM (root/stem: FĒNUM)

  Attestation date: 14th century, OL palatalization: yes

  Sources and notes: GCLI (278); DCECH (hinojo I); REW (3246); DEEH (675); TMILG (GP *feuncho* and *fuuncho* are attested in TA); DEHLP (funcho/fiolho); see DEM (970) for the context and source of the given inherited form. FF (330) suggested the development Lat. FĒNŬCŬLUM > *FENUNCULU > *FENUNC'LU > *feuncho/fuuncho* (TA). Gal. *fiollo/fionllo* (DEEH: 675) would be the expected result of Lat. FĒNŬCŬLUM without the nasality of the syllable onset extending through the vowel nucleus to the syllable coda before OL palatalization. See DELG (fiollo), TLPGP (fiollo/fiúncho) and DDD (fiollo/fionllo/fiuncho) for different forms of Gal. *fiuncho*.

- ***güeyu* (Ast.)**

  Etymology: Lat. ŎCŬLUS (root/stem: ŎCŬLUS)

  OL palatalization: yes

  Sources and notes: GCLI (278); cf. DCECH (ojo); DGLA (güeyu); DALLA (güeyu).

- ***glabro* (Sp.)**

  Etymology: Lat. GLĂBER (root/stem: GLĂBER) (BORR)

  Attestation date: 19th century, OL palatalization: no

  Sources and notes: No information on Ibero-Romance was found in REW (3769-70); DCECH (glabro). Attempted root or stem reconstruction for words like Lat. GLĂBELLUS, DĒGLĀBRO, GLĂBRĀRĬA, or GLĂBRĬTAS (see LS for words containing the root -*glab*-): *lab*, *lav*, *l?av*, *l?ab* (for <ll lh lj ly li>) (CORDE).

- ***glabros* (Gal.)**

  Etymology: Lat. GLĂBER (root/stem: GLĂBER) (BORR)

  Attestation date: 20th century, OL palatalization: no

  Sources and notes: No information on Ibero-Romance was found in REW (3769-70); DEHLP (Pt. *glabro* is attested in the 18th century); DEM (1104). Attempted root or stem reconstruction for words like Lat. GLĂBELLUS, DĒGLĀBRO, GLĂBRĀRĬA, or GLĂBRĬTAS (see LS for words containing the root -*glab*-): *llav*, *llab*, *lab*, *lav*, *xab*, *xav*, glab*, glav*, *grab*, grav* (DDGM, TMILG, partially in TILG). It may be semantically possible, although phonologically unclear, that Gal. *dexabrar* 'to damage a tree by pruning or snapping its branches' (DDD: dexabre/dexabrar; DXL: 432) comes from Lat. DĒGLĀBRO 'to make smooth (trees, body)' (LS: deglabro; Georges: deglabro; see also *deglabro* in CORDE for the definition in Nebrija's vocabulary). DXL (432, 1263, see xabre 2) argued that Gal. *dexabrar* is a derivational form of Gal. *xabre*.

- ***gladio* (OSp.)**

  Etymology: Lat. GLADIUS (root/stem: GLADIUS) (BORR)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: It is unclear whether Sp. *aglayarse* and *aglayo* come from Lat. GLADIUS (DEEH: 711; TDHLE: aglayar) or are Catalan borrowings (DCECH: aglayarse/gladio); cf. CORDE.

- ***glayar* (Ast.)**

  Etymology: Lat. GLADIUS (root/stem: GLADIUS)

  OL palatalization: no

  Sources and notes: Georges and LS (gladius); DCECH (gladio); DEEH (710); no information on Ibero-Romance was found in REW (3773); DGLA (glayar/glayu).

- ***gleba* (OSp.)**

  Etymology: Lat. GLĒBA (root/stem: GLĒBA) (BORR)

  Attestation date: 15th century, OL palatalization: no

  Sources and notes: DCECH (gleba); DRAE (gleba); no information was found in REW (3782); DEEH (712) mentioned the existence of dialectal *leva*. Attempted root or stem reconstruction for words like Lat. GLAEBĀRĬUS, GLAEBĀTĬO, GLAEBŌSUS, GLAEBŬLA, and GLAEBŬLENTUS (see LS for words containing the root *glaeb-* or *gleb-*): l?eb*, leb*, jeb*, ieb*, yeb* (CORDE).

- ***glera* (OSp.)**

  Etymology: Lat. GLARĔA (root/stem: GLARĔA)

  Attestation date: 12th century, OL palatalization: no

  Sources and notes: CRC (502); cf. GCLI (235); DCECH (glera); REW (3779); DRAE (glera) and Roberts (2014: 767) suggested that Sp. *glera* is an Aragonese borrowing (< Lat. GLARĔA) (cf. DEEH: 712).

- ***glorias* (OSp.)**

  Etymology: Lat. GLŌRĬA (root/stem: GLŌRĬA) (BORR)

  Attestation date: 12th century, OL palatalization: no

  Sources and notes: DCECH (gloria); DRAE (gloria); no information was found in DEEH or REW; CORDE. OSp. *gloria* should be an old Latin borrowing since it did not undergo the change /orj/ > /ojr/ > /wer/ (cf. GCLI: 267-9; Penny 2002: 50-3). Attempted root or stem reconstruction for words like Lat. GLŌRĬĀTĬO, GLŌRĬFĬCĀTĬO, GLŌRĬFĬCO, GLŌRĬŎLA, GLŌRĬŌSUS, CONGLŌRĬFĬCO, INGLŌRĬŌSUS, and PRAEGLŌRĬŌSUS (see LS for words containing the root *-glori-*): *gl?ori*, *l?ori*, *chori*, *ñori*, *n?ori*, *jori*, ?luer*, juer*, *chuer*, gl?o?r*, l?o?r*, lo?r*, jo?r* (these regular expressions should account for the different vowel combinations along the change /orj/ > /ojr/ > /wer/) (CORDE).

- ***glosa* (OSp.)**

  Etymology: Lat. GLŌSSA (root/stem: GLŌSSA) (BORR?)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: DCECH (glosa); DRAE (DRAE); no information was found in DEEH; CORDE. Attempted root or stem reconstruction for words like Lat. GLOSSĀRĬUM, GLOSSĒMĂTĬCUS, BŪGLOSSA, DĪGLŌSSOS, HŸPOGLOSSA, and GLOTTIS (see LS for words containing the root -*gloss*-, *glott*-): *l?os*, *los* (all these combinations were also searched with <z t> instead of with <s> in CORDE).

- ***glotón* (OSp.)**

  Etymology: Lat. GLŬTTO, -ŌNIS (root/stem: GLUTTĪRE)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: With the meaning 'a glutton' (Georges: glutto 2; LS: glutto); DCECH (glotón); DRAE (glotón); no information on Spanish forms was found in REW (3807-10). DEEH (712) also gave Sp. *golostrón* and Ast. *goltrón* and *golitrón* (DGLA: golitrón; DALLA: golitrón, goldrón) as inherited words from Lat. GLŬTTO, -ŌNIS. The change /gl/ > /gol/ could have a variety of reasons, among which is the influence of Lat. GULOSUS 'gluttonous' > Sp. *goloso* (Georges and LS: gulosus) (see DCECH: glotón). Attempted root or stem reconstruction for words like Lat. GLUTTO/GLŪTO, GLUTTUS/GLŪTUS), DĒGLUTTĬO, INGLUTTIO/INGLŪTIO, INGLŬVĬŌSUS, and TRANSGLUTTIO/TRANSGLŪTĬO (see LS for words containing the root -*glūt*- or -*glutt*-): *cho*, *l?o*, *lo*, *n?o* (CORDE).

- ***gluma* (Gal.)**

  Etymology: Lat. GLŪMA (root/stem: GLŬBĀRE) (BORR)

  Attestation date: 20th century, OL palatalization: no

  Sources and notes: No information on Ibero-Romance was found in REW (3804-5); DEM (1107); DEHLP (Pt. *gluma* is attested in the 18th century). Attempted root or stem reconstruction for words like Lat. DĒGLŪBO and GLŪBO (see LS for words containing the root -*glu*- with the meaning 'to bark, peel'): *chuv*, *chub*, *chum*, lub*, luv*, lum*, *xub*, *xuv*, *xum* (TMILG, DDGM). It may be semantically and phonologically possible for Gal. *deluvar* 'to peel, shell, dekernel, to rub (eyes, flax, etc)' (DRAG: deluvar) to come from Lat. DĒGLŪBO. However, the etymological information on Gal. *deluvar* was scarce and usually pointed out to a derivational form of Gal. *luva* 'glove' (see *luva* (OSp.)) (DXL: 389; DELG: deluvar).

- ***gluma* (Sp.)**

  Etymology: Lat. GLŪMA (root/stem: GLŬBĀRE) (BORR)

  Attestation date: 19th century, OL palatalization: no

  Sources and notes: DCECH (gluma); no information on Ibero-Romance was found in REW (3804-5). Attempted root or stem reconstruction for words like Lat. DĒGLŪBO and GLŪBO (see LS for words containing the root -*glu*- with the meaning 'to bark, peel'): *iub*, *lub*, *jub*, *llub* (CORDE).

- ***gẽollos* (GP)**

  Etymology: Late Lat. GĔNŬCŬLUM (root/stem: GENŪ)

  Other forms: *geollos, geonllos*

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: FF (136, 326, 354); GCLI (278); DDGM (geollo, especially TC and CVGP); DEHLP (joelho); DCECH (hinojo II); REW (3737); DEM (1263); DEEH (710); TMILG (CSM, TC, HT). The standard Gal. form is *xeonllo* (cf. DRAG) but there are many others (cf. TLPGP: xeonllo; DELG: xeonllo; DDD: xeollo/xionllo/xollo).

- ***golpello* (GP)**

  Etymology: Lat. VŬLPĒCŬLA (root/stem: VŬLPES)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: Georges (vulpecula); FF (135, 354, 386, 417); DEHLP (golpelha); DEM (1111, GP *golpelha* < Lat. VULPĬCULA); DDGM (golpella/golpello, especially TC); DEEH (1075); cf. DELG (golpe); TMILG (CSM, TC); NDLP (golpelha 1); according to REW (9463), Pt. *golpelha* is an OFr. borrowing.

- ***grajos* (OSp.)**

  Etymology: Lat. GRACŬLUS (root/stem: GRĀCŬLUS) (u.e.)

  Attestation date: 15th century, OL palatalization: yes

  Sources and notes: CRC (438); DCECH (grajo); Roberts (2014: 773); REW (3830); DEEH (714); CORDE. DCECH (grajo) claimed that the inherited words in some Romance varieties might come from Lat. GRĀGŬLUS, while others might come from Lat. GRĀCŬLUS. For Galician-Portuguese and Spanish, both etyma could be possible (cf. Georges and OLD).

- ***gralheira* (GP)**

  Etymology: Lat. GRĀCŬLA (root/stem: GRĀCŬLUS) (u.e.)

  Other forms: *gralha*

  Attestation date: 13th century, OL palatalization: yes

Sources and notes: FF (135, 355); DCECH (grajo); REW (3830); DEEH (714). GP *gralha* or *gralho* are attested in the 15th century (DEHLP: gralha/gralho; DEM: 1123). For GP *graleira* or *gralheira* 'cawing, place where jackdaws are common', see CVGP (197), DEM (1123) and DDD (gralleira) (original source PMH, *Leges* IV: 650). Further toponyms like *Graliaria, Grallaria* and *Grallia* might be attested in the 11th-12th centuries (cf. DELG: gralla; see DEM: 1123). DCECH (grajo) claimed that the inherited words in some Romance varieties might come from Lat. GRĀGŬLUS, while others might come from Lat. GRĀCŬLUS. For Galician-Portuguese and Spanish, both etyma could be possible (cf. Georges and OLD).

- ***grimpa* (Gal.)**

  Etymology: OFr. *guimple* (root/stem: **wimpil*) (u.o.)

  Attestation date: 20th century

  Sources and notes: DDD (grimpa). It is unclear whether Gal. Pt. *grimpa* comes from Fr. *guimple* (DCECH: grímpola) or from another OFr. form without an OL cluster (DEM: 1131; DELG: grimpa; DEHLP: grimpar 1). Pt. *grinpa* is attested in the 16th century (DEHLP: grimpa).

- ***grimpola* (OSp.)**

  Etymology: OFr. *guimple* (root/stem: **wimpil*) (u.o.)

  Attestation date: 15th century

  Sources and notes: DCECH (grímpola) and Roberts (2014: 778) suggested that OSp. *grímpola* came from OFr. *guimple*, while REW (9543) implied that it came directly from *wimpel* (DEEH: 214) and DRAE (grímpola) claimed it came from Occ. *guimpola*; CORDE.

- ***grodom* (Gal.)**

  Etymology: Lat. GLŬTTO, -ŌNIS (root/stem: GLUTTĪRE)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: Georges (glutto 2); DEHLP (glutão). The given inherited form is written slightly different in different sources: *grodon* in DDGM (grodon, Rodrigues Lapa 1970), *grodom* in CVGP (Martim Soares, Paio Soares de Taveirós) and *grodõ* in CVGP (194). DEM (1107) claimed that Pt. *glutão* comes from Fr. *glouton*. GP *glotõ* is attested in the 14th century (TMILG: XH). Attempted root or stem reconstruction for words like Lat. GLUTTO/GLŪTO, GLUTTUS/GLŪTUS, DĒGLUTTĬO, INGLUTTIO/INGLŪTIO, INGLŬVĬŌSUS, and TRANSGLUTTIO/TRANSGLŪTĬO (see LS for words containing the root -*glūt*- or -*glutt*-): *chu*, *l?u*, *lu*, *gu*, *n?u* (for all these combinations, also <o> instead of <u> was searched; g = <g j i> see "Asociacións gráficas" in TMILG) (TMILG, DDGM).

- ***groriosa* (GP)**

  Etymology: Lat. GLŌRĬA (root/stem: GLŌRĬA) (BORR)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: FF (394); DEHLP (glória); DEM (1106); DELG (gloria); DDGM (gloria). GP *groriosa/o* is attested in the 13th century (TMILG: CSM, LP) and GP *gloria* in the 14th century (TMILG: TC, XH). GP *gloria* and derivational forms are Latin borrowings because they did not undergo the change /orj/ > /ojr/ or /owr/ (cf. GCLI: 267-9; FF: 143-7). Attempted root or stem reconstruction for words like Lat. GLŌRĬĀTĬO, GLŌRĬFĬCĀTĬO, GLŌRĬFĬCO, GLŌRĬŎLA, GLŌRĬŌSUS, CONGLŌRĬFĬCO, INGLŌRĬŌSUS, and PRAEGLŌRĬŌSUS (see LS for words containing the root -*glori*-): *chori*, *gl?ori*, *l?ori*, lori*, *gori*, *xori*,*ñori*, *nl?ori* (for all these combination, <oir> instead of <ori> was also searched; i = <i j y h> and g = <g h i> see "Asociacións gráficas" in TMILG).

- ***grosa* (GP)**

  Etymology: Lat. GLŌSSA (root/stem: GLŌSSA) (BORR?)

  Attestation date: 14th century, OL palatalization: no

  Sources and notes: DEHLP (glosa); REW (3802); DDGM (glosa/grosa); TMILG (HT; GP *glosa* is attested in 14th-century XH); DEM (1107). Attempted root or stem reconstruction for words like Lat. GLOSSĀRĬUM, GLOSSĒMĂTĬCUS, BŪGLOSSA, DĪGLŌSSOS, HȲPOGLOSSA, and GLOTTIS (see LS for words containing the root -*gloss*-, *glott*-): *chos*, *l?os*, *los*, *gos*, *xos* (all these combinations also with <z t> instead of <s>; g = <g h i>, see "Asociacións gráficas" in TMILG).

- ***guedelia* (GP)**

  Etymology: Lat. VĪTĪCŬLA (root/stem: VĪTIS)

  Attestation date: 12th century, OL palatalization: yes

  Sources and notes: DDGM (Lorenzo 1977); TMILG (TC); GCLI (147); DEHLP (guedelha); DEEH (1068-9). In contrast to the Lat. VĪTĪCULA suggested by DCECH (guedeja) and REW (9392), FF (386) preferred Lat. VĬTĬCULA, DELG (guedella-o) suggested Lat. *VETECULA, and DEM (1054) preferred VĪTĬCŬLA as the etymon. Got. **wathils* might have influenced GP *guedelia* (DCECH; DEHLP: guedelha).

- ***gulpeja* (OSp.)**

  Etymology: Lat. VŬLPĒCŬLA (root/stem: VŬLPES)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: CRC (155, 439, 446); DCECH (vulpeja); DRAE (vulpeja); Roberts (2014: 705); DEEH (1075); cf. DDGM (golpella, TC); CORDE; according to REW (9463), OSp. *gulpeja* and *vulpeja* were Old French borrowings.

- ***hojalde* (OSp.)**

  Etymology: Late Lat. FŎLĬĀTĬLIS (root/stem: FŎLĬUM)

  Other forms: *hojaldre*

  Attestation date: 15th century, OL palatalization: no

  Sources and notes: LS (foliatilis/folium); CRC (437); DEEH (685); DRAE (hojaldre/hojalde); DCECH (hoja).

- ***hollejo* (OSp.)**

  Etymology: Lat. FOLLĬCŬLUS (root/stem: FOLLIS)

  Attestation date: 15th century, OL palatalization: yes

  Sources and notes: Georges and LS (folliculus); CRC (438); DEEH (686); REW (3419); DRAE (hollejo); cf. DCECH (fuelle).

- ***ilesia* (Ast.)**

  Etymology: Late Lat. ECLĒSĬA (root/stem: ECCLĒSĬA)

  OL palatalization: no

  Sources and notes: Lat. ECCLĒSIA > Late Lat. ECLĒSĬA; GCLI (234); DGLA (ilesia); DCECH (iglesia).

- ***inchaçon* (GP)**

  Etymology: Lat. ĬNFLATIO, -ŌNE (root/stem: ĬNFLĀRE)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: REW (4407); DEHLP (inchação); DEM (1219-20); DDGM (inchaçon); cf. DEEH (742); TMILG (CSM, TA).

- ***inchazón* (OSp.)**

  Etymology: Lat. ĬNFLATIO, -ŌNE (root/stem: ĬNFLĀRE)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: REW (4407); DEEH (742); cf. DCECH (hinchar); CORDE.

- ***inchámoslas* (OSp.)**

  Etymology: Lat. ĬMPLĒRE (root/stem: PLĒRE)

  Other forms: *fenchir*

  Attestation date: 12th century, OL palatalization: yes

  Sources and notes: CRC (270); GCLI (233); DEEH (737); DCECH (henchir); cf. REW (3410). The modern word, which is nowadays seldom used, is Sp. *henchir* (cf. DRAE:

henchir). DCECH (henchir) suggested that the first attestation of *henchir* was OSp. *ynchamos*, which should appear in *Cantar del Mio Cid*. I could not locate that form in CORDE but OSp. *inchámoslas* does appear.

- ***çinchos* (GP)**

  Etymology: Lat. CĬNGŬLUM (root/stem: CINGERE)

  Other forms: *cinho, cenllo*

  Attestation date: 13-14th centuries, OL palatalization: yes

  Sources and notes: Georges (cingulum); GCLI (283); DELG (cello); DEEH (580-1); DCECH (cello/cincho); DEHLP (cincho); DLPC (818); NDLP (cincho 1/cinho); TMILG (TC). DEM (603) mentioned that GP *cincho* could have come from Late Lat. *CĪNCTŪLU (← Lat. CĪNCTUM) (cf. DDGM: çincho, TC; arguments against this etymology in DCECH: cincho). While both words had an OL cluster, the outcome /ʧ/ would be expected for /nktl/ (postconsonantal cluster) but not for /ngl/ (cf. Section 2.4.1.1). Pt. *cinho* seems to be attested in the 17th century (DEM: 603). REW (1927) preferred to derive GP *cincho* from GP *cinchar* (< Lat. *CĬNGŬLĀRE).

- ***inchou* (GP)**

  Etymology: Lat. ĬNFLĀRE (root/stem: ĬNFLĀRE)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: FF (331); GCLI (233); REW (4406); cf. DEHLP (inchar); DELG (inchar); TMILG (CSM, LP, CT); DDGM (CVGP); DEHLP (inchar); DEM (1219-20). It is unclear whether GP *inchado* (TMILG: CSM/LP, 13th century) came from Lat. ĬNFLĀTUS or whether it was the regular participle form of GP *inchar* (cf. DEHLP: inchado). Attempted root or stem reconstruction for words like Lat. ĂDINFLO, INFLĀTĬLIS, INFLĀTUS, and SŬBINFLO (see LS for words containing the root -*infl*-): *inch*, *jnch*, *ynch* (TMILG, DDGM)

- ***inojos* (Sp.)**

  Etymology: Late Lat. GĔNŬCŬLUM (root/stem: GENŪ)

  Attestation date: 12th century, OL palatalization: yes

  Sources and notes: CRC (403, 439); DCECH (hinojo II); GCLI (278); REW (3737); DEEH (710); CORDE.

- ***inssoa* (GP)**

  Etymology: Lat. ĪNSŬLA (root/stem: ĪNSŬLA) (-OL)

  Other forms: *ilha*

  Attestation date: 13th century, OL palatalization: no

Sources and notes: FF (340, 367); DEEH (745); DCECH (isla); cf. REW (4475); TMILG (CSM, HT, CT). Several sources implied that GP *ilha* (14th century) was a Catalan borrowing (DEM: 1209-10; DEHLP: ilha; DDGM: ilha, especially TC).

- ***isla* (OSp.)**

  Etymology: Lat. ĪNSŬLA (root/stem: ĪNSŬLA) (-OL)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: CRC (259); DCECH (isla); DEEH (745); cf. REW (4475); DRAE (isla); CORDE.

- ***juviello* (Arag.)**

  Etymology: Lat. GLŎBĔLLUM (root/stem: GLOBUS)

  Other forms: *chubillo, libiecho*

  Attestation date: 15th century, OL palatalization: unclear

  Sources and notes: DCECH (ovillo); Aragonario (ovillo); DEEH (712). The palatalization of the OL cluster was probably the result of word-initial strengthening of /l/ (cf. GCLI: 222-5).

- ***lambrija* (Sp.)**

  Etymology: Late Lat. *LUMBRĪCŬLA (root/stem: LUMBRĪCUS)

  Attestation date: 18th century, OL palatalization: yes

  Sources and notes: CRC (439, 446); DCECH (lombriz); DEEH (783); DRAE (lambrija); REW (5157); NTLLE (lambrija); no examples of *lambrija(s)* or *lombrija(s)* were found in CORDE.

- ***lancha* (Gal.)**

  Etymology: Late Lat. *PLANCŬLA (root/stem: PLANCA) (BORR)

  Attestation date: 20th century, OL palatalization: no

  Sources and notes: With the meaning ‘stone slab'; DELG (lancha 1); DDD (lancha). While the possible dissimilation of word-initial /ʎ/ to /l/ due to the following palatal would have been possible in Spanish, the common result of word-initial /pl/ was /ʧ/ in Galician-Portuguese (cf. Section 2.4.1.1 and Table 2.19). This fact makes the hypothesized dissimilation of /ʧ/ into /l/ unlikely. Therefore, either Gal. *lancha* comes from Lat. *LANCULA (cf. DELG) or it is a Spanish borrowing (cf. NDLP: lancha 1; DEHLP: lancha 2; DEM: 1296). GP *prancha* may be a French borrowing (DEHLP: prancha; DXL: 977; cf. DEHH: 879).

- ***lancha* (Pt.)**

  Etymology: Late Lat. *PLANCŬLA (root/stem: PLANCA) (BORR)

  Attestation date: 19th century, OL palatalization: no

  Sources and notes: With the meaning 'stone slab'. DELG (lancha 1); DDD (lancha). While the possible dissimilation of word-initial /ʎ/ to /l/ due to the following palatal would have been possible in Spanish, the common result of word-initial /pl/ was /ʧ/ in Galician-Portuguese (cf. Section 2.4.1.1 and Table 2.19). This fact makes the hypothesized dissimilation of /ʧ/ into /l/ unlikely. Therefore, either Pt. *lancha* comes from Lat. *LANCULA (cf. DELG) or it is a Sp. borrowing (cf. NDLP: lancha 1; DEHLP: lancha 2; DEM: 1296). GP *prancha* may be a French borrowing (DEHLP: prancha; DXL: 977; cf. DEHH: 879).

- ***lancha* (OSp.)**

  Etymology: Late Lat. *PLANCŬLA (root/stem: PLANCA)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: CRC (259); REW (6571); DEEH (878); CORDE. According to DCECH (lancha I), the etymology *PLANCŬLA is possible if the dissimilation of the first palatal in *LLANCHA is assumed, resulting in OSp. *lancha* (also DEEH: 879).

- ***lande* (GP)**

  Etymology: Lat. GLANS, -DIS (root/stem: GLĀNS, -DIS)

  Attestation date: 15th century, OL palatalization: no

  Sources and notes: GCLI (235); DEHLP (lande); REW (3778); NDLP (lande); DEM (1104-5); DDGM (lande, CVGP).

- ***lande* (OSp.)**

  Etymology: Lat. GLANS, -DIS (root/stem: GLĀNS, -DIS)

  Attestation date: 12th century, OL palatalization: no

  Sources and notes: DCECH (landre); REW (3778); DRAE (lande); DEEH (712); CORDE. Ast. *llande* (DGLA).

- ***landoas* (GP)**

  Etymology: Lat. GLANDŬLA (root/stem: GLĀNS, -DIS)

  Other forms: *landra*

  Attestation date: 14th century, OL palatalization: no

  Sources and notes: FF (332); GCLI (235); REW (3777); DELG (landra 1); DDGM (landoa, CVGP); TMILG (GP *landooas* is attested in 15th-century TA); DDD (landra, especially

García González 1985); cf. DEM (1104-5), DEHLP (landre/lândoa) and REW (3777) for information on Pt. forms.

- ***landre* (OSp.)**

  Etymology: Late Lat. GLANDO, -ĬNIS (root/stem: GLĀNS, -DIS)

  Attestation date: 15th century, OL palatalization: no

  Sources and notes: Late Lat. GLANDO, -DĬNIS < Lat. GLANS, -DIS (DCECH: landre); DRAE (landre); DEEH (711); CRC (284); cf. GCLI (235); cf. REW (3777, OSp. *landre* < LAT. GLANDŬLA); CORDE.

- ***larea* (GP)**

  Etymology: Lat. GLARĔA (root/stem: GLARĔA) (u.o.)

  Other forms: *leira*

  Attestation date: 9th century

  Sources and notes: With the Latin meaning 'gravel' and the Galician-Portuguese meaning 'parcel of farming land' (cf. LS: glarea and DDGM: leira). It is unclear whether GP *leira* came from Lat. GLARĔA (FF: 331; GCLI: 235; DEHLP: leira; REW: 3779 but 4913; DXL: 736) or from Late Lat. LAREA or LĀRIA (DELG: leira; NDLP: larea 1; DCECH: glera; cf. DEEH: 779). See DCECH (glera) for the semantic difficulties of an etymology based on Lat. GLARĔA. See DEM (1314) and PMH (*Diplomata et Chartae* I: 4) for the context and original source of the given inherited form. GP *leira* is attested in the 10th century (DEM: 1314; cf. CODOLGA). There are several examples from the 15th century, in which the first consonant seems to be /ʒ/ or /ʤ/: GP *geira* (TMILG: GHCD), GP *ieira* (TMILG: SMCP) and GP *geyra(s)* (TMILG: VFD, MERS). All these words have the approximate meaning 'piece of land'. If the etymon would indeed have been Lat. GLARĔA, this may hint at OL palatalization.

- ***laredo* (Pt.)**

  Etymology: Late Lat. *GLARĒTUM (root/stem: GLARĔA)

  Attestation date: 20th century, OL palatalization: no

  Sources and notes: DCECH (glera); no etymological information was found in DEHLP (laredo); REW (3779); TLPGP (laredo).

- ***lastima* (OSp.)**

  Etymology: Lat. BLASPHĒMĀRE (root/stem: BLASPHĒMĀRE)

  Other forms: *blasmar?*

  Attestation date: 14th century, OL palatalization: no

  Sources and notes: CRC (290); GCLI (235); Torreblanca (1990: 322); REW (1155); DEEH (510); DCECH (blasfemar/ lastimar) set the first attestation already in the 11th century (cf. CORDE). BLASPHEMARE > BLASTEMARE through dissimilation but it is unclear whether the dissimilation happened in Greek or in Latin (cf. DCECH and REW). Attempted root or stem reconstruction for words like Lat. BLASPHĒMĀTĬO, BLASPHĒMĬA, or BLASPHĒMUS (see LS for words containing the root -*blasph*-): *bllas-, *llas-, jas-*, *chas- (CORDE). DRAE (blasmar) argued that Sp. *blasmar* is a French borrowing (against this etymology, TDHLE: blasmar).

- ***lastimado* (GP)**

  Etymology: Lat. BLASTEMĀTU (root/stem: BLASPHĒMĀRE)

  Other forms: *brasmar?*

  Attestation date: 14th century, OL palatalization: no

  Sources and notes: FF (331); REW (1155); DCECH (lastimar); DELG (lástima); DEHLP (lastimar); DDGM (lastimado/brasmar); DEHLP (lastimar); DEEH (510). There are three examples of GP *lastimado* (CT, CGC), one of GP *brasmar* and one of GP *brasmado* (CSM, CT) in TMILG. BLASPHEMARE > BLASTEMARE through dissimilation but it is unclear whether the dissimilation happened in Greek or in Latin (cf. references DCECH and REW). DEM (372-3) argued that GP *blasmar* was a French borrowing. Attempted root or stem reconstruction (TMILG, DDGM) for words like Lat. BLASPHĒMĀTĬO, BLASPHĒMĬA, or BLASPHĒMUS (see LS for words containing the root -*blasph*-): *bllas-, *llas-, *jas-, *chas- (also followed by <f> or <t> instead of <s>) (TMILG, DDGM).

- ***latidos* (OSp.)**

  Etymology: Lat. GLATTĪRE (root/stem: GLATTĪRE)

  Attestation date: 14th century, OL palatalization: no

  Sources and notes: Torreblanca (1990: 322); GCLI (236); DCECH (latir); REW (3781); DEEH (712). DCECH claimed that the first attestation dates from the 13th century but I could not locate any instance of OSp. *latido(s)* before the 14th century in CORDE. Attempted reconstruction for Lat. GLATTĪRE: lat*, l?at* (<ll lh li ly lj>), jat*, iat*, yat* (<g> representing /ʒ/). Several examples of *llat-* were found, from the 15th century onward (cf. CORDE). There are several explanations for this, with being OL palatalzation the least likely: either <ll> was written for /l/, a common occurrence where words containing /l/ and /ʎ/ were spelled identically (Echenique Elizondo & Martínez Alcalde 2011: 81-2); or the word may have been influenced by the Astur-Leonese cognates, which did have /ʎ/.

- ***lazo* (Gal.)**

  Etymology: Lat. GLACĬĒS (root/stem: GLACĬĒS)

  Attestation date: 19th century, OL palatalization: no

  Sources and notes: DCECH (glacial); REW (3771); DELG (laz); cf. DDD and TLPGP (lazo). The earliest attestation of Gal. *lazo* or *lazar* date from the 19th century (cf. FF: 332).

Attempted root or stem reconstruction for words like Lat. GLĂCĬĀLIS, CONGLĂCĬO, and GLĂCĬES (see LS for words containing the root -*glac*-): *chaz, *l?az, *gaz* (for all these regular expressions, <ç s c > were also searched instead of <z>; g = <g i j>, see "Asociacións gráficas" in TMILG) (TMILG, DDGM).

- ***legra*** **(OSp.)**

  Etymology: Lat. LĬGŬLA (root/stem: LINGUA)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: Georges and LS (ligula); CRC (102, 440); DEEH (777); DRAE (legra); CORDE; DCECH (legra) considered (O)Sp. *legra* to be a semi-learned word.

- ***legra*** **(GP)**

  Etymology: Lat. LĬGŬLA (root/stem: LINGUA)

  Attestation date: 15th century, OL palatalization: no

  Sources and notes: Georges and LS (ligula); DEHLP (legra); DELG (legra/alegres); DDD (legra/llerga); TLPGP (legra); DEM (1341); DXL (736); DEEH (777). According to DCECH (legra), GP *legra* was attested already in the 14th century. Notably, none of the inherited words provided by REW (5036) shows traces of OL palatalization.

- ***leibas*** **(Gal.)**

  Etymology: Lat. GLĒBA (root/stem: GLĒBA)

  Other forms: *leivas*

  Attestation date: 20th century, OL palatalization: no

  Sources and notes: With the meaning 'a lump of eath, clod' (LS: gleba); TLPGP (leiba/leiva); DDD (leiba/leiva); DXL (736-737); DRAG (leiba); cf. DEHLP (leiva); cf. TILG. DELG (léboa) seemed to suggest that the Gal. forms *léboa, leiba* or *léiboa* come from Late Lat. GLĒBŬLA. The evolutionary path may have been as follows: Lat. GLAEBA or GLĒBA > *GLĒBEA > GP *leiva* (cf. DEM: 1315-6). Attempted root or stem reconstruction for words like Lat. GLAEBĀRĬUS, GLAEBĀTĬO, GLAEBŌSUS, GLAEBŬLA, and GLAEBŬLENTUS (see LS for words containing the root *glaeb*- or *gleb*-): l?eb*, leb*, geb*, cheb* (for all these combinations, <v u ll> were also searched instead of <b>; g = <g h i>, see "Asociacións gráficas" in TMILG).

- ***leirón*** **(Gal.)**

  Etymology: Lat. GLĪS, -ĪRIS (root/stem: GLĪS, -ĪRIS) (u.e.)

  Other forms: *lirio*

  Attestation date: 19th century, OL palatalization: no

  Sources and notes: GCLI (236); DCECH (lirón I); DEEH (712); DELG (lirón); REW (3787); DEM (1314); TILG. Pt. *leirão* and Gal. *leirón* could also come from *(G)LIRIONEM

(DCECH: lirón). Attempted root or stem reconstruction for Lat. GLĪRĀRĬUM and GLIS (see LS for words containing the root *glis/r-*): gir*, chir*, l?ir* (for all these regular expressions, <ei> was also searched instead of <i>; g = <g h i>, see "Asociacións gráficas" in TMILG) (TMILG, DDD).

- ***leirão* (Pt.)**

  Etymology: Lat. GLĪS, -ĪRIS (root/stem: GLĪS, -ĪRIS) (u.e.)

  Attestation date: 19th century, OL palatalization: no

  Sources and notes: GCLI (236); DCECH (lirón I); DEEH (712); REW (3787); NDLP (leirão); DEM (1314); cf. FF (332). Pt. *leirão* and Gal. *leirón* could also come from *(G)LIRIONEM (DCECH: lirón). The form *lirionibus* seems to be attested in a 13th-century Portuguese document (ibid.) but that form could not be found in TMILG, CODOLGA or DEM (1314).

- ***leiva* (Pt.)**

  Etymology: Lat. GLĒBA (root/stem: GLĒBA)

  Attestation date: 17th century, OL palatalization: no

  Sources and notes: With the meaning 'a lump of eath, clod' (LS: gleba). REW (3782); DCECH (gleba); DEHLP (leiva); NDLP (leiva); DEEH (712); DXL (736-737); also Gal. *leiba* (TLPGP and DDD: leiba). The evolution of the etymon may have been as follows: Lat. GLAEBA or GLĒBA > *GLĒBEA > GP *leiva* (cf. DEM: 1315-6). With a different meaning, *leiva* was already attested in the 13th century (cf. DEM: 1316).

- ***lentejas* (OSp.)**

  Etymology: Lat. LENTĬCŬLA (root/stem: LĒNS, -TIS)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: CRC (438); REW (4980); DRAE (lenteja). DCECH (lenteja) suggested that the first instances of OSp. *lenteja* date from the 12th century but I could locate any before the 13th century in CORDE.

- ***lentellas* (GP)**

  Etymology: Lat. LENTĬCŬLA (root/stem: LĒNS, -TIS)

  Attestation date: 14th century, OL palatalization: yes

  Sources and notes: FF (136); GCLI (278); DELG (lentella); TMILG (XH, HT); DDGM (lentegoso/lentella); DCECH (lenteja); cf. REW (4980) and DEHLP (lentilha).

- ***lera* (Sant.)**

  Etymology: Lat. GLARĔA (root/stem: GLARĔA)

  OL palatalization: no

  Sources and notes: DCECH (glera); CRC (502); DEEH (712).

- ***lirón* (OSp.)**

  Etymology: Lat. GLĪS, -ĪRIS (root/stem: GLĪS, -ĪRIS) (u.e.)

  Other forms: *lir*

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: GCLI (236); DCECH (lirón I); REW (3787); CORDE (OSp. *lir* is attested in the 15th century, in a text from Nebrija); Roberts (2014: 135); cf. DRAE (Sp. *lirón* < *GLIRO, -ONIS). Attempted root or stem reconstruction for Lat. GLĪRĀRĬUM and GLIS (see LS for words containing the root *glis/r-*): gir*, jir*, l?ir* (CORDE).

- ***llacia* (Ast.)**

  Etymology: Lat. FLACCĬDA (root/stem: FLACCUS)

  OL palatalization: no

  Sources and notes: GCLI (160); DEEH (682); DGLA (llaciu). It is unclear whether /ʎ/ came from OL palatalization or, more probably, from the strengthening of word-initial /l/ common in Astur-Leonese (cf. GCLI: 222-5).

- ***llacio* (OSp.)**

  Etymology: Lat. FLACCĬDUS (root/stem: FLACCUS)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: CRC (36, 309); REW (3342); DEEH (682). DCECH (lacio) mentioned that Sp. *lacio* had an old form *llacio* (also Roberts 2014: 109). It is unclear whether <ll> represented /l/ or /ʎ/ since etymological /l/ could be written in multiple ways. However, there is some evidence supporting the existence of OSp. *llacio*. In the works of Berceo (13th century), OSp. *lhacias* and *llacio* are attested but it does not seem to be any instance of <lacio> in this author (cf. García Turza 1992 and Dutton 1992 in CORDE). In addition, the use of <l> or <ll> to represent alveolar and palatal laterals, respectively, is consistent. DCECH (lacio) gave two further examples, OSp. *liado* (Berceo, *Milagros de Nuestra Señora*) and *lhacio* (Berceo, *Historia del Señor San Millán*), which I could not locate in CORDE. It should be noted that very few examples of OSp. *lacio* (or similar forms) are generally found before the 14th century (cf. CORDE).

- ***llaga* (OSp.)**

  Etymology: Lat. PLĀGA (root/stem: PLĀGA)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: CRC (93, 97); GCLI (230); DCECH (llaga); REW (6562); DRAE (llaga); DEEH (878); CORDE.

- ***llagar* (OSp.)**

  Etymology: Late Lat. PLAGĀRE (root/stem: PLĀGA)

  Attestation date: 12th century, OL palatalization: yes

  Sources and notes: DCECH (llaga); Roberts (2014: 147); DRAE (llagar); CORDE.

- ***llama* (OSp.)**

  Etymology: Lat. FLAMMA (root/stem: FLAMMA)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: Torreblanca (1990: 318); GCLI (230); DCECH (llama I); REW (3350); DEEH (683); CORDE; Occ. Aran. *hlama/ahlama* (GCLI: 169).

- ***llama* (OSp.)**

  Etymology: Lat. CLĀMĀRE (root/stem: CLĀMĀRE)

  Attestation date: 12th century, OL palatalization: yes

  Sources and notes: GCLI (230); DCECH (llamar); REW (1961); DEEH (583); CORDE. Attempted root or stem reconstruction for words like Lat. CLĀMĀTOR, CLĀMĀTŌRĬUS, CLĀMĬTĀTĬO, CLĀMOR, ACCLĀMĀTĬO, SUCCLĀMO, CONCLĀMĀTĬO, CONCLĀMO, EXCLĀMĀTĬO, EXCLĀMO, INCLĀMO, PRAECLĀMO, PROCLĀMĀTĬO, PROCLĀMO, RĒCLĀMĀTĬO, RĒCLĀMO, DĒCLĀMĀTŌRĬUS, DĒCLĀMO, and DĒCLĀMĀTĬUNCŬLA (see LS for words containing the root -*clam*-): *cham*, *llam*, *jam* (DCECH). One instance of OSp. *llamor* from the 14th century was found in CORDE (Herrera & Sánchez: 2000) but there is also one instance of OSp. *clamor* in the same work. Additionally, many instances of OSp. *clamor* are attested as early as the 12th century (*Cid*). DEEH (583) suggested that OSp. *llamadera* comes from Lat. CLĀMĀTORĬUS but DRAE (llamadera), DCECH (llamar) and NTLLE (llamadera, see Pagés: 1914, among others) preferred to derive it from OSp. *llamar*. There are two examples of OSp. *rellam* + verbal suffix before the 15th century (CORDE) but they probably come from *re* + *llamar*.

- ***llandiu* (Ast.)**

  Etymology: Lat. BLANDUS (root/stem: BLANDUS)

  Other forms: *blandiu*

  OL palatalization: unclear

Sources and notes: GCLI (236); DCECH (blando); DGLA and DALLA (llandiu/blandiu). It is probable that the palatalization of /bl/ was not due to OL palatalization, but due to the loss of /b/ and the strengthening of word-initial /l/ in Astur-Leonese, e.g. Lat. LŬPUS > Sp. *lobo*, Ast. *llobu* (cf. GHLI: 222-5)

- ***llaneza* (Sp.)**

  Etymology: Lat. PLANĬTĬA (root/stem: PLĀNUS)

  Attestation date: 16th century, OL palatalization: yes

  Sources and notes: LS (planitia/planities); CRC (532); REW (6574); cf. DCECH (llano); DEEH (879); DRAE (llaneza).

- ***llano* (OSp.)**

  Etymology: Lat. PLĀNUS (root/stem: PLĀNUS)

  Attestation date: 12th century, OL palatalization: yes

  Sources and notes: Torreblanca (317, 320); REW (6581); GCLI (230); Georges (plānus); DEEH (879); DRAE (llano); CORDE. DCECH (llano) mentioned the ultracorrection *flano* in a 1080 document (cf. Torreblanca 1990). For information on Sp. *llana*, see DCECH (llano), DRAE (llana) and Roberts (2014: 147).

- ***llantaina* (Ast.)**

  Etymology: Lat. PLANTĀGŌ, -ĬNIS (root/stem: PLANTA)

  OL palatalization: yes

  Sources and notes: CRC (391, 396); DCECH (planta); DGLA (llantaina). According to REW (6578), Ast. *allancar* comes from Lat. PLANTĀRE, while DCECH (planta) suggested that it comes from Lat. *PLANTICARE (also DEEH: 879).

- ***llantar* (OSp.)**

  Etymology: Lat. PLANTĀRE (root/stem: PLANTA)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: DCECH (planta); cf. REW (6578); DEEH (879); CORDE; Torreblanca (1990: 318-20) provided the examples Lat. PLANTATA > OSp. *Hllantada* (13th century) and *Hlantada*.

- ***llantas* (OSp.)**

  Etymology: Lat. PLANTA (root/stem: PLANTA)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: GCLI (231); DCECH (planta); REW (6576); DRAE (llanta); DEEH (879); CORDE.

- ***llanten* (OSp.)**

  Etymology: Lat. PLANTĀGŌ, -ĬNIS (root/stem: PLANTA)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: CRC (391, 396); DCECH (planta); REW (6577); DEEH (879); CORDE; cf. Leon. *lantel* (CRC: 391, 396; DCECH: planta; DGLA: llantén; DEEH: 879).

- ***llanto* (OSp.)**

  Etymology: Lat. PLĀNCTUS (root/stem: PLANGĔRE)

  Attestation date: 12th century, OL palatalization: yes

  Sources and notes: GCLI (231); DCECH (llanto); DEEH (879); REW (6570); Georges (planctus); CORDE.

- ***llañer* (OSp.)**

  Etymology: Lat. PLANGĔRE (root/stem: PLANGĔRE)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: GCLI (231); DCECH (llanto); REW (6572);DEEH (879); CORDE (OSp. *llannido(s)* is also attested in the 13th century); the modern word is Sp. *plañir* (DRAE: plañir; DCECH).

- ***llatejar* (GP)**

  Etymology: Lat. GLATTĪRE (root/stem: GLATTĪRE)

  Other forms: *latir*

  Attestation date: 15th century, OL palatalization: no

  Sources and notes: FF (332); DCECH (latir); DELG (latexar); TMILG (TA); DDD (later/latir); GCLI (236); REW (3781); DEM (1306); cf. HGP (494-97) for information on the use of the grapheme <ll> to represent /l/. Both Gal. *latir* 'dog bark' and Gal. *latexar* 'heart beat' are included in DRAG (cf. DEHLP: latejar/latir for the Pt. words and meanings). Attempted reconstruction for Lat. GLATTĪRE: chat*, l?at* (<ll lh li ly lj>), jat*, iat*, yat*, xat*, gat* (<g> representing /ʒ/ or /ʤ/) (TMILG, DDGM).

- ***llatir* (Ast.)**

  Etymology: Lat. GLATTĪRE (root/stem: GLATTĪRE)

  OL palatalization: no

  Sources and notes: GCLI (236); DGLA (llatir); DALLA (llatir). /ʎ/ probably came from the strengthening of word-initial /l/ common in Astur-Leonese and not from OL palatalization (cf. GCLI: 222-5).

- ***llave* (OSp.)**

  Etymology: Lat. CLĀVIS (root/stem: CLĀVIS)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: CRC (139); GCLI (230); DCECH (llave); CORDE; DRAE (llave); REW (1981); DEEH (584).

- ***llavija* (OSp.)**

  Etymology: Lat. CLĀVĬCŬLA (root/stem: CLĀVIS)

  Other forms: *clavija, lavija*

  Attestation date: 14th century, OL palatalization: yes

  Sources and notes: DCECH (llave); GCLI (232); REW (1979); DEEH (584); CORDE. Sp. *cabilla* also comes from Lat. CLAVĬCŬLA (<CAVICLA) but through an intermediate, maybe Pt., form *cavilha* (cf. ref. REW and DCECH: cabilla). It is unclear whether *llavija* can be considered dialectal OSp. (from Santander, Soria, etc) or whether it belongs to Astur-Leonese varieties (cf. DEEH: 584; REW: 1979). There are only three examples of *llavija* in CORDE, from the 14th, 19th and 20th centuries. However, as dialectal *lavija* (Burgos, Segovia, Murcia, Andalucia, Extremadura, etc.) seems to come from *llavija* (cf. TDHLE: lavija; DEEH: 584; DRAE: lavija; NTLLE: lavija; DRAE 1970), *llavija* will be considered an OSp. word.

- ***llavija* (Montañ. or AL)**

  Etymology: Lat. CLĀVĬCŬLA (root/stem: CLĀVIS)

  Other forms: *llavía, llaviya, llavicha*

  OL palatalization: yes

  Sources and notes: REW (1979); DEEH (584); DALLA (llavía); DGLA (llavía).

- ***llaz* (Ast.)**

  Etymology: Lat. GLACĬĒS (root/stem: GLACĬĒS)

  OL palatalization: unclear

  Sources and notes: GCLI (235); DCECH (glacial). It is unclear whether /ʎ/ resulted from OL palatalization or from strengthening of word-initial /l/ (cf. GCLI: 222-5). This is also probably true for Leon. *yaz*.

- ***lleba* (Rib. Arag.)**

  Etymology: Lat. GLĒBA (root/stem: GLĒBA)

  OL palatalization: yes

Sources and notes: With the meaning ‘a lump of eath, clod’ (LS: gleba); Aragonario. /ʎ/ may come from the strengthening of word-initial /l/ common in Astur-Leonese and Catalan (cf. GCLI: 222-5).

- ***llegarán* (OSp.)**

  Etymology: Late Lat. PLĬCĀRE (root/stem: PLĬCĀRE)

  Attestation date: 12th century, OL palatalization: yes

  Sources and notes: Georges and OLD (plico, applico); GCLI (230); DEEH (880); DRAE (llegar); DCECH (llegar) mentioned that *aplekare* is already attested in the 10th century; no information on (O)Sp. *llegar* was found in REW (6601); CORDE; see DCECH (plegar) for (semi-)learned words from this etymon. OSp. *hlegaron, hlegó*, and *llegaron* (13th century) illlustrate how the process of OL palatalization and obstruent loss might have been in Old Spanish (Torreblanca 1990: 320).

- ***llegra* (Ast.)**

  Etymology: Lat. LĬGŬLA (root/stem: LINGUA)

  OL palatalization: no

  Sources and notes: DCECH (legra); DGLA (llegre); DEEH (777).

- ***llen* (Cant.)**

  Etymology: Lat. *CLĪNUS (root/stem: CLĪNĀRE) (u.o.)

  Sources and notes: REW (1992); DEEH (584); DCECH (deleznarse) suggested that Ast. *llen* comes from Lat. LĒNIS.

- ***llena* (OSp.)**

  Etymology: Lat. PLĒNUS (root/stem: PLĒNUS)

  Attestation date: 12th century, OL palatalization: yes

  Sources and notes: GCLI (77, 230); DCECH (lleno); DEEH (880); DRAE (lleno); REW (8596); CORDE; GCLI (233) mentioned Ast. *enllenu* < Lat. IMPLĒNU; see also Mir. *anchena* (< IMPLĒNĀRE) (ibid.).

- ***llera* (Ast.)**

  Etymology: Lat. GLARĔA (root/stem: GLARĔA)

  OL palatalization: no

  Sources and notes: REW (3779); DGLA (llera); DEEH (712); cf. DCECH (glera). /ʎ/ probably resulted from the strengthening of word-initial /l/ common in Astur-Leonese (cf. GCLI, 222-5). For information on Sp. *llera*, see DRAE (llera) and Roberts (2014: 147) (cf. Viudas Camarasa 1979: 367).

- ***lleral* (Rib. Arag.)**

  Etymology: Lat. GLARĔA (root/stem: GLARĔA)

  OL palatalization: yes

  Sources and notes: DCECH (glera); DEEH (712). /ʎ/ may have resulted from the loss of /g/ after OL palatalization (Viudas Camarasa 1979: 358) or from the strengthening of word-initial /l/ (after obstruent loss) common in Astur-Leonese and Catalan (cf. GCLI: 222-5).

- ***llirón* (Ast.)**

  Etymology: Lat. GLĪS, -ĪRIS (root/stem: GLĪS, -ĪRIS) (u.e.)

  Other forms: *llira*

  OL palatalization: no

  Sources and notes: GCLI (236); cf. REW (3787); DCECH (lirón I); DGLA (llirón); DEEH (712). /ʎ/ probably resulted from the strengthening of word-initial /l/ common in Astur-Leonese and Catalan (cf. GCLI: 222-5).

- ***llor* (OSp.)**

  Etymology: Lat. FLŌS, -RIS (root/stem: FLŌS)

  Other forms: *flor*

  Attestation date: 14th century, OL palatalization: yes

  Sources and notes: GCLI (232); REW (3382); DEEH (683). OSp. *flore* is already attested in the year 950 (DCECH: flor), while OSp. *llor* seems to be first attested in the 14th century (cf. CORDE: Sánchez-Prieto Borja 2004). Cf. Occ. Aran. *flor/hlor* (GCLI: 169, 232).

- ***llorar* (OSp.)**

  Etymology: Lat. PLŌRĀRE (root/stem: PLŌRĀRE)

  Attestation date: 12th century, OL palatalization: yes

  Sources and notes: GCLI (230); DCECH (llorar); DRAE (llorar); REW (6606); DEEH (881); CORDE.

- ***llosa* (Ast.)**

  Etymology: Lat. CLAUSA (root/stem: CLAUDĔRE)

  Attestation date: 11th century, OL palatalization: yes

  Sources and notes: GCLI (230); cf. REW (1973). Apart from Astur-Leonese varieties, all Spanish words that go back to Lat. CLAUDŌ are borrowings or learned words (DCECH: clausura). However, *llosa* may have also been present in OSp. dialects (DEEH: 584;

Torrablanca 1990). For an approximate date of the inherited form, see DCECH (llosa) and CORDE (OSp. *llosa* in 13th century).

- ***llouiesse* (OSp.)**

  Etymology: Late Lat. PLŎVĔRE (root/stem: PLŎVĔRE)

  Attestation date: 12th century, OL palatalization: yes

  Sources and notes: CRC (143); REW (6610); DCECH (llover); DRAE (llover); DEEH (881); CORDE.

- ***llueca* (Ast.)**

  Etymology: Late Lat. CLOCCA (root/stem: CLOCCA)

  OL palatalization: yes

  Sources and notes: With the meaning '(cow)bell'; DCECH (chocallo); DGLA (llueca); DALLA (llueca); DEEH (584).

- ***llueca* (Sp.)**

  Etymology: Late Lat. *CLŎCCA (root/stem: *CLŎCCA) (u.e)

  Other forms: *clueca*

  Attestation date: 17th century, OL palatalization: yes

  Sources and notes: Contrary to other scholars (DEM: 588-90, chocar 1/choca 1; DELG: chocar 2/choca 2; REW: 1995; DEEH: 584-5), DCECH (chocallo/clueca) seemed to propose two different etymologies for Ast. *llueza* and GP *choca* 'brooding hen', on the one hand, and for Leon. *chocallo* and Ast. *llueca* 'cowbell', on the other hand: Late Lat. *CLŎCCA (onomatopoeic origin) and Late Lat. CLOCCA 'bell' (perhaps of Celt. origin) (also DXL: 276-7, choca/choco 2; DEHLP: choca 1/choco) (see root = CLOCCA). See DCECH (cócora/en cuclillas) for other possible inherited forms from Lat. *CLŎCCA or cf. *clueca* (Sp.).

- ***llueza* (Ast.)**

  Etymology: Late Lat. *CLŎCCA (root/stem: *CLŎCCA) (u.e)

  Other forms: *chueca, llueca*

  OL palatalization: yes

  Sources and notes: With the meaning 'brooding hen, spoiled or empty (egg, nuts)'; GCLI (232); DCECH (clueca); DGLA (llueca/lluezu); DALLA (lluecu); DEEH (276).

- ***llumazos* (OSp.)**

  Etymology: Lat. PLŪMĀCIUM (root/stem: PLŪMA)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: DCECH (pluma); cf. REW (6611); DEEH (881); CORDE (OSp. *plumazo* is already attested in the 9th century).

- ***llun* (OSp.)**

  Etymology: Lat. CLŪNIS (root/stem: CLŪNIS)

  Other forms: *lunanca*

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: With the meaning 'buttock, haunch' (LS: clunis); DRAE (lunada/lunanca); DEEH (585); no information was found in REW. Apart from the attestations given by DCECH (lunanco) from the 13th and 15th centuries, OSp. *llun* appears once in CORDE with the meaning 'horse rump or haunch'.

- ***lluvias* (OSp.)**

  Etymology: Lat. PLŬVĬA (root/stem: PLŬVĬA)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: CRC (477); GCLI (230); DCECH (llover); REW (6620); DEEH (881); CORDE.

- ***lluviellu* (Ast.)**

  Etymology: Lat. GLŎBĔLLUS (root/stem: GLOBUS)

  Other forms: *duviellu, chuviechu*

  OL palatalization: unclear

  Sources and notes: DCECH (ovillo); GCLI (236); REW (3791); DGLA (duviellu); DEEH (712). The palatalization of the OL cluster was probably the result of the word-initial strengthening of /l/ (cf. GCLI: 222-5). <ll> and <d>, as the result of word-initial lateral strengthening or of Lat. /l:/, may have different affricate realizations and outcomes, such as apico-prepalatal (cf. GCLI: 223-6 and Ast. forms in REW and DCECH).

- ***loa* (Salam.)**

  Etymology: Late Lat. GLŪS, -TIS (root/stem: GLŪS, -TIS) (u.e.)

  OL palatalization: no

  Sources and notes: REW (3806); DEEH (712).

- ***locajo* (Salam.)**

  Etymology: Late Lat. CLOCCACULUM (root/stem: CLOCCA)

  Attestation date: 15th century, OL palatalization: no and yes (two OL clusters)

  Sources and notes: With the meaning '(cow)bell'; DCECH (chocallo); de Castro (2001: 66); no information was found in REW (1995), DEEH (584), CORDE, or TDLLE.

- ***lovelo* (GP)**

  Etymology: Lat. GLŎBĔLLUS (root/stem: GLOBUS)

  Other forms: *novelo*

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: FF (332); DCECH (ovillo); GCLI (236); REW (3791); TMILG (FCR); DELG (nobelo); DDD (nobelo). GP *novelo* is also attested in the 13th century (TMILG: CSM, DDGM: CSM). DEHLP (novelo) gave 12th-13th-century *oulivelô* as the first attestation of a GP inherited word from Lat. GLŎBĔLLUS. However, DEM (1595) argued that GP *oulivelô* was probably a Spanish borrowing (see PMH, *Leges* V: 761 for the original source). Attempted root or stem reconstruction for words like Lat. CONGLŎBĀTĬO, CONGLŎBO, CIRCUMGLŎBĀTUS, GLŎBO, GLŎBŌSUS, GLŎBŬLUS, and GLŎBUS (see LS for words containing the root -*glob*-): *chob*, l?ob*, lob*, gob* (all these combinations also with <v> instead of <b>; v = <u v>, see "Asociacións gráficas" in TMILG) (TMILG, DDGM).

- ***luva* (OSp.)**

  Etymology: Got. **lôfa* (root/stem: **lôfa*) (-OL)

  Attestation date: 11th century

  Sources and notes: DDGM (luua, TC). The most widespread etymology is from Got. *lôfa* (ibid.; DCECH: lúa; DRAE: lúa; DEHLP: luva; Roberts 2014: 142-3; DEM: 1371; DXL: 760) but some sources proposed an etymology containing an OL cluster, such as Got. **glōva* (REW: 3803) or *glof* (DELG: luva).

- ***machados* (GP)**

  Etymology: Late Lat. *MARCŬLĀTUS (root/stem: MARCUS)

  Attestation date: 15th century, OL palatalization: yes

  Sources and notes: With the GP meaning 'axe'; FF (331); DEHLP (machado); REW (5347); DDGM (machadijnha, CVGP); DELG (machada); TMILG (LCS, VFD). According to DEM (1380), there is an example of GP *machados* in the 13th century (PMH, *Leges* V: 679). See DCECH (macho II) for arguments against the given etymology (see also DXL: 762).

- ***macho* (OSp.)**

  Etymology: Lat. MARCŬLUS (root/stem: MARCUS)

  Attestation date: 15th century, OL palatalization: yes

  Sources and notes: REW (5347); DEEH (799); DRAE (macho 2). DCECH (macho II) suggested a different etymology, from a Mozarab. variation of the word *mazo* 'mallet'.

- ***macho* (OSp.)**

  Etymology: Lat. MASCŬLUS (root/stem: MĀS, -RIS)

  Other forms: *maslo*

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: CRC (259); GCLI (283); DRAE (macho 1); CORDE. As DCECH (macho I) pointed out (also DDGM: macho, TC), there is no reason to think that Sp. *macho* is a GP borrowing (cf. REW: 5392) since /ʧ/ is the normal outcome for postconsonantal OL clusters in Spanish (cf. Section 2.4.1.1).

- ***macho* (GP)**

  Etymology: Lat. MASCŬLUS (root/stem: MĀS, -RIS)

  Attestation date: 13-14th centuries, OL palatalization: yes

  Sources and notes: FF (219, 331); GCLI (283); DELG (macho 2); DDGM (TC); TMILG (TC, XH, TA); cf. DEHLP (macho) and REW (5392).

- ***magoasse* (GP)**

  Etymology: Lat. MACŬLĀRE (root/stem: MACŬLA)

  Attestation date: 14th century, OL palatalization: no

  Sources and notes: DXL (773); DCECH (magullar); REW (5213); DEHLP (magoar); DEEH (789); cf. DELG (magoar); GP *manchar* might have been derived from GP *mancha* (DEHLP: manchar; DELG: manchar; DEM: 1384) and GP *magoar* from GP *magoa* (ibid.).

- ***majada* (OSp.)**

  Etymology: Lat. *MACŬLĀTA (root/stem: MACŬLA)

  Attestation date: 12th century, OL palatalization: yes

  Sources and notes: CRC (438); DRAE (majada); DCECH (magullar/majada); DEEH (789); Roberts (2014: 156); cf. REW (5212, < MACŬLA). The earliest example I could find in CORDE is OSp. *maiada* (13th century), even though DCECH (majada) suggested that examples from the 12th century exist.

- ***malha* (GP)**

  Etymology: Lat. MACŬLA (root/stem: MACŬLA)

  Other forms: *mãchas, mágoa, mangra*

  Attestation date: 14th century, OL palatalization: yes

  Sources and notes: DEHLP (mágoa/mangra); DEEH (789), 795); Lat. MACŬLA > MANC'LA > GP *mancha* through extension of the nasality to the syllable coda (cf. FF: 331; GCLI: 282; DCECH: mancha I; DELG: mancha; DEHLP: mancha/macul-; DEM: 1384). According to REW (5212), Pt. *mancha* is a Sp. borrowing (cf. DCECH: mancha I). Depending on the meaning, GP *malha* 'stain, blemish' could come from Lat. MACŬLA (DELG: malla 2; NDLP: malha 1; DEEH: 789; DEM: 1383; DEHLP: malha 2) or be a borrowing from Fr. *maille* if the meaning is 'mesh, type of fabric' (DEHLP: malha 1; DELG: malla 1; DXL: 769; cf. also DCECH: malla and DEM: 1383). DEM (1383) and DDGM (malha, CVGP) claimed that GP *malha* was first attested in the 18th century. DEHLP (malha 2) claimed that the first attestation was in the 14th century but the original sources could not be examined. Both GP *mãchas* (TMILG: CT) and GP *magoa/mágoa* (DEM: 1383) are attested in the 14th century, GP *mangra* in the 15th century (DEM: 1384).

- ***malhada* (GP)**

  Etymology: Lat. *MACŬLĀTA (root/stem: MACŬLA) (u.o.)

  Attestation date: 13th century

  Sources and notes: DXL (769); DDGM (mallada); TMILG (CSM); cf. DCECH (majada); REW (<MACŬLA, 5212). DELG (mallada) gave a different etymology, from a protocelt. root **mel-/*mal-*. DEHLP (malhada/malha1) claimed that Pt. *malhada* is a derivational form of *malha* and DEM (1402-3) suggested that GP *mallada* was derived from either GP *malha* (< Lat. MĀGĀLIA) or from GP *malhar* 'to beat with a hammer' (ultimately from Lat. MALLEU).

- ***mancha* (OSp.)**

  Etymology: Lat. MACŬLA (root/stem: MACŬLA)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: GCLI (282); REW (5212); DRAE (mancha 1); CORDE. DCECH (mancha I/malla) suggested that the extension of the nasality to the syllable coda resulted in a form *MANGLA or *MANCLA (cf. CRC 271, 438). This would have resulted in /ʧ/, which was the regular outcome of postconsonantal OL clusters in Spanish (cf. Section 2.4.1.1); see DCHCH (manglar) for a posible origin of Sp. *mangle* in Lat. MACŬLA; see DEEH (789, 795) for a different explanation of *MANCLA/*MANCŬLA.

- ***manchados* (OSp.)**

  Etymology: Lat. MACŬLĀRE (root/stem: MACŬLA)

  Other forms: *magular*

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: DRAE (manchar 1). CRC (438), DCECH (magullar) and DRAE (magullar/magular) suggested that OSp. *magullar* (15th century) was an alteration of *magular* (16th century) by influence of *abollar*; cf. REW (5213); DRAE (magullar); Roberts (2014: 163); DCECH (mancha I).

- ***manijas* (OSp.)**

  Etymology: Lat. MANĬCŬLA (root/stem: MANUS)

  Attestation date: 15th century, OL palatalization: yes

  Sources and notes: CRC (439, 447); DEEH (796); REW (5303); DRAE (manija). DCECH (mano) considered Sp. *manija* a Cat. borrowing.

- ***manojos* (OSp.)**

  Etymology: Late Lat. MANŬCŬLUS (root/stem: MANUS)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: CRC (439); GCLI (279); DEEH (798); REW (5306); cf. CORDE. According to DCECH (mano), Late Lat. MANŬCŬLUS was an alteration of Lat. MANĬPŬLUS. For information on Sp. *manopla*, see DCECH (manopla) or DEEH (796).

- ***mezclados* (OSp.)**

  Etymology: Late Lat. MĬSCŬLĀRE (root/stem: MISCĒRE)

  Attestation date: 12th century, OL palatalization: no

  Sources and notes: Georges (miscere); CRC (256, 269); DRAE (mezclar); Roberts (2014: 203); DEEH (815); CORDE. According to REW (5606), Sp. *mezclar* was borrowed from Cat. *mesclar* (see arguments against this in DCECH: mecer). For Sp. *níscalo/mízcalo*, see DCECH and Roberts (2014: 214). DCECH (mecer) suggested that the lack of OL palatalization could be due to the predominance of a more phonetically conservative form or to a later loss of the unstressed vowel (syncope), which could have potentially prevented OL palatalization.

- ***mezcrar* (GP)**

  Etymology: Late Lat. MĬSCŬLĀRE (root/stem: MISCĒRE)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: Georges (miscere); DDGM (miscla/misclar); NDLP (mesclar); DEEH (815); DEHLP (mesclar); cf. DCECH (níscalo); TMILG (CSM, LP, CT). According to REW

(5606), Pt. *mesclar* and Gal. *mezcrar* were borrowed from Cat. *mesclar* (see arguments against this in DCECH: mecer). DCECH (mecer) also suggested that the lack of OL palatalization could be due to the predominance of a more phonetically conservative form or to a later loss of the unstressed vowel (syncope), which could have potentially blocked OL palatalization. DEM (1482) claimed that the evolution of Pt. *mesclar* had a conservative or learned influence ("com influência culta").

- ***miraclo*** **(OSp.)**

  Etymology: Lat. MĪRACŬLUM (root/stem: MĪRACŬLUM)

  Other forms: *milagro, miraglo*

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: CRC (438); GCLI (278); DEEH (814); DRAE (milagro/miraglo). REW (5602) gave several inherited forms of Lat. MĪRACŬLUM, including Sp. *milagro* and Pt. *milagre*, and considered all of them to be technical or learned words ("Buchwörter"). Notably, none of the given inherited words shows traces of OL palatalization. DCECH (mirar) described Sp. *milagro* as a semi-learned word ("descendiente semiculto").

- ***miragre*** **(GP)**

  Etymology: Lat. MĪRACŬLUM (root/stem: MĪRACŬLUM)

  Other forms: *milagre*

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: FF (61); GCLI (278); DELG (milagre); DEHLP (milagre); DDGM (miragre, specially TC); TMILG (LP, CSM, CI). REW (5602) gave several inherited forms of Lat. MĪRACŬLUM, including Sp. *milagro* and Pt. *milagre*, and considered all of them to be technical or learned words ("Buchwörter"). Notably, none of the given inherited words shows traces of OL palatalization. DEM (1504) claimed that the evolution of GP *milagre* had a conservative ecclesiastical influence.

- ***moion*** **(OSp.)**

  Etymology: Late Lat. *MŬTŬLO, -ŌNIS (root/stem: MŬTŬLUS)

  Attestation date: 11th century, OL palatalization: yes

  Sources and notes: CRC (437, 449); GCLI (279); DRAE (mojón); REW (5797); DCECH (mojón); DEEH (830) preferred Lat. MŬTŬLUS as the etymon; cf. CORDE; OSp. *mojón* is attested in the 12th century (cf. CORDE).

- ***moliones*** **(GP)**

  Etymology: Late Lat. *MŬTŬLO, -ŌNIS (root/stem: MŬTŬLUS)

  Other forms: *malhões*

  Attestation date: 10th century, OL palatalization: yes

Sources and notes: REW (5797); DCECH (mojón); DEEH (830); DDGM (mollon, CVGP); TMILG (GP *mollon* attested in FCR); cf. DDD (mallón); for information on the context and source of both given inherited forms, see CODOLGA, DDGM (mollon, CVGP) and DEHLP (malhão 1). DELG (mollón) gave a different etymology, from Cauc. (Caucassus?) **mal-* or **mel-*. DEHLP (malhão 1/malho) derived GP *maliones/mollon* (attested forms) 'mark or sign to indicate land boundaries' from GP *malho* 'big hammer', for which Lat. MALLĔUS is preferred as etymon. DEM (1403) gave the same etymology but Pt. *malhão* seems not to be related to the meaning 'mark or sign to indicate land boundaries'. DDGM (mollon, TC) seemed to claim that GP *moliones*, *moion* (attested forms) are Sp. borrowings.

- ***moolho* (GP)**

  Etymology: Late Lat. MANŬCŬLUS (root/stem: MANUS)

  Attestation date: 12th century, OL palatalization: yes

  Sources and notes: FF (354); DCECH (mano); DELG (cadamollo); REW (5306); DEHLP (molho 1); DDGM (mãolho); GP *mõollo(s)* is attested in the 14th century (TMILG: XH); for the context of the given attested form, see DEM (1524) or the original source (PMH, *Leges* III: 474).

- ***mouil* (GP)**

  Etymology: Lat. MŌBĬLIS (root/stem: MŎVĒRE)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: DEHLP (móvel); REW (5624); DEM (1546); DDGM (moble/movil); cf. TMILG.

- ***mueble* (OSp.)**

  Etymology: Lat. MŌBĬLIS (root/stem: MŎVĒRE)

  Other forms: *moble*

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: CRC (433); DEEH (816); DRAE (mueble/moble); REW (5624); according to DCECH (mover), OSp. *muebele* is already attested in the 11th century.

- ***musclo* (GP)**

  Etymology: Lat. MŪSCŬLUS (root/stem: MŪS)

  Other forms: *musgoo*

  Attestation date: 14th century, OL palatalization: no

  Sources and notes: CRC (364); DEEH (828); DEHLP (músculo); DDD (musgo, see where the word has the meaning 'muscle'); TLPGP (musgo/músculo); for information on the source of the inherited form, see DEHLP (músculo). According to REW (5772), DEM

(413) and NDLP (bucho), Pt. *bucho* comes from Lat. mūscŭlus, but DCECH (buche I) and DEHLP (bucho/buch-) rejected this hypothesis (cf. DRAE: buche and DELG: bocha 1/bucho). REW (5772) and DEEH (828) gave the GP form *musgoo*, which I could not locate in DDGM, TMILG, DEHLP or DEM.

- ***muslo* (OSp.)**

  Etymology: Lat. mūscŭlus (root/stem: mūs)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: CRC (259); DRAE (muslo); REW (5772); cf. Roberts (2014: 240); DEEH (828); DCECH (mur); CORDE.

- ***nadija* (OSp.)**

  Etymology: Lat. anatĭcŭla (root/stem: anas, -ătis)

  Other forms: *anadeja, nabija*

  Attestation date: 12th century, OL palatalization: yes

  Sources and notes: With the meaning 'iron piece in a mill'; CRC (446); DEEH (28, 463); REW (440); no information was found in DRAE; cf. DCECH (ánade); NTLLE (anadeja, see Nebrija or DRAE 1770, also nabija); CORDE (OSp. *anadeja* in Nebrija, 15th century, see NTLLE); TDHLE (anadeja) considered OSp. *anadeja* to be a derivational form of OSp. *ánade*.

- ***navaja* (OSp.)**

  Etymology: Lat. nŏvācŭla (root/stem: nŏvācŭla)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: CRC (438, 139); GCLI (278); DCECH (navaja); DRAE (navaja); DEEH (838); REW (5965).

- ***Navalia* (GP)**

  Etymology: Lat. nŏvācŭla (root/stem: nŏvācŭla)

  Attestation date: 11th century, OL palatalization: yes

  Sources and notes: GCLI (278); DELG (navalla); REW (5965); DCECH (navaja); DEEH (828); DEHLP (navalha); DEM (1571); DDGM (navalla); TMILG (CSM, CDMO, CT); for the given inherited form, see FF (135, 354) and CODOLGA; Mir. *nabalha*.

- ***nebli* (OSp.)**

  Etymology: Late Lat. nībŭlus (root/stem: mīlvus)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: CRC (433); REW (5904); cf. DRAE (from Mozarab. *burní*); DEEH (836); CORDE. A possible evolution of the etymon would be as follows: Lat. nīlvus (alternative form of MĪLVUS) > *NĪLVULUS > NĪBULUS > *NIBLO > OSp. *neblí* (cf. DCECH: neblí).

- ***negligencia* (OSp.)**

  Etymology: Lat. NEGLĔGENTĬA (root/stem: NEGLEGO) (BORR?)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: No information was found in REW (5877-9), DCECH and DEEH; DRAE (negligencia); CORDE (examples of OSp. *negligencia* before the 13th century in Latin texts). OSp. *neglir* (12th century) could be a form of OSp. *negligir* (< Lat. NEGLĔGERE) but its meaning its unclear (see CORDE). Attempted root or stem reconstruction for words like Lat. NEGLECTĒ, NEGLECTĬO, NEGLECTOR, NEGLĔGENS, and NEGLĔGO (see LS for words containing the root *negle-*): ne*e*, ne*i*, ne*j*, ne*y* (more general regular expressions to account for possible diphthongization) (CORDE).

- ***negrigença* (GP)**

  Etymology: Lat. NEGLĔGENTĬA (root/stem: NEGLEGO)

  Other forms: *negryiança, negleença*

  Attestation date: 14th century, OL palatalization: no

  Sources and notes: No information on Ibero-Romance was found in REW (5877-9); DEHLP (negligência); DEM (1576); DDGM (negrigẽça). GP *negleença* is attested in 13th-century CDMO but it seems to be written as *negleẽꝣa* in a different version of the same text in HGP (TMILG, see also GP *negregencya* in TA and LP for the given inherited form). Lat. /g/ was lost before /j i/ (FF: 365), so GP *negleença* should not necessarily be considered a Lat. borrowing. Attempted root or stem reconstruction for words like Lat. NEGLECTĒ, NEGLECTĬO, NEGLECTOR, NEGLĔGENS, and NEGLĔGO (see LS for words containing the root *negle-*): ne*e*, ne*i* (more general regular expressions to account for possible diphthongization) (i = <j y i>, see "Asociacións gráficas" in TMILG) (TMILG, DDGM).

- ***nespereyra* (GP)**

  Etymology: Lat. MĔSPĬLUM (root/stem: MĔSPĬLUM)

  Attestation date: 10th century, OL palatalization: no

  Sources and notes: Georges and LS (mĕspĭlus/mĕspĭlum); GCLI (69); DCECH (mízcalo); DEEH (810); Lat. MĔSPĬLUS-M > NESPĬLUS > *NESPĬRUS > Gal. *níspero* (DEHLP: nêspera; REW: 5540; RELG: nespereira); GP *Nespereira/nespereyra* are attested between the 13th and 16th centuries in TMILG (DTT, MSMDFP, VFD, SVP), GP *nesperas* is attested in the 15th century (DEHLP: nêspera); for the context of the given inherited form, see DEM (1580) and the original source (PMH, *Diplomata et Chartae* I: 46).

- ***nevris* (GP)**

  Etymology: Late Lat. NĪBŬLUS (root/stem: MĪLVUS)

  Attestation date: 15th century, OL palatalization: no

  Sources and notes: REW (5904); see DEHLP (nebri) for information on the inherited form; DEEH (836). A possible evolution of the etymon would be as follows: Lat. NĪLVUS (alternative form of MĪLVUS) > *NĪLVULUS > NĪBULUS > *NIBLO > GP *nevris* (cf. DCECH: neblí). DEM (1573) considered Pt. *nebri* to be a Sp. borrowing.

- ***niebla* (OSp.)**

  Etymology: Lat. NĔBŬLA (root/stem: NĔBŬLA)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: CRC 433; GCLI (281); DCECH (niebla); REW (5865); CORDE.

- ***nisperos* (OSp.)**

  Etymology: Lat. MĔSPĬLUM (root/stem: MĔSPĬLUM)

  Attestation date: 14th century, OL palatalization: no

  Sources and notes: Georges and LS (mĕspĭlus/mĕspĭlum); GCLI (69); DCECH (mízcalo); DEEH (810). REW (5540); CORDE. Lat. MĔSPĬLUS-M > NESPĬLUS > *NESPĬRUS > Sp. *níspero* (cf. DEHLP: nêspera and DRAE: níspero)

- ***nublado* (OSp.)**

  Etymology: Lat. NUBĬLĀRE (root/stem: NŪBES)

  Other forms: *añublar*

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: CRC (433); DEEH (838); cf. REW (5975); DRAE (nublar/añublar); cf. DCECH (nube); CORDE.

- ***nublo* (OSp.)**

  Etymology: Lat. NŪBĬLUS (root/stem: NŪBES)

  Other forms: *ñublo*

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: CRC (433); DCECH (nube); DEEH (838); REW (5978); DRAE (nublo); cf. CORDE.

- ***nuveado* (GP)**

  Etymology: Lat. NUBĬLĀRE (root/stem: NŪBES)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: cf. DEEH (838) and REW (5975); DEM (1602); DEHLP (nublar); DDGM (nuveado); TMILG (CSM).

- ***núvia* (Pt.)**

  Etymology: Lat. NŪBĬLUS (root/stem: NŪBES)

  Other forms: *nuvioso*

  Attestation date: 16th century, OL palatalization: no

  Sources and notes: DEEH (838); DEM (1602); REW (5978); DEHLP (nuvioso/nub-); TLPGP (núbia/nuvem).

- ***névoa* (GP)**

  Etymology: Lat. NĔBŬLA (root/stem: NĔBŬLA)

  Other forms: *nebra*

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: FF (222); GCLI (281); cf. REW (5865); DEHLP (névoa); DDGM (neuoa/névoa); see CMGP (Martin Anes Marinho) for the original text, other examples in DEM (1582-3); cf. TMILG; GP *nebra* is attested in the 14th century (TMILG: VIM).

- ***oblada* (OSp.)**

  Etymology: Lat. OBLĀTA (root/stem: OFFERRE)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: CRC (142); DEEH (841); DRAE (oblada); CORDE; Sp. *oblea* would be a Fr. borrowing (REW: 6012, DEEH: 841).

- ***obligar* (OSp.)**

  Etymology: Lat. ŎBLĬGĀRE (root/stem: OBLIGO)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: CRC (109); GCLI (237); REW (6012a); DRAE (obligar); DCECH (ligar).

- ***obradar* (GP)**

  Etymology: Lat. OBLĀTA (root/stem: OFFERRE)

  Attestation date: 14th century, OL palatalization: no

  Sources and notes: DEEH (841); DEHLP (obrada 1/obradar); cf. DEM (972); DELG (oblada); Pt. *obreia* would be a Fr. borrowing (REW: 6012); DDGM (obladar); TMILG (VFD, GP *obladas* attested in the same source).

- ***obridar* (GP)**

  Etymology: Late Lat. *ŎBLĪTĀRE (root/stem: OBLĪTUS)

  Other forms: *olvidar*

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: cf. Georges and LS (oblito/oblitus); GCLI (237); DCECH (olvidar); DEEH (841); DEHLP (olvidar); DDGM (olvidar, TC); TMILG (LP, CSM). It is possible that GP *olvidar*, attested in the 13th-14th centuries (TMILG: TC, XH, HT, CT), was an OSp. borrowing (REW: 6015; DDGM: TC; DEM: 1621). DEHLP (obridar) suggested that Pt. *obridar* is of Cat. or Prov. origin.

- ***obrigo* (GP)**

  Etymology: Lat. ŎBLĬGĀRE (root/stem: OBLIGO)

  Other forms: *obligo*

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: GCLI (237); DELG (obrigar); REW (6012a); DDGM (obrigar); DEHLP (obrigar); DEM (1335-6); TMILG (CDMO; GP *obligo* also attested in VFD, CDMO).

- ***ojo* (OSp.)**

  Etymology: Lat. ŎCŬLUS (root/stem: ŎCŬLUS)

  Attestation date: 12th century, OL palatalization: yes

  Sources and notes: CRC (226, 439, 445); GCLI (278); REW (6038); DCECH (ojo); DRAE (ojo); CORDE; Sp. *anteojo* may come from Lat. ANTE ŎCŬLUM (cf. DEEH: 467 and DELG: antollo) or from Sp. *ante + ojo* (DRAE: antojo; DCECH: ojo).

- ***ollos* (GP)**

  Etymology: Lat. ŎCŬLUS (root/stem: ŎCŬLUS)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: FF (354); GCLI (278); DELG (ollo); DCECH (ojo); TMILG (LP, CSM, TC); DDGM (ollo); see also DEHLP (olho) and DEM (1619); see DELG (abesullar) for other possible inherited words from the Lat. root ŎCŬLUS; Gal. *antollo* may come from

Lat. ANTE ŎCŬLUM (cf. DELG: antollo; DXL: 85; DEEH: 467) or from GP *ante + ollos* (DEHLP: antolho; DDGM: antolãte, TC); Mir. *uolho* (GCLI: 278).

- ***olvidar* (OSp.)**

  Etymology: Late Lat. *ŎBLĪTĀRE (root/stem: OBLĪTUS)

  Attestation date: 12th century, OL palatalization: no

  Sources and notes: cf. Georges and LS (oblito/oblitus); GCLI (237); CRC (433); DCECH (olvidar); REW (6015); DEEH (841); CORDE.

- ***onceja* (OSp.)**

  Etymology: Late Lat. *ŬNCĬCŬLA (root/stem: UNCUS)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: CRC (439); DCECH (vencejo II); no information found in DEEH; CORDE. Sp. *vencejo* 'common swift' may be an alteration of OSp. *oncejo* due to confusion with Sp. *vencejo* 'type of ligature'. OSp. *oncejo* would be the result of the influence of OSp. *onceja* (*ŬNCĬCŬLA) on OSp. **hocejo*, which may have its origin in Lat. *FALCICULUM (cf. DCECH: vencejo II; REW: 3156; DRAE: oncejo/vencejo 2; Roberts 2014: 275).

- ***orejadas* (OSp.)**

  Etymology: Lat. AURĬCŬLA (root/stem: AURIS)

  Attestation date: 12th century, OL palatalization: yes

  Sources and notes: CRC (439); DCECH (oreja); REW (793); DEEH (484); CORDE.

- ***orellas* (GP)**

  Etymology: Lat. AURĬCŬLA (root/stem: AURIS)

  Attestation date: 12th century, OL palatalization: yes

  Sources and notes: FF (135, 354); DCECH (oreja); DDGM (orella, especially TC and Tato Plaza 1999); DELG (orella); DEHLP (orella); DEM (1630); TMILG (GP *orella* also attested in CSM, LP, TC, HT); for the context (in PMH, *Leges* III: 380) of the given inherited form, see DEM (1630) or DDGM (TC); Mir. *oureilha* (GCLI: 278).

- ***oreya* (Ast.)**

  Etymology: Lat. AURĬCŬLA (root/stem: AURIS)

  Other forms: *urecha*

  OL palatalization: yes

  Sources and notes: DEEH (484); DGLA (oreya).

- ***ouelias* (GP)**

  Etymology: Lat. OVĬCŬLA (root/stem: OVIS)

  Attestation date: 9th century, OL palatalization: yes

  Sources and notes: DELG (ovella); REW (6124); DEEH (847); DEHLP (ovelha); DDGM (ovella); TMILG (CSM, FCR, VFD); CODOLGA (*ouelias* also attested in the 10th and 11th centuries); for the given inherited form, see FF (136, 354) and DEM (1641); Mir. *oubeilha* (GCLI: 278).

- ***ovelias* (OSp.)**

  Etymology: Lat. OVĬCŬLA (root/stem: OVIS)

  Attestation date: 10th century, OL palatalization: yes

  Sources and notes: CRC (135, 439, 544); REW (6124); DCECH (oveja); DEEH (847); DRAE (oveja); CORDE.

- ***oviello* (OSp.)**

  Etymology: Lat. GLŎBĔLLUM (root/stem: GLOBUS)

  Other forms: *luviello, lovelo*

  Attestation date: 14th century, OL palatalization: no

  Sources and notes: CRC (140); GCLI (236); REW (3791). Leon. *ovielo* is already attested in the 13th century (DCECH: ovillo). DCECH suggested that the attested forms *iubellum* and *gubellum* might point to the palatalization of the OL cluster with the outcome /ʤ/. Attempted root or stem reconstruction for words like Lat. CONGLŎBĀTĬO, CONGLŎBO, CIRCUMGLŎBĀTUS, GLŎBO, GLŎBŌSUS, GLŎBŬLUS, and GLŎBUS (see LS for words containing the root -*glob*-): *chob*, l?ob*, lob*, gob*, job* (all these combinations also with <ue> instead of <o> due to possible diphthongization) (CORDE).

- ***palabra* (OSp.)**

  Etymology: Lat. PARABŎLA (root/stem: PARABŎLA)

  Attestation date: 12th century, OL palatalization: no

  Sources and notes: CRC (433); DCECH (palabra); REW (6221); DEEH (854); DRAE (palabra); CORDE.

- ***palavra* (GP)**

  Etymology: Lat. PARABŎLA (root/stem: PARABŎLA)

  Other forms: *paravoa, paravras, paravla*

  Attestation date: 13th century, OL palatalization: no

Sources and notes: FF (222); DCECH (palabra); DEEH (854); cf. REW (6221); DDGM (palabra, especially TC); cf. DEHLP (palabra); DEM (1655-6); all given forms are attested in CSM (see also TMILG: TC, XH).

- ***panojas* (OSp.)**

  Etymology: Late Lat. PĀNŬCŬLA (root/stem: PĀNUS)

  Attestation date: 15th century, OL palatalization: yes

  Sources and notes: CRC (439, 446); DCECH (panoja); REW (6209); Georges (panucula); DRAE (panoja); DEEH (853); CORDE.

- ***pareja* (OSp.)**

  Etymology: Late Lat. *PARĬCŬLA (root/stem: PĀR, -RIS)

  Attestation date: 12th century, OL palatalization: yes

  Sources and notes: GCLI (278); REW (6240); DEEH (856); DCECH (par); Roberts (2014: 311); DRAE (parejo); CORDE.

- ***parejo* (OSp.)**

  Etymology: Late Lat. *PARĬCŬLUS (root/stem: PĀR, -RIS)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: CRC (439); REW (6241); DEEH (856); DCECH (par); Roberts (2014: 311); DRAE (parejo); CORDE.

- ***parelios* (GP)**

  Etymology: Late Lat. *PARĬCŬLUS (root/stem: PĀR, -RIS)

  Attestation date: 11th century, OL palatalization: yes

  Sources and notes: REW (6241); DEHLP (parelho); DELG (parella); DEM (1672). There are earlier examples of *parelios* in CODOLGA but these texts were written in Castile and León. For this reason, it is unclear whether they are valid examples of GP or the Medieval Latin of the region (see TMILG: HT for GP examples).

- ***parella* (GP)**

  Etymology: Late Lat. *PARĬCŬLA (root/stem: PĀR, -RIS)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: GCLI (278); REW (6240); DEHLP (parelha); DELG (parella); DDGM (parella, especially TC); DEM (1672); TMILG (CSM, LP, TC).

- ***peligro* (OSp.)**

  Etymology: Lat. PĔRĪCŬLUM (root/stem: PERĪCŬLUM)

  Other forms: *periglo, perigro*

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: CRC (438); DCECH (peligro); DEEH (867); REW (6414); DRAE (peligro). In CORDE, both OSp. *peligro* and *periglo* are attested in the works of Berceo (13th century).

- ***perigo* (GP)**

  Etymology: Lat. PĔRĪCŬLUM (root/stem: PERĪCŬLUM)

  Other forms: *perigros, prigoo*

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: FF (221); cf. REW (6414); DEEH (867); DDGM (perigo); DEHLP (perigo); DEM (1722). In TMILG (CSM), GP *periglos* and *perigoo* are also found (see also TC, HT).

- ***pesunho* (Pt.)**

  Etymology: Late Lat. PĔDĬS ŬNGŬLA (root/stem: UNGUIS)

  Attestation date: 18th century, OL palatalization: yes

  Sources and notes: DEEH (862); DCECH (pie); DEM (1701); REW (6439); DEHLP (pezunho) seemed to imply that Pt. *pezunho* is a Sp. borrowing.

- ***pesuña* (OSp.)**

  Etymology: Late Lat. PĔDĬS ŬNGŬLA (root/stem: UNGUIS)

  Attestation date: 15th century, OL palatalization: yes

  Sources and notes: CRC (259, 269); DRAE (pezuña); DEEH (862); DCECH (pie); REW (6439); CORDE.

- ***piesllu* (Ast.)**

  Etymology: Late Lat. PĔSTŬLUS (root/stem: PĔSSŬLUS)

  OL palatalization: yes

  Sources and notes: CRC (260-2); REW (6441); DEEH (869); DCECH (pestillo); GCLI (283); DGLA (piesllu). The evolution of the etymon could have been as follows: Lat. PĔSSŬLUS > (PESTŬLUS) > PESCULUM > PESCLUM > GP *pecho* (cf. DCECH: pestillo; REW: 6441; DEM: 965).

- ***pilche* (Mozarab.)**

  Etymology: Late Lat. PĔSTŬLUS (root/stem: PĔSSŬLUS)

  OL palatalization: yes

  Sources and notes: CRC (272, 285); DCECH (pestillo); DEEH (869).

- ***piojos* (OSp.)**

  Etymology: Late Lat. PĒDŬCŬLUS (root/stem: PĒDIS)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: CRC (50, 439); GCLI (278); DCECH (piojo); REW (6361); DEEH (862); DRAE (piojo); CORDE.

- ***piollo* (GP)**

  Etymology: Late Lat. PĒDŬCŬLUS (root/stem: PĒDIS)

  Attestation date: 14th century, OL palatalization: yes

  Sources and notes: FF (136); GCLI (278); DCECH (piojo); DEEH (862); cf. REW (6361); DELG (piollo); DDD (piollo, CVFLG). DEHLP (piolho) gave GP *peolhos* (14th century) as first attestation, which I could not locate in TMILG or DDGM, and DEM (1742) provided the example *piolho* (15th century).

- ***piérgula* (Ast.)**

  Etymology: Lat. PĔRGŬLA (root/stem: PĔRGŬLA)

  OL palatalization: no

  Sources and notes: DCECH (pérgola); DGLA (piérgola); DEEH (867); cf. CORDE; see REW (6413), where most inherited words lack OL palatalization.

- ***playa* (OSp.)**

  Etymology: Late Lat. PLAGĬA (root/stem: PLAGĬA)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: GCLI (231); DRAE (playa); DEEH (878); CORDE. REW (6564) suggested that both Sp. *playa* and Pt. *praya* are borrowings from Prov. *playa*, which DCECH (playa) refuted. DCECH (ibid.) suggested that OSp. *playa* may have originated in the Southern Spanish and Portuguese varieties, so the lack of OL palatalization would be explained by the Mozarab. influence (cf. DEEH: 878).

- ***plaza* (OSp.)**

  Etymology: Late Lat. *PLATTĔA (root/stem: PLATĔA) (u.e.)

  Attestation date: 12th century, OL palatalization: no

  Sources and notes: Two possible etymologies that actually refer to two forms of the same word: Late Lat. *PLATTĔA (GCLI 231; DCECH: plaza; DRAE: plaza) and Lat. PLATĔA (REW: 6583; cf. DEHLP: praça, DEEH: 880, DELG: praza); CORDE. DEM (1785) suggested that OL palatalization did not take place in this word because it was borrowed from Fr. *place* (also DEEH: 880). DCECH (plaza) suggested that the lack of OL palatalization could be due to the administrative use of this word, which would have made it more common among the upper-class, or due to the status of this word as semi-learned: "En cast. y port. (*praça*) el vocablo no presenta el tratamiento radicalmente popular del grupo PL-, mas ello puede explicarse simplemente por la aparición preferente del vocablo en el uso oficial y administrativo, con el consiguiente predominio de la pronunciación de las clases elevadas en la fonética de *plaza*; también podría ser palabra propiamente semiculta, pues PLATEA es voz frecuente en latín clásico y medieval [...]" (ibid.). REW (6583) considered Sp. *plaza* to be a learned or technical word ("Buchwort").

- ***plazer* (OSp.)**

  Etymology: Lat. PLACĒRE (root/stem: PLACĒRE)

  Attestation date: 12th century, OL palatalization: no

  Sources and notes: CRC (526); DRAE (placer); CORDE. DCECH (placer) suggested that the lack of OL palatalization was due to the predominance of a more conservative form used by the upper-classes: "Si en *placer* no se alteró el grupo inicial de consonantes no fué porque fuese voz culta ni aun semiculta, sino por ser vocablo muy empleado por las clases altas, y porque el agrado del señor importaba mucho más que el del rústico." (ibid.). REW (6557) considered Sp. *placer* to be a technical or learned word ("Buchwort").

- ***plazo* (OSp.)**

  Etymology: Lat. PLACĬTUS (root/stem: PLACĒRE)

  Other forms: *pleito*

  Attestation date: 11th century, OL palatalization: no

  Sources and notes: CRC (319, 330); GCLI (231); DCECH (plazo); DRAE (plazo/pleito); DEEH (878); CORDE. It is possible that OSp. *pleito* was an OFr. borrowing (REW: 6561; cf. DCECH: plazo). OSp. *plazdo* > Sp. *plazo* is considered to be a technical or learned word by REW (6561). DCECH (plazo) rejected the status of OSp. *plazdo* as learned word and preferred to explain the absence of OL palatalization with the prevalence of a more conservative form of the word; as OSp. *plazdo* 'agreed (by the authorities) day or deadline' was a legal term, it may have been more frequently used by the upper-classes: "Meyer-Lübke (REW, número 6561) supone que sean cultismos, a causa del tratamiento del grupo PL-, pero a lo sumo se podrán calificar de semicultismos, y más bien deben mirarse meramente como voces hereditarias en las que prevaleció, por su significado jurídico, la pronunciación más conservadora de las clases elevadas. Se trata de un viejo término jurídico propio, entre todos los romances, del cast. y el port." (ibid.).

- ***pllorar* (Arag.)**

  Etymology: Lat. PLŌRĀRE (root/stem: PLŌRĀRE)

  OL palatalization: yes

  Sources and notes: GCLI (231); Aragonario; Viudas Camarasa (1979).

- ***plomo* (OSp.)**

  Etymology: Lat. PLŬMBUM (root/stem: PLŬMBUM) (BORR?)

  Attestation date: 11th century, OL palatalization: no

  Sources and notes: GCLI (232); DRAE (plomo); DEEH (881); CORDE. DCECH (plomo) gave two reasons for the lack of OL palatalization in Sp. *plomo*: Sp. *plomo* is an Arag. or Cat. borrowing (also REW: 6615) or that the learned pronunciation predominated in this word.

- ***pluma* (OSp.)**

  Etymology: Lat. PLŪMA (root/stem: PLŪMA)

  Attestation date: 11th century, OL palatalization: no

  Sources and notes: GCLI (232); no information on Spanish was found in REW (6610a); DEEH (881); CORDE. DCECH (pluma) did not consider OSp. *pluma* 'feather' to be a (semi-)learned word; the absence of OL palatalization would come from the prevalecence of a more conservative form of the word since only the upper-classes would be able to afford such items: "En cast. y port., el vocablo no presenta el tratamiento popular del grupo PL-, que quizá existió en la forma preliteraria del vocablo, a juzgar por los derivados port. *chumaço* y *chumaceira* y el cast. ant. *llumazo* […]. No creo, sin embargo, que en cast. podamos mirar el vocablo como voz culta ni aun propiamente semiculta; más bien es de creer que prevaleció en él la pronunciación más conservadora de las clases elevadas: en una economía primitiva, la pluma es artículo de lujo sólo empleado por las clases pudientes." (ibid.).

- ***poblar* (OSp.)**

  Etymology: Late Lat. PŎPŬLĀRE (root/stem: PŎPŬLUS)

  Attestation date: 12th century, OL palatalization: no

  Sources and notes: Georges (populo); CRC (432); DCECH (pueblo); DRAE (poblar); REW (6654); Roberts (2014: 373); CORDE; Leon. *polar* (DCECH: pueblo; cf. DEEH: 883).

- ***poboo* (GP)**

  Etymology: Lat. PŎPŬLUS (root/stem: PŎPŬLUS)

  Other forms: *povoo*

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: FF (222, 363, 379); DELG (pobo 1); DEHLP (povo); DEM (1784); DDGM (povoo); TMILG (CSM, TC); GP *povoo* is attested in the 14th century (see DDGM: povoo/pouoo). Notably, none of the inherited words provided by REW (6654) exhibits palatalization.

- ***pobrou* (GP)**

  Etymology: Late Lat. PŎPŬLĀRE (root/stem: PŎPŬLUS)

  Other forms: *povoar, povorar*

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: Georges (populo); FF (222, 379); DDGM (pobrar); REW (6654); DELG (pobo 1); cf. DCECH (pueblo); TMILG (CSM, TC, CT; GP *povoedes/povoar* attested in 14th-century CDMO and MPR). According to DEHLP (povoar) and DEM (1784), GP *povoar* was derived from GP *povoo* (also NDLP: povoar). DEM (1784) claimed that GP *povorar* would come from Lat. PŎPŬLĀRE.

- ***praça* (GP)**

  Etymology: Late Lat. *PLATTĔA (root/stem: PLATĔA) (u.e.)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: Two possible etymologies that actually refer to two forms of the same word: Late Lat. *PLATTĔA (GCLI 231; DCECH: plaza; DEHLP: praça; DDGM: praça, see TC, de Miguel 1977 and Tato Plaza 1999) and Lat. PLATĔA (DELG: praza; REW: 6583; FF: 319; DEEH: 880); TMILG (CSM, TC). DEM (1785) suggested that OL palatalization did not take place in this word because it was borrowed from Fr. *place* (also DEEH: 880). DCECH (plaza) suggested that the lack of OL palatalization could be due to the administrative and official implications of the word, which would have made it more common among the upper-class, or due to the status of this word as semi-learned. REW (6583) considered Pt. *praça* to be a learned or technical word ("Buchwort").

- ***prayas* (GP)**

  Etymology: Late Lat. PLAGĬA (root/stem: PLAGĬA)

  Attestation date: 14th century, OL palatalization: no

  Sources and notes: GCLI (231); DEHLP (praia); DELG (praia); DDGM (praia, CVGP); DEM (1786); for the given inherited form, see DEHLP (praia). REW (6564) suggested that both Sp. *playa* and Pt. *praya* are Prov. borrowings, which DCECH (playa) refuted. DCECH (ibid.) suggested that Pt. *praia* may have originated in Southern Spanish and

Portuguese varieties, so the absence of OL palatalization would be explained by the Mozarab. influence (cf. DEEH: 878).

- ***prazer* (GP)**

  Etymology: Lat. PLACĒRE (root/stem: PLACĒRE)

  Attestation date: 12th century, OL palatalization: no

  Sources and notes: GCLI (231); DDGM (plazer); DEHLP (prazer); for the given inherited form, see DEM (1749) or the original source (PMH, *Leges* III: 380); GP *prazer* is also attested in the 13th century (TMILG: LP, CSM); GP *prazer* is refered to as a (semi-)learned form by some sources (DDGM: prazer, see TC and Michaëlis 1920; REW: 6557; cf. DCECH: placer).

- ***prazo* (GP)**

  Etymology: Lat. PLACĬTUS (DIES) (root/stem: PLACĒRE)

  Attestation date: 10th century, OL palatalization: no

  Sources and notes: FF (220, 400); DCECH (plazo); DEHLP (prazo); REW (6561); DELG (prazo); DEEH (878); DDGM (prazo); DEM (1750); see TMILG (CSM, GHCD, CDMO), CODOLGA and PMH (*Diplomata et Chartae* I: 183) for attestations of GP *plazo/prazo* as early as the 10th century. Pt. *prazo* is considered to be a technical or learned word by REW (6561), which DCECH (plazo) contested. DCECH (ibid.) preferred to explain the lack of OL palatalization in GP *prazo* as a predominance of a more conservative form of the word, which was a legal term and probaly most often used by the upper-classes (see *plazo* (OSp.) for further information).

- ***prégoa* (Minh. Pt.)**

  Etymology: Lat. PĔRGŬLA (root/stem: PĔRGŬLA)

  OL palatalization: no

  Sources and notes: DCECH (pérgola); DEEH (867); DEM (1718); no information was found in DEHLP.

- ***prouguer* (GP)**

  Etymology: Lat. PLACĒRE (root/stem: PLACĒRE) (u.e.)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: Either influence of the perfect form of PLACĒRE or directly from PLACUI(T) (cf. FF: 362 and DELG: pracer/aprouguer); cf. DEHLP (prazer) and DEM (1749-50); DDGM (prazer); DDD (prouguer); TMILG (LP, CSM, CDMO, TC). Michaëlis (1920, in DDD) considered it a semi-learned word, probably similar to GP *prazer* (see *prazer* (GP)).

- ***prumas* (GP)**

  Etymology: Lat. PLŪMA (root/stem: PLŪMA)

  Attestation date: 14th century, OL palatalization: no

  Sources and notes: GCLI (232); cf. REW (66610a); DELG (pluma); cf. DEHLP (pluma); DDGM (pruma); DEEH (881); TMILG (CT); GP *prumaz* is attested twice in CSM (13th century) with the meaning 'piece of clothing'. DCECH (pluma) did not consider Pt. *pruma* 'feather' to be a (semi-)learned word; the absence of OL palatalization would come from the prevalecence of a more conservative form of the word since only the upper-classes would be able to afford such items. DEM (595) described Pt. *pluma* as being a learned word or having undergone a learned evolution ("por via culta").

- ***publigo* (OSp.)**

  Etymology: Lat. PŪBLĬCUS (root/stem: PŪBLĬCUS)

  Other forms: *púlvego*

  Attestation date: 11th century, OL palatalization: no

  Sources and notes: DRAE (público); CORDE. OSp. *púlvego/a* also existed, which would come from *PULBICUS (CRC: 304; DCECH: público)

- ***pucaro* (GP)**

  Etymology: Lat. PŌCŬLUM (root/stem: PŌCŬLUM) (BORR?)

  Attestation date: 14th century, OL palatalization: no

  Sources and notes: DCECH (búcaro); DDGM (púcaro); DEEH (881); DELG (púcaro); TLPGP (púcaro); DEEH (881). Being attested in the 14th century, a form with lenition would be expected, i.e. **púgaro*. It is possible that the lack of lenition comes from the Mozarab. origin of the word (cf. DCECH: búcaro and DEM: 1818).

- ***pueblo* (OSp.)**

  Etymology: Lat. PŎPŬLUS (root/stem: PŎPŬLUS)

  Attestation date: 12th century, OL palatalization: no

  Sources and notes: CRC (432); DCECH (pueblo); DEEH (883); DRAE (pueblo); CORDE. Notably, none of the inherited words provided by REW (6654) shows traces of OL palatalization.

- ***puluega* (GP)**

  Etymology: Lat. PŪBLĬCUS (root/stem: PŪBLĬCUS)

  Other forms: *pobligo*

  Attestation date: 13th century, OL palatalization: no

Sources and notes: FF (394); DDGM (pubrico/publico, especially CVGP); TMILG (PRMF, CDMO); DCECH (público); for information on the context and source of GP *púlvego*, see DEM (1818).

- ***quajo* (OSp.)**

  Etymology: Lat. COAGŬLUM (root/stem: CŌGERE)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: CRC (102, 440, 540); Georges (coagulum); REW (2006); Mozarab. *quwályo* is already attested in the 12th century (DCECH: cuajo); CORDE.

- ***quallado* (GP)**

  Etymology: Late Lat. COAGŬLĀRE (root/stem: COAGŬLUM)

  Attestation date: 14th century, OL palatalization: yes

  Sources and notes: FF (395); GCLI (279); DCECH (cuajo); DELG (callar/coallar-se); cf. REW (2005), DEHLP (coalhar) and NDLP (coalhar); TMILG (CT); the modern word is Gal. *callar* (DRAG, TLPGP).

- ***quallo* (GP)**

  Etymology: Lat. COAGŬLUM (root/stem: CŌGERE)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: DELG (coallar-se); TMILG (FCR); cf. DEHLP(coalho) and REW (2006). The modern form seems to be Gal. *callo* (DRAG) but there are other geographically used forms like Gal. *coallo* and *cuallo* (TLPGP).

- ***quenlla* (Gal.)**

  Etymology: Lat. CANĪCŬLA (root/stem: CANIS)

  Attestation date: 20th century, OL palatalization: yes

  Sources and notes: DELG (quenlla); DXL (1012). Variations of Gal. *quenlla* include *caella*, *caenlla*, *quella* and *quenlla* with the meaning ‘a type of shark’ (cf. DRAG: quenlla/caella; TLPGP and DDD: quenlla, especially Ríos Panisse 1977). REW (1586) gave the etymology Sp. *caneja* ‘shark, dogfish’ < Lat. CANĪCULA with a similar meaning and form to the Galician words.

- ***racha* (OSp.)**

  Etymology: Lat. ASTŬLA (root/stem: AXIS)

  Attestation date: 14th century, OL palatalization: yes

  Sources and notes: DCECH (rajar); DRAE (rachar); CORDE. Sp. *astilla* comes from Lat. ASTĔLLA, which is the diminutive form of ASTŬLA and does no longer have an OL cluster (DCECH: astilla). The evolution of the etymon might have been as follows: Lat. ASSŬLA

~ ASTŬLA > ASTLA > ASCLA -> Leon. *racha* (cf. DCECH: rajar REW). DCECH (rajar) mentioned that *racha(s)* is found several times in Leonese documents from the 13th and 14th centuries, but that there are also examples of *racha* in the 14th century that cannot be considered Leonese.

- ***rajado* (OSp.)**

  Etymology: Late Lat. *RAGŬLĀRE (root/stem: RAGERE)

  Attestation date: 14th century, OL palatalization: yes

  Sources and notes: DEEH (905); DCECH (rajar); REW (7009); cf. CORDE.

- ***ralhar* (Pt.)**

  Etymology: Late Lat. *RAGŬLĀRE (root/stem: RAGERE)

  Attestation date: 18th century, OL palatalization: yes

  Sources and notes: DEEH (905); DEHLP (ralhar); DEM (1848-9); DCECH (rajar). REW (7001, 7009) seemed to give two different etymologies (Lat. RADŬLA and Late Lat. *RAGŬLĀRE) for Pt. *ralhar* 'to reprimand or reprehend'.

- ***rallante* (Gal.)**

  Etymology: Late Lat. *RAGŬLĀRE (root/stem: RAGERE)

  Attestation date: 19th century, OL palatalization: yes

  Sources and notes: With the meaning 'to bother, nag'; DCECH (rajar); DEEH (905); DDD (rallar/rallante); TLPGP (rallante).

- ***rallar* (OSp.)**

  Etymology: Lat. RADŬLA (root/stem: RADERE) (u.o.)

  Attestation date: 15th century

  Sources and notes: DCECH (rajar/rallo); DEEH (905); cf. GCLI (282); DRAE (rajar/rallo). CRC (33-4, 438) and REW (7001) suggested that Sp. *raja(r)* comes from Lat. RADŬLA, which DCECH (rajar) disputed. It is possible that Sp. *ralla, rallar* or *rallador* come from Lat. RADŬLA/RADULĀRE (DEEH: 905; GCLI: 282). However, /ʎ/ is not the outcome to be expected in Spanish for secondary postvocalic /O(V)l/ clusters (cf. Section 2.4.1.1). Consequently, it may be more accurate to consider Sp. *ralla, rallar* and *rallador* as a derivational form of Sp. *rallo*, which comes from Lat. RALLUM (DCECH: rallo; DRAE: rallo/ralla/rallar; REW: 7022).

- ***rallo* (OSp.)**

  Etymology: Lat. RALLUM (root/stem: RADERE) (-OL)

  Attestation date: 15th century, OL palatalization: no

Sources and notes: LS (rallum/rado); DCECH (rallo); DEEH (906); DRAE (rallo). GCLI (282) gave as etymon Lat. RADŬLU, which does not appear in LS or Georges. Instead, there is Lat. RALLUM, which would be the result of the assimilation of /d/ to the lateral: Lat. RADERE → *RADLOM > Lat. RALLUM (DCECH: rallo). Consequently, the cluster dissolved and the Sp. outcome /ʎ/ comes Lat. /lː/.

- ***ralo* (Pt.)**

  Etymology: Lat. RALLUM (root/stem: RADERE) (-OL)

  Attestation date: 16th century, OL palatalization: no

  Sources and notes: LS and Georeges (rallum/rado); DCECH (rallo); DEHLP (ralo 2); DEEH (906); cf. DEM (1849). GCLI (282) gave as etymology Lat. RADŬLU, which does not appear in LS or Georges. Instead, there is LAT. RALLUM, which would be the result of the assimilation of /d/ to the lateral: Lat. RADERE → *RADLOM > Lat. RALLUM (DCECH: rallo). Consequently, the cluster dissolved and the GP outcome /l/ resulted from Lat. /lː/ (cf. FF: 358).

- ***rêbo* (Gal.)**

  Etymology: Late Lat. *REPŬLUM (root/stem: REPLĒRE)

  Attestation date: 18th century, OL palatalization: no

  Sources and notes: DXL (1032); DCECH (ripio); cf. DEHLP (rebo) and DEM (1861); TLPGP (rebo); DDD (rebo); DEEH (924) preferred Lat. *REPLEĀRE or REPLĒRE as etymology.

- ***rêbo* (Pt.)**

  Etymology: Late Lat. *REPŬLUM (root/stem: REPLĒRE)

  Attestation date: 17th century, OL palatalization: no

  Sources and notes: Lat. RĔPLUM > *REPŬLUM (DCECH: ripio; DEHLP: rebo); DELG (rebo); cf. DDGM (rebo); DEM (1861); TLPGP (rebo); DEEH (924) preferred *REPLEĀRE or REPLĒRE as the etymology. There is one instance of GP *rebo* attested in TMILG (THCS, 14th century) but it does not seem to have the meaning 'shard, pebble'.

- ***recluir* (Sp.)**

  Etymology: Lat. RECLŪDĔRE (root/stem: CLAUDĔRE) (BORR?)

  Attestation date: 16th century, OL palatalization: no

  Sources and notes: Georges (cludo/claudo); DEEH (914); DRAE (recluir); no Spanish inherited words were found in REW (7124). DCECH (clausura) seemed to imply that Sp. *recluir* is a learned word. Given that the /d/ suffered lenition and disappeared, it is unexpected that /k/ was not voiced. A preceding /w/ usually blocks voicing (GCLI: 142) but this is not the case in this etymon.

- ***relia* (OSp.)**

  Etymology: Lat. RĒGŬLA (root/stem: REGŌ)

  Other forms: *reja*

  Attestation date: 10th century, OL palatalization: yes

  Sources and notes: CRC (102, 440, 446); GCLI (279); DCECH (reja I); REW (7177); DEEH (919); cf. CORDE.

- ***relia* (GP)**

  Etymology: Lat. RĒGŬLA (root/stem: REGŌ)

  Attestation date: 10th century, OL palatalization: yes

  Sources and notes: FF (135, 219, 354); GCLI (279); DCECH (reja I); REW (7177); cf. DEHLP (regra); DELG (rella 1); CODOLGA (relias); TMILG (GP *rellas* attested in 13th-century FCR). It may be possible that GP *rellar* comes from Lat. RĒGŬLĀRE (DDGM: rella, TC; DELG: rella 2; but cf. REW: 7178-9 and DCECH: reja 1). Mir. *reilha* (GCLI: 279).

- ***reninchando* (OSp.)**

  Etymology: Late Lat. *HĬNNĪTŬLĀRE (root/stem: HINNIRE) (u.e.)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: CRC (271, 314); REW (4138); CORDE. According to DCECH (relinchar), the evolution of the etymon would be as follows: Lat. HINNIRE → HINNITARE → *HĬNNĪTULARE > HĬNNĪCLARE > **eninchar* > OSp. *reninchar* > Sp. *relinchar*. The nasalization of the onset nasal extended through the vowel nucleus, creating a nasal coda. For this reason, this OL cluster resulted in /ʧ/, which is the common outcome for postconsonantal OL clusters in Spanish (ibid.). An alternative etymon *REHINNITULARE would also be possible (cf. DRAE: relinchar; DEHLP: rinchar; DEEH: 727, 919).

- ***resollar* (OSp.)**

  Etymology: Lat. RESŬFFLĀRE (root/stem: SŬFFLĀRE)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: GCLI (235); DRAE (resollar); cf. Diez and Scheler (2021: 488); no information found in REW; CORDE. DEEH (928) preferred Lat. RESŬFLĀRE as etymology, which is unexpected given that the etymology for OSp. *sollar* is Lat. SŬFFLĀRE (DEEH: 1000). DCECH (resollar) seemed to derive OSp. *resollar* from OSp. *sollar*.

- ***resollo* (GP)**

  Etymology: Lat. RESŬFFLĀRE (root/stem: SŬFFLĀRE) (BORR?)

  Attestation date: 13-14th centuries, OL palatalization: yes

  Sources and notes: DELG (resollo); DDGM (resollo, specially TC); TMILG (only one instance, in TC). No words with a form *(re)solh-* were found in DEHLP (solhar/assoalhar/soalho/soalha) with the meaning 'gasp, breath'. Similarly, no information was found in DEM. GCLI (235) suggested that Gal. *resollar* may have been influenced or borrowed from Spanish. Given that Lat. SŬFFLĀRE became OSp. *sollar* (with OL palatalization) but GP *soprar* (without OL palatalization), and that the expected outcome for /Vf:l/ is /ʧ/ in Galician-Portuguese, it is probable that GP *resollo/resolhar* is of Spanish origin (further information in *soprar* (GP)).

- ***restojo* (OSp.)**

  Etymology: Late Lat. *RESTŬCŬLUM (root/stem: STIPULA)

  Attestation date: 12th century, OL palatalization: yes

  Sources and notes: Georges and LS (stipula); CRC (432); REW (7252a); DRAE (restojo/rastrojo); CORDE. According to DCECH (rastrojo), the evolution of the etymon would be the following: Lat. STIPULA > STUPULA → *RESTUPULARE → *RESTUPULU > Late Lat. *RESTŬCŬLUM. This last change was due to a suffix change, which was quite common from <tul, pul> to <cul> (cf. DEEH: 927).

- ***restroio* (GP)**

  Etymology: Late Lat. *RESTŬCŬLUM (root/stem: STIPULA)

  Attestation date: 12-13th centuries, OL palatalization: yes

  Sources and notes: Georges and LS (stipula); DELG (restrollo); DEEH (927); REW (7252a); DEHLP (restolho); DDGM (restollo, CVGP); DEM (1888); TMILG (GP *restrollo* attested in 13th-century FCR); see the context for the given inherited form in PMH (*Leges* V: 755; GP *restrolho* attested in Leges IV: 866). According to DCECH (rastrojo), the evolution of the etymon would be as follows: Lat. STIPULA > STUPULA → *RESTUPULARE → *RESTUPULU > Late Lat. *RESTŬCŬLUM. This last change was due to a suffix change, which was quite common from <tul, pul> to <cul>.

- ***Rianno* (Leon.)**

  Etymology: Lat. (RĪVĪ) ANGŬLUS (root/stem: ANGŬLUS) (u.e.)

  Other forms: *Riaño*

  Attestation date: 11th century, OL palatalization: yes

  Sources and notes: CRC (131, 259); REW (465); cf. DEEH (465); cf. Celdrán (2009: 70-1, 666-7); *Toponomasticon Hispaniae* (*Toponimia asturiano-leonesa*: Fuente Cornejo 2024).

- ***ripio* (Sp.)**

  Etymology: Late Lat. *REPŬLUM (root/stem: REPLĒRE) (u.o.)

  Attestation date: 16th century

  Sources and notes: DRAE (ripio). According to DCECH, Sp. *ripio* comes from Lat. RĔPLUM or *REPŬLUM through Mozarab. *rípel*. In contrast, REW (7222b) suggested the etymology **rēpja* (cf. DCECH: ripio/ripia), and DEEH (924) preferred Lat. *REPLEĀRE.

- ***rollo* (OSp.)**

  Etymology: Lat. RŎTŬLUS (root/stem: RŎTA) (u.o.)

  Attestation date: 15th century

  Sources and notes: DCECH (rueda); DEEH (938); DRAE (rollo). It is unclear whether Sp. *rollo* is a Fr. or Pt. borrowing (REW: 7397; DCECH: rueda).

- ***rrinchar* (GP)**

  Etymology: Late Lat. *HĬNNĪTŬLĀRE (root/stem: HINNIRE) (u.e.)

  Attestation date: 14th century, OL palatalization: yes

  Sources and notes: DDGM (rrinchar); TMILG (HT, CT). According to DCECH (relinchar), the evolution of the etymon would be as follows: HINNIRE → HINNITARE → *HĬNNĪTULARE > HĬNNĪCLARE > (**eninchar*) > reninchar > Gal. *rinchar*. The nasalization of the onset nasal extended through the vowel nucleus, creating a nasal coda (ibid.). An alternative etymon *REHINNITULARE would also be possible (cf. DELG: rinchar, DEHLP: rinchar, DEEH: 919, DEM: 1877).

- ***rrolha* (GP)**

  Etymology: Lat. RŎTŬLA (root/stem: RŎTA)

  Other forms: *rolo*

  Attestation date: 15-16th centuries, OL palatalization: yes

  Sources and notes: GCLI (280); FF (134); DEM (1904); DCECH (rueda); DEEH (938); DEHLP (rolha). According to DDGM (rolado, TC), GP *rollado* is attested in the 14th century. GP *rolo* is already attested in the 14th century (DCECH: rolo 1; see also DDGM: rolo, CVGP).

- ***ruejo* (Nav.)**

  Etymology: Lat. RŎTŬLUS (root/stem: RŎTA)

  Attestation date: 17th century, OL palatalization: yes

  Sources and notes: CRC (437, 445); DRAE (ruejo); DEEH (938); DCECH (rueda); REW (7397).

- ***rueldo* (Leon.)**

  Etymology: Lat. RŎTŬLUS (root/stem: RŎTA)

  OL palatalization: yes

  Sources and notes: CRC (437, 445); DEEH (938); DCECH (rueda); DGLA (rueldu).

- ***sachar* (Sp.)**

  Etymology: Lat. SARCŬLĀRE (root/stem: SARCŬLUM)

  Attestation date: 16th century, OL palatalization: yes

  Sources and notes: Georges (sarculum/sarculo); DCECH (sacho); DRAE (sachar); REW (7601); DEEH (953); there is one example of OSp. *sachar* in the 12th century but its meaning is unclear (CORDE). Apart from the expected outcome of postconsonantal OL clusters in Sp. *sachar*, we also find Ast. *sallar* and Leon. *jajar* (in the Maragatería region) (DCECH: sacho; DEEH: 953).

- ***sachar* (GP)**

  Etymology: Lat. SARCŬLĀRE (root/stem: SARCŬLUM)

  Attestation date: 14th century, OL palatalization: yes

  Sources and notes: Georges (sarculum/sarculo); DELG (sacho-a 1); REW (7601); DCECH (sacho); DEHLP (sachar). The given inherited form and the attestation date may not coincide because the original source could not be consulted (see DEHLP: sachar). However, there is one example of GP *sachadoras* in the 15th century (TMILG: FMST).

- ***sachio* (GP)**

  Etymology: Lat. SARCŬLUM (root/stem: SARRIRE)

  Attestation date: 12th century, OL palatalization: yes

  Sources and notes: Georges (sarculum/sarculo); FF (331); DCECH (sacho); DELG (sacho-a 1); REW (7602); DEHLP (sacho); DDGM (sacho, CVGP); for the context of the given inherited form, see DEM (1926) and the original source (PMH, *Leges* V: 743).

- ***sacho* (Sp.)**

  Etymology: Lat. SARCŬLUM (root/stem: SARRIRE)

  Attestation date: 16th century, OL palatalization: yes

  Sources and notes: Georges (sarculum/sarculo); CRC (259-60); DCECH (sacho); REW (7602); DRAE (sacho); DEEH (953); CORDE

- ***sallamos* (Ast., Sant., Burg.)**

  Etymology: Lat. SARCŬLĀRE (root/stem: SARCŬLUM)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: Georges (sarculum/sarculo); CRC (259-60); DCECH (sacho); DEEH (953); CORDE.

- ***saluçadas* (GP)**

  Etymology: Late Lat. SŬGGLŬTTĬUM (root/stem: SĬNGŬLTUS or GLUTTIRE)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: DEHLP (soluço/saluço); DDGM (saluçada); DEEH (974); REW (7943) suggested Lat. SŬBGLUTTIĀRE as the etymon; DEM (2001); DXL (1091); TMILG (CSM). GP *soluço/saluço* are attested in the 14th century (DEHLP: soluço; DEM: 2001). Lat. SŬGGLUTĬUM 'hiccup' (cf. LS and Georges: sugglutio), which is attested in several Latin glossaries, seems to originally come from Lat. SINGULTUS 'sobbing' (LS), which was then interpreted as derivational form of Lat. GLUTTIRE (DCECH: sollozo). It is unclear whether GP *soluçar* comes directly from Lat. SŬBGLUTTIĀRE (cf. REW and DRAE: sollozar) or was derived from GP *soluço* < Lat. SŬGGLŬTTĬUM (DCECH: sollozo; DEHLP: soluçar). The evolution of the etymon is unclear since /l/ is not a common outcome beyond word-initial /gl/ (cf. Section 2.4.1.2 and Table B.2). Perhaps the following evolution would be possible: Late Lat. /g:l/ > /l:/ > GP /l/ or Late Lat. /g:l/ > /gl/ > /l:/ > GP /l/.

- ***sarapulha* (Gal.)**

  Etymology: Late Lat. *SERPUCŬLUS (root/stem: SERPĔRE)

  Attestation date: 16th century, OL palatalization: yes

  Sources and notes: TLPGP (sarabullo); DXL (1096); no information found in DEM. According to DCECH (sarpullido), the evolution of the etymon would be as follows: Lat. SERPĔRE → Late Lat. SERPUSCULUS > Late Lat. *SERPUCŬLUS (cf. DEEH: 968). DELG (sarabulla-o-ón/sarabia) gave IE. **sar-*/**sal-* as etymological base, whereas DEHLP (sarabulho) and DDD (sarabullo/sarapulla) provided no etymological information.

- ***sarpullo* (Leon.)**

  Etymology: Late Lat. *SERPUCŬLUS (root/stem: SERPĔRE)

  OL palatalization: yes

  Sources and notes: cf. DRAE (sarpullido); DEEH (968). According to DCECH (sarpullido), the evolution of the etymon would be as follows: Lat. SERPĔRE → Late Lat. SERPUSCULUS > Late Lat. *SERPUCŬLUS. Sp. *sarpullido* (attested in the 16th century, see CORDE) comes from *sarpullo*, which is either a Galician-Portuguese or Leonese borrowing.

- ***seglar* (OSp.)**

  Etymology: Lat. SAECŬLĀRIS (root/stem: SAECŬLUM)

  Attestation date: 12th century, OL palatalization: no

  Sources and notes: DEEH (944); cf. DDGM (TC, segrar); DRAE (seglar). There is only one attestation in the 12th century but many in the 13th century (CORDE). As in the case of Sp. *siglo* (see *sieglo* (OSp.)), a more conservative form of OSp. *seglar* 'belonging to earthly life' could have prevailed due to its use in religious contexts (cf. DCECH: siglo).

- ***segrares* (GP)**

  Etymology: Lat. SAECŬLĀRIS (root/stem: SAECŬLUM)

  Other forms: *seglares*

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: DDGM (segrar, TC); DEHLP (secular); cf. DELG (século); TMILG (TC, XH, CI). GP *seglares* is attested in 13th-century VFD (also TC and XH). As in the case of OSp. *sieglo* (see *sieglo* (OSp.)), the preservation of the OL cluster may be due to the prevalence of a more conservative form of the word, given by its religious usage.

- ***segre* (GP)**

  Etymology: Lat. SAECŬLUM (root/stem: SAECŬLUM)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: REW (7495); DELG (século); DEHLP (século); DEM (1957); DDGM (segre, TC); TMILG (LP, CSM, XH). Both in the case of Galician and Portuguese, the modern word is *século* (DEHLP: século; DRAG: século). As in the case of OSp. *sieglo* (see *sieglo* (OSp.)), the preservation of the OL cluster may be due to the prevalence of a more conservative form of the word, given by its religious use.

- ***sella* (GP)**

  Etymology: Lat. SĬTŬLA (root/stem: SĬTŬLA)

  Other forms: *senlla*

  Attestation date: 14th century, OL palatalization: yes

  Sources and notes: With the meaning 'bucket or pan (for drawing water)' (LS and Georges: situla); DCECH (acetre); FF (136); DELG (sella); DEHLP (selha); DEM (1963); DDD (sella); maybe DDGM (selha, CVGP).

- ***senllas* (GP)**

  Etymology: Lat. SĬNGŬLUS (root/stem: SĬNGŬLUS)

  Other forms: *sennas, senhos, senlos*

  Attestation date: 13th century, OL palatalization: yes

Sources and notes: FF (355); GCLI (283); DDGM (senllos/senlos, especially TC); DEEH (974); DELG (senllos-as); DEHLP (senhos); REW (7945); DEM (1971); TMILG (LP, TC; both GP *senllas* and *sennas* are attested in CSM).

- ***senlleira* (GP)**

  Etymology: Late Lat. SĬNGŬLĀRĬUS (root/stem: SĬNGULĀRIS)

  Other forms: *senheyra*

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: Georges (singularius); FF (355); GCLI (283); DDGM (senlleyro/senlleiro, especially TC); cf. DELG (senllos-as); DEM (1971); DEEH (974); TMILG (LP, CSM, TC), both given forms attested in LP, in CSM only GP *senlleira*.

- ***señardá* (Ast.)**

  Etymology: Lat. SĬNGŬLĀRĬTĀS, -ĀTIS (root/stem: SĬNGULĀRIS)

  OL palatalization: yes

  Sources and notes: Georges (singularitas); GCLI (283); REW (7941); DEEH (974); DGLA (señardá).

- ***señardade* (Mir.)**

  Etymology: Lat. SĬNGŬLĀRĬTĀS, -ĀTIS (root/stem: SĬNGULĀRIS)

  OL palatalization: yes

  Sources and notes: GCLI (283); REW (7941); DEEH (974).

- ***señardade* (Gal.)**

  Etymology: Lat. SĬNGŬLĀRĬTĀS, -ĀTIS (root/stem: SĬNGULĀRIS) (u.o.)

  Attestation date: 19-20th centuries

  Sources and notes: Georges (singularitas); GCLI (283); cf. DELG (senllos-as) and REW (7941); DDD (señardá); DRAG (señardade); cf. DEEH (974); cf. DEHLP (singularidade) and DEM (1972); TILG (senardá/señardade). Given that the available etymological information on Galician-Portuguese only mentions Mir. *señardade*, it is unclear whether Gal. *señardade/señardá* come from Lat. SĬNGŬLĀRĬTĀS, -ĀTIS or whether it is an Ast. borrowing (see TLPGP: señardade for the geographical regions were *señardade* and similar forms are used).

- ***señerdat* (OSp.)**

  Etymology: Lat. SĬNGŬLĀRĬTĀS, -ĀTIS (root/stem: SĬNGULĀRIS)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: Georges (singularitas); CRC (350); DEEH (974); cf. DCECH (sencillo); CORDE.

- ***señeros* (OSp.)**

  Etymology: Late Lat. SĬNGŬLĀRĬUS (root/stem: SĬNGULĀRIS)

  Attestation date: 12th century, OL palatalization: yes

  Sources and notes: Georges (singularius); CRC (256, 269); GCLI (283); DCECH (sencillo); DRAE (señero 2); cf. REW (7940-5); DEEH (974); CORDE.

- ***seños* (OSp.)**

  Etymology: Lat. SĬNGŬLUS (root/stem: SĬNGŬLUS)

  Other forms: *sendos*

  Attestation date: 12th century, OL palatalization: yes

  Sources and notes: CRC (259, 269); GCLI (283); DCECH (sencillo); DEEH (974); DRAE (sendos); CORDE.

- ***sieglo* (OSp.)**

  Etymology: Lat. SAECŬLUM (root/stem: SAECŬLUM)

  Attestation date: 12th century, OL palatalization: no

  Sources and notes: CRC (236, 438); REW (7495); DEEH (944-5); DRAE (siglo); CORDE; OSp. *siéculo* is already attested in the 10th century (ibid.). According to DCECH (siglo), Sp. *siglo* is a semi-learned word. The reason behind its semi-learned character and behind the lack of OL palatalization could be a more extended use of the word in religious contexts, as Sp. *siglo* had not only the meaning 'generation, century' but also 'earthly life, world and eternal life' (cf. ibid.).

- ***silvar* (GP)**

  Etymology: Lat. SĪBĬLĀRE (root/stem: SĪBĬLUS)

  Other forms: *asubiar*

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: Georges (sibilo); FF (340, 400); DCECH (silbar/chifle); GCLI (281); REW (7890); DELG (chifro/chifra/subiar/chufar); DEHLP (silvar/assobiar); DEM (270-1, 1984); DEEH (970-1); DDGM (asobiar/silvar); TMILG (CSM, CT), GP *aseuios* is also attested in TC and CT (13-14th centuries). The evolution of the etymon could be as follows: Lat. SĪFĬLĀRE > Lat. SĪBĬLĀRE > GP *silvar*, Lat. (AD)SĪBĬLĀRE < Lat. (AD)SŪBĬLĀRE > Gal. *asubiar*, Pt. *assobiar* (cf. DEHLP; DCECH; REW). Gal. *chifrar* could come from Lat. SĪFĬLĀRE (cf. DCECH silbar; DDD: chifrar; DELG: chifro).

- ***silvos* (OSp.)**

  Etymology: Lat. sībĭlāre (root/stem: sībĭlus)

  Other forms: *chiflar*

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: Georges (sibilo); CRC (433) (silbar); DCECH (silbar); REW (7890); DRAE (silbar); TDHLE (silbar/chiflar); DEEH (970-1); CORDE. The evolution of the etymon would be as follows: Lat. sīfĭlāre > Lat. sībĭlāre > Sp. *silbar*; see also DCECH (chifle/chufa). Sp. *chiflar* could come from Lat. sīfĭlāre (cf. DCECH: silbar/chifle/chufa; DEEH: 970) but DRAE (chiflar) considered it a Fr. borrowing.

- ***simple* (OSp.)**

  Etymology: Lat. sĭmplus (root/stem: sĭmplus) (BORR?)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: LS and Georges (simplus/simplex); DCECH (simple); cf. DRAE (simple); Roberts (2014: 548); no information in REW (7930); DEEH (973); CORDE.

- ***simpriz* (GP)**

  Etymology: Lat. sĭmplex-ĭcis (root/stem: sĭmplex-ĭcis)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: LS and Georges (simplus/simplex); DCECH (simple); DELG (simple); DEHLP (simples); DDGM (simprez, see TC for information on GP *simpriz*); DEM (604-5); no information on Galician or Portuguese inherited words in REW (7930); several examples were found in TMILG (e.g., XH, FDUSC) from the 14th century onwards.

- ***sinlia* (GP)**

  Etymology: Lat. cĭngŭla (root/stem: cingere)

  Other forms: *cincha, cilla*

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: Georges (cingula); REW (1926); DEHLP (cilha); REW (1926-1927); GCLI (283); DELG (cincha); DDGM (çenlla/çinlla); TMILG (GP *çinlla(s)* attested in TC, CT, TA). DEM (603) mentioned several 13th-century instances, i.e. GP *sinlia, cinlia, scinlia* (PMH, *Leges* II: 195) and a 12th-century example *Runpicinlas*, where OL palatalization is, however, not clear (see also DDGM: çinlla, TC).

- ***solenguaño* (Sant.)**

  Etymology: Late Lat. sŭblĭnguanĕus (root/stem: lingua)

  OL palatalization: no

  Sources and notes: DEEH (996); REW (8377); no information found in DCECH or DRAE.

- ***solho* (GP)**

  Etymology: Lat. SŬCŬLUS (root/stem: SŪS)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: DDD (sollo); no etymological information in DRAE (sollo). REW (8439, see also 8418b) suggested that Lat. SŪĪLLUS would have resulted in Sp. *sollo*, which was borrowed into Portuguese (REW also gave Gal. *chula* as inherited word). This etymology has been strongly critized by DCECH (sollo), who preferred to derive Pt. *sollo* from Lat. SŬCŬLUS (also DEM: 2018 and DELG: sollo) and suggested that Sp. *sollo* should either be a Pt., Mozarab. or OArag. borrowing. TLPGP (sollo, Ríos Parnisse 1977) expanded some points of the etymology given by DCECH (sollo). DEHLP (solho/solha) gave no information on Pt. *solho* 'sturgeon', but Pt. *solha* 'sole, brill' would go back to Lat. SOLĔA. DEEH (980) preferred Lat. SŎLĔA as etymology for Pt. *solho* and *solha* and Gal. *solla*.

- ***solieuo* (OSp.)**

  Etymology: Lat. SŬBLĔVĀRE (root/stem: LEVIS)

  Attestation date: 15th century, OL palatalization: no

  Sources and notes: DEEH (996); cf. REW (8373); DRAE (solevar); DCECH (leve); CORDE.

- ***soliuiate* (OSp.)**

  Etymology: Late Lat. *SŬBLĔVIĀRE (root/stem: LEVIS)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: Georges (levio); DEEH (996); cf. REW (8374); DRAE (soliviar); CORDE. DCECH (leve) suggested that Sp. *soliviar* was a mixed word, involving the Sp. words *solevar* and *aliviar*.

- ***sollamaran* (OSp.)**

  Etymology: Lat. SŬFFLAMĀRE (root/stem: FLAMA) (u.o.)

  Attestation date: 15th century

  Sources and notes: It is unclear whether Sp. *sollamar* comes directly from Lat. SŬFFLAMĀRE (CRC: 432; DEEH: 1000) or is a derivational form of Sp. *llama* (DCECH: llama I; Roberts 2014: 565); no etymological information in DRAE (sollamar); CORDE.

- ***sollar* (OSp.)**

  Etymology: Lat. SŬFFLĀRE (root/stem: SŬFFLĀRE)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: GCLI (235); DCECH (soplar); DRAE (sollar); REW (8430); CRC (432); DEEH (1000); CORDE.

- ***solloços* (OSp.)**

  Etymology: Late Lat. sŭgglŭttĭum (root/stem: sĭngŭltus or gluttire)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: CRC (440); DRAE (sollozo); DEEH (974); CORDE. REW (7943) suggested Lat. sŭbgluttiāre as the etymon (Lat. sŭgglutĭum 'hiccup', cf. LS and Georges: sugglutio), which is attested in several Latin glossaries. Lat. sŭgglŭttĭum seems to originally come from Lat. singultus 'sobbing' (LS), which was then interpreted as a derivational form of Lat. gluttīre (DCECH: sollozo). It is unclear whether OSp. *solloçar* comes directly from Lat. sŭbgluttiāre (cf. REW and DRAE) or was derived from OSp. *solloço* < Lat. sŭgglŭttĭum (DCECH: sollozar).

- ***sollutir* (Ast.)**

  Etymology: Late Lat. sŭgglūtīre (root/stem: sĭngŭltus or gluttire)

  OL palatalization: yes

  Sources and notes: DGLA (sollutar); DCECH (sollozar); DEEH (974); REW (7943) suggested Lat. sŭbgluttiāre as the etymon (Lat. sŭgglutĭum 'hiccup', cf. LS and Georges sugglutio), which is attested in several Latin glossaries. Lat. sŭgglŭttĭum seems to originally come from Lat. singultus 'sobbing' (LS), which was then interpreted as a derivational form of Lat. gluttīre (DCECH: sollozo).

- ***soprar* (GP)**

  Etymology: Lat. sŭfflāre (root/stem: sŭfflāre)

  Attestation date: 14th century, OL palatalization: no

  Sources and notes: see DCECH (soplar) for the alternation sŭfflāre/sŭpplāre; REW (8430); cf. DEHLP (soprar); DELG (soprar); DXL (1131); DEM (2008 for GP *soprar*; no information on GP *(re)sollar*, *(re)solhar* or *resoplar*); TMILG (HT, TA). DELG (sollar 2) and DEEH (1000) suggested that Gal. *sollar* is an inherited word from Lat. sŭfflāre (see also DDGM: resollo, TC and DELG: ensollar-se). However, /ʧ/, and not /ʎ/, should be the expected outcome for -VO:l-, e.g. Lat. afflāre > Gal. *achar*, Lat. applĭcāre > Gal. *achegar*. Moreover, outside of secondary postvocalic O(V)L clusters, all palatalized OL clusters resulted in /ʧ/ in Galician-Portuguese. For these reasons, it is more probable that Gal. *sollar*, together with *resollar* and *ensollar*, were borrowed either from Spanish or from Astur-Leonese.

- ***sortijas* (OSp.)**

  Etymology: Late Lat. *sŏrtīcŭla (root/stem: sŏrs, -tis)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: CRC (439, 448-9); DCECH (suerte); DEEH (983); REW (8108); CORDE.

- ***sortilia* (GP)**

  Etymology: Late Lat. *SŎRTĪCŬLA (root/stem: SŎRS, -TIS)

  Attestation date: 12?-13th centuries, OL palatalization: yes

  Sources and notes: CRC (439); FF (136); DEEH (983); DCECH (suerte); REW (8108); DDGM (sortella, especially TC); DEHLP (sortelha/sortilha); GP *sortella* is attested in 13th-century CSM, among other sources (cf. TMILG: TC, XH, GHCD); DEM (228).

- ***spadoam* (GP)**

  Etymology: Lat. SPATŬLA (root/stem: SPATHA)

  Attestation date: 12th century, OL palatalization: no

  Sources and notes: REW (8130); DCECH (espalda); DEHLP (espádua); GCLI (280, < SPATHŬLA); FF (221); DDGM (espadoa/espadoas, TC and CSM); TMILG (GP *spadoas* attested in TC, SVP); see DEM (885) for the context of the attested form in PMH (*Leges* III: 482).

- ***spillu* (OSp.)**

  Etymology: Lat. SPĔCŬLUM (root/stem: SPĔCĔRE)

  Other forms: *espejo*

  Attestation date: 10th century, OL palatalization: yes

  Sources and notes: CRC (438, 445); DCECH (espejo); GCLI (278); REW (8133); DEEH (984-5); DRAE (espejo); OSp. *spillu* could not be located in CORDE but OSp. *espejo* is attested in the 13th century; see DCECH (espejo) for information on the attested form (*Glosas Emilianenses*).

- ***stipullaços* (GP)**

  Etymology: Lat. STĬPŬLĀRI (root/stem: STĬPŬLUS) (BORR)

  Attestation date: 14th century, OL palatalization: no

  Sources and notes: Georges and LS (stipulor/stipulus); TMILG (GHCD); CVGP (167); DEHLP (estipular); DEM (918). This word is clearly an old borrowing in Galician, as lenition caused neither the voicing of /p/ nor the loss of /l/.

- ***tablados* (OSp.)**

  Etymology: Lat. TABŬLĀTUM (root/stem: TABŬLA)

  Attestation date: 12th century, OL palatalization: no

  Sources and notes: DRAE (tablado); REW (8515); cf. DCECH (tabla); DEEH (1008); CORDE.

- ***tablas* (OSp.)**

  Etymology: Lat. TABŬLA (root/stem: TABŬLA)

  Attestation date: 12th century, OL palatalization: no

  Sources and notes: CRC (236, 433); GCLI (281); REW (8514); DRAE (tabla); DCECH (tabla); DEEH (1008); CORDE.

- ***tauoado* (GP)**

  Etymology: Lat. TABŬLĀTUM (root/stem: TABŬLA)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: REW (8515); DEEH (1008); DDGM (tavolado, TC); DELG (táboa); DEHLP (tabuado); DEM (2035); TMILG (MB, DMSBC, MNP); GP *tauolado* is also attested in the 13th century (TMILG: LP, TC).

- ***tavoa* (GP)**

  Etymology: Lat. TABŬLA (root/stem: TABŬLA)

  Other forms: *taboas*

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: FF (222); GCLI (281); DCECH (tabla); REW (8514); DEEH (1008); DDGM (tavoa, TC); DEHLP (tábua); DELG (táboa); DEM (2035); TMILG (CSM, TC; GP *taboa(s)* attested in XH, HT, MS).

- ***teias* (OSp.)**

  Etymology: Lat. TĒGŬLA (root/stem: TEGO)

  Other forms: *teja*

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: CRC (102, 440, 446); GCLI (279); DRAE (teja 1); DCECH (techo); DEEH (1015); REW (8618); OSp. *teja(s)* is also attested in the 13th century (cf. CORDE). There is an example of OSp. *tella* in the 12th-13th centuries, which could also come from Lat. TĒGŬLA.

- ***telia* (GP)**

  Etymology: Lat. TĒGŬLA (root/stem: TEGO)

  Attestation date: 12th century, OL palatalization: yes

  Sources and notes: FF (135, 354); GCLI (279); DELG (tella); REW (8918); DEEH (1015); DEHLP (telha); DEM (2061); DDGM (tella, specially TC); TMILG (GP *tella* also attested in FCR, TC, CDMO); GP *telia* is attested in CODOLGA and in PMH (*Leges* III: 406), GP *telleiro* is attested in PMH (*Diplomata et Chartae* I: 10) in the 10th century; Mir. *teilha* (GCLI: 279).

- ***tenlleira* (Gal.)**

  Etymology: Late Lat. *TEMPOLA (root/stem: TEMPUS, -ŎRIS) (BORR?)

  Attestation date: 19th century, OL palatalization: unclear

  Sources and notes: With the meaning 'cheek'; DCECH (temporal); DELG (tempas); DDD (tenlleira); no information in DEM (2062-3); cf. DEHLP (têmpora). The outcome /nʎ/ is unusual outside of /ngl/ in Spanish and Galician-Portuguese and postconsonantal /pl fl kl/ usually resulted in /ʧ/ (cf. Section 2.4.1.1). For this reason, this word could have come from the Astur-Leonese territory (cf. DALLA and DGLA: tenllera), where this outcome is more usual in postconsonantal OL clusters containing voiceless obstruents (ibid.; cf. GCLI: 233, 282-3).

- ***tenllera* (Ast.)**

  Etymology: Late Lat. *TEMPOLA (root/stem: TEMPUS, -ŎRIS)

  Other forms: *tellera, tenyera*

  OL palatalization: yes

  Sources and notes: DCECH (temporal); DALLA (tenllera/tenyera); DGLA (tenllera).

- ***tenpro* (GP)**

  Etymology: Lat. TĔMPLUM (root/stem: TĔMPLUM)

  Other forms: *tenplos*

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: DEHLP (templo); DCECH (templo); DDGM (tenpro/templo/tenplo); no information on Galician or Portuguese in REW (8630); TMILG (CSM, CT; GP *tẽplos* attested in XH, HT). DEM (2062) claimed that GP *templo/temple* represented the learned or conservative form of the etymon ("por via culta"). DCECH (templo) also implied that GP *temple* was a learned word.

- ***tidoo* (GP)**

  Etymology: Lat. TĬTŬLUS (root/stem: TĬTŬLUS)

  Attestation date: 13-14th centuries, OL palatalization: no

  Sources and notes: DELG (tídoo); cf. REW (8761); DDGM (tidoo, CVGP); TMILG (CPB, CDMO, GHCD); DDD (tídoo); DEEH (1024). It is unclear whether Gal. *til/tilde* and Pt. *til* come directly from Latin (GCLI 280; REW: 8761; DELG: tídoo) or from Occ. *tille(s)* (DCECH: título; DEHLP: til). DEM (2087) considered Pt. *tilde* a Sp. borrowing.

- ***tiemplo* (OSp.)**

  Etymology: Lat. TĔMPLUM (root/stem: TĔMPLUM)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: DRAE (templo); no information on Spanish inherited words in REW (8630); CORDE. According to DCECH (templo), Sp. *templo* is a learned word and OSp. *tiemplo* perhaps a semi-learned word.

- ***tienlla* (OSp.)**

  Etymology: Late Lat. *TEMPOLA (root/stem: TEMPUS, -ŎRIS) (BORR?)

  Attestation date: 13th century, OL palatalization: unclear

  Sources and notes: With the meaning 'temple (of the head)'; DCECH (temporal); DEEH (1015); no information in REW (8635); CORDE. Some sources preferred Lat. *TĔNŬLA (← Lat. TENUS 'stretched cord, noose') (LS and Georges: tenus) as etymology (CRC: 381; see references in DCECH: temporal). The expected outcome in postconsonantal OL clusters is /ʧ/ and the outcome /nʎ/ is unusual outside of /ngl/ in Spanish and Galician-Portuguese (cf. Section 2.4.1.1). DCECH (ibid.) argued that OSp. *tienlla* must reflect a dialectal evolution of the cluster. This evolution probably comes from Astur-Leonese (cf. DALLA and DGLA: tenllera), where /nʎ/ is more usual in OL clusters containing a voiceless obstruent (ibid.; cf. GCLI: 233, 282-3).

- ***tilde* (OSp.)**

  Etymology: Lat. TĬTŬLUS (root/stem: TĬTŬLUS)

  Attestation date: 15th century, OL palatalization: no

  Sources and notes: CRC (437); GCLI (280); REW (8761). According to DRAE (tilde), Sp. *tilde* would come from Sp. *tildar* (< Lat. TITULĀRE). In contrast, DCECH (título) and REW (8761) suggested that Sp. *tildar* was derived from Sp. *tilde*. In addition, DCECH suggested that Sp. *tilde* is a semi-popular word and does not come directly from Latin due to the unusual e-ending, but from Cat. or Occ. (also Roberts 2014: 616). DEEH (1024) preferred Lat. TITULĀRE as etymology. REW (8761) considered Sp. *tilde* to be a technical or learned word ("Buchwort").

- ***tolva* (Sp.)**

  Etymology: Lat. TŬBŬLA (root/stem: TŬBA)

  Attestation date: 16th century, OL palatalization: no

  Sources and notes: CRC (433); DCECH (tubo); DEEH (1038); DRAE (tolva); REW (8968). According to DCECH (tubo), Sant. *tólbola* was the result of a old form **tóvola* influenced by Sp. *tolva* (cf. DEEH: 1038).

- ***tortulho* (GP)**

  Etymology: Lat. TERTUBLO (root/stem: TERRAE TUBERUM)

  Attestation date: 14th century, OL palatalization: yes

  Sources and notes: With the meaning 'mushroom'; DCECH (trillo); DEHLP (tortulho/trilh-); DEM (2097); TLPGP (tortulho). Gal. *tortullo* does not seem to be a common or extended word (DDD: tortullo; TLPGP: tortullo) and no medieval examples were found in DDGM or TMILG.

- ***tramallo* (Ast.)**

  Etymology: Late Lat. *TRĬMACŬLUM (root/stem: MACŬLA)

  OL palatalization: yes

  Sources and notes: DRAE (trasmallo); DCECH (malla 1); DGLA (tresmallu); DALLA (tresmayu).

- ***trasmalhos* (GP)**

  Etymology: Late Lat. *TRĬMACŬLUM (root/stem: MACŬLA)

  Attestation date: 14th century, OL palatalization: yes

  Sources and notes: DCECH (malla 1); DDGM (trasmalho/trasmalhar, see for the example's context); cf. TMILG (GP *tramallo* and *trasmallos* attested in 14th-15th-century FMST); DDD (tramallo/trasmallo); TLPGP (tramallo); REW (8875) gave Lat. *TRĒMACŬLUM as etymon (also DEHLP: tremalho). DELG (malla 1) seemed to suggest that it is a derivational form of Gal. *malla*, which comes from Fr. *maille*.

- ***treble* (OSp.)**

  Etymology: Lat. TRĬPLUS (root/stem: TRĬPLUS)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: REW (8913); DEEH (1036); DCECH (tres); DRAE (triple).

- ***tresmallo* (Sp.)**

  Etymology: Late Lat. *TRĬMACŬLUM (root/stem: MACŬLA) (BORR)

  Attestation date: 16th century, OL palatalization: yes

  Sources and notes: DCECH (malla 1); DEEH (1034). Sp. *tresmallo* or *trasmallo* might come from Arag. *trasmallo* (cf. DRAE: trasmallo; Roberts 2014, 642), as the expected outcome of an intervocalic OL cluster in Spanish is /ʒ/ > /x/ and not /ʎ/ (cf. Section 2.4.1.1). REW (8875) gave Lat. *TRĒMACŬLUM as etymon but did not provide any Sp. inherited words.

- ***trilho* (GP)**

  Etymology: Lat. TRĪBŬLUM (root/stem: TERERE)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: REW (8886); cf. DELG (trillo); DEHLP (trilho); DEM (2115); DEEH (1034); GP *trilho* could not be found in TMILG; for the attestation of the given inherited word, see DDGM (trilho, CVGP).

- ***trilla* (GP)**

  Etymology: Lat. TRĪBŬLĀRE (root/stem: TRĪBŬLUM)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: GCLI (281); DCECH (atribular/trillo); REW (8885); DEEH (1034); DELG (trillar); DEHLP (trilhar/trilh-); DEM (2115); DDGM (trillar/trilhar); TMILG (CSM, CT). In CODOLGA (Herrero Jiménez 2004), there is one example of *trillar* from the 12th century but it is unclear whether it can be considered Galician-Portuguese.

- ***trillar* (OSp.)**

  Etymology: Lat. TRĪBŬLĀRE (root/stem: TRĪBŬLUM) (BORR?)

  Attestation date: 11th century

  Sources and notes: GCLI (281); DCECH (atribular/trillo); REW (8885); DRAE (trillar); DEEH (1034); CORDE; according to TDHLE (trillar), Sp. *trillar* was borrowed from Pt. *trilhar*; see discussion in *trillo* (OSp.)

- ***trillo* (OSp.)**

  Etymology: Lat. TRĪBŬLUM (root/stem: TERERE)

  Attestation date: 12th century, OL palatalization: unclear

  Sources and notes: CRC (433-4); DCECH (trillo); REW (8886); DEEH (1034); cf. Roberts (2014: 652), where Sp. *trillo* is derived from Sp. *trillar*; CORDE. DCECH (trillo) stated that the evolution /bl/ > /ʎ/ is certain, giving as examples not only Lat. TRĪBŬLUM > Sp. *trillo* and *trillar* (< LAT. TRĪBŬLĀRE) but also Sp. *enjullo* (< Lat. ĬNSŪBŬLUM) and maybe Sp. *trulla* (< Lat. TŬRBŬLA?. However, it is unclear how /bl, bul/ became /ʎ/, while /gul, cul/ became /ʒ/ (and later /x/) in Spanish. It is unusual for one cluster within a position to behave differently than the other clusters (cf. Section 2.4.1 and Appendix B). Given that OL palatalization in secondary postvocalic O(V)L clusters consistently resulted in /ʎ/ in Galician-Portuguese, it may be possible that Sp. *trillo, trillar* (see TDHLE: trillar) and *ensullo* are GP borrowings (and Sp. *trulla* might be of Cat. origin, cf. *trulla* (Sp.) or DCECH: trulla I).

- ***trollar* (Ast.)**

  Etymology: Late Lat. *TŬRBŬLĀRE (root/stem: TŬRBŬLA)

  OL palatalization: yes

  Sources and notes: REW (8897); DCECH (trulla I); DEEH (1041); DGLA (trollar).

- ***trujal* (Sp.)**

  Etymology: Lat. TŎRCŬLĀRE (root/stem: TORQUĒRE)

  Other forms: *trujar*

  Attestation date: 19th century, OL palatalization: yes

  Sources and notes: CRC (242, 256, 269); DCECH (estrujar); DRAE (trujal); REW (8790); DEEH (1026); Roberts (2014: 652); CORDE. It is unclear whether Sp. *trullo* 'wine press' may have been borrowed from Cat. *trull* (< Lat. TŎRCULUM; cf. DCECH: estrujar, REW: 8792, DRAE: trullo 2). Given that the expected outcome for /kul/ is /ʒ/ > /x/ in Spanish (cf. Section 2.4.1), it is probable that Sp. *trullo* is of Cat. origin. Sp. *trujaron* is attested in a 1676 document, perhaps with the meaning 'twist, bend' (cf. CORDE; cf. LS: torqueo).

- ***trulla* (Sp.)**

  Etymology: Late Lat. TŬRBŬLA (root/stem: TŬRBŬLA)

  Attestation date: 16th century, OL palatalization: yes

  Sources and notes: With the meaning 'hubbub, racket'; Roberts (2014: 660); REW (8997); DEEH (1041); no etymological information in DRAE (trulla 1). Sp. *trulla* could also come from Cat. *trull* (< Lat. TŎRCŬLUM) (DCECH: trulla I). There are instances of OSp. *trulla* before the 16th century (ibid.) but their meaning is unclear.

- ***trullada* (Gal.)**

  Etymology: Late Lat. *TŬRBŬLĀRE (root/stem: TŬRBŬLA)

  Attestation date: 19th century, OL palatalization: yes

  Sources and notes: REW (8897); DCECH (trulla I); DDD (trullada); DELG (troula) seemed to suggest a different etymology; no information found in DEHLP or DEM.

- ***tullas* (GP)**

  Etymology: Lat. TŬBŬLA (root/stem: TŬBA) (u.o.)

  Attestation date: 14th century

  Sources and notes: With the Lat. meaning 'small trumpet' (LS and Georges: tubula) and the general GP meaning 'cellar or chest to keep cereals, olives, etc' (DXL: 1213-4; DEHLP: tulha; DCECH: tubo); DDGM (tulla, CVGP); DEEH (1038); TMILG (GHCD, CDMO). DEHLP (tulha) gave no etymological information and DEM (2123) only suggested that it may come from a derivational form of Lat. TŬBU-. NDLP (tulha) preferred Lat. TUDICULA as the etymology, while DXL (1213-4) preferred Got. **thraúshs* 'chest'. A form of GP *tullas*, i.e. *tulias*, may already be attested in the 10th century (cf. CODOLGA; DDGM: tulla, CVGP).

- ***uermelia* (GP)**

  Etymology: Lat. vermĭcŭla (root/stem: vermis)

  Attestation date: 10th century, OL palatalization: yes

  Sources and notes: LS (vermiculus); FF (136, 354); GCLI (278); DEHLP (vermelho 1); DEM (2161); DELG (vermello-a); REW (9230); DDGM (vermello/vermella); TMILG (LP, CSM, TC, HT); in CODOLGA (Lucas Álvarez 1986 and Costa 1999), there are several examples of *vermelios* from before the 12th century; Mir. *burmeilho* (GCLI: 278).

- ***unfllar* (Rib. Arag.)**

  Etymology: Lat. ĭnflāre (root/stem: ĭnflāre)

  OL palatalization: yes

  Sources and notes: GCLI (233); Aragonario; Viudas Camarasa (1979).

- ***unnas* (GP)**

  Etymology: Lat. ŭngŭla (root/stem: unguis)

  Other forms: *unlla*

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: FF (355); GCLI (283); REW (9071); DEHLP (unha); DELG (uña); DDGM (unlla); TMILG (both given forms attested in CSM, XH); DEM (2135).

- ***uña* (OSp.)**

  Etymology: Lat. ŭngŭla (root/stem: unguis)

  Attestation date: 12th century, OL palatalization: yes

  Sources and notes: CRC (259, 269); GCLI (283); DCECH (uña); DRAE (uña); REW (9071); DEEH (1045); CORDE.

- ***vedija* (OSp.)**

  Etymology: Lat. vītīcŭla (root/stem: vītis)

  Other forms: *guedella*

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: CRC (155, 439, 447); DCECH (guedeja); GCLI (147); REW (9392); DEEH (1068-9); cf. CORDE; possible influence of Got. **wathils* (DCECH; DEHLP: guedelha) in Sp. *guedella* (modern form).

- ***Vellia* (GP)**

  Etymology: Lat. VĔTŬLA (root/stem: VĔTUS)

  Attestation date: 11th century, OL palatalization: yes

  Sources and notes: FF (354), cf. CODOLGA; GCLI (279); DELG (vello-a); DEHLP (velho); DDGM (vello); DEM (2152); cf. TMILG (GP *velha* attested in LP, GP *vella* in CSM); Mir. *bielho* (GCLI: 279).

- ***vencejo* (OSp.)**

  Etymology: Late Lat. *VĬNCĬCŬLUM (root/stem: VĬNCĪRE)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: With the Sp. meaning 'type of ligature'; CRC (439); DCECH (vencejo I); DRAE (vencejo); cf. DEM (2153); Roberts (2014: 684); Diez and Scheler (2021: 497); CORDE. DEEH (1065) and REW (9339) preferred to set the origin of OSp. *vencejo* in Lat. *VĬNCĪLĬA/UM/E.

- ***vencello* (GP)**

  Etymology: Late Lat. *VĬNCĬCŬLUM (root/stem: VĬNCĪRE)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: FF (136); DCECH (vencejo I); DEHLP (vincilho/vinc-); DEM (2153); DDGM (CVGP, vencello); TMILG (CSM). REW (9339), DELG (vencello 1), and DEEH (1065) preferred to set the origin of GP *vencelho* in Lat. *VĬNCĪLĬA/UM.

- ***verdoaga* (Gal.)**

  Etymology: Lat. PŎRTŬLĀCA (root/stem: PORTULA)

  Attestation date: 19th century, OL palatalization: no

  Sources and notes: DEEH (884); DDD (verdoaga/beldroega); DCECH (beldroega); DXL (1242); Gal. *verdoaga* through Mozarab. **berdolaca* from Lat. PŎRTŬLĀCA (DCECH: verdolaga; DEHLP: beldroega; cf. DEM: 347).

- ***verdoega* (Pt.)**

  Etymology: Lat. PŎRTŬLĀCA (root/stem: PORTULA)

  Other forms: *beldroega*

  Attestation date: 16th century, OL palatalization: no

  Sources and notes: REW (6679); DEEH (884); DLPC (507); Pt. *beldroega* through Mozarab. **berdolaca* from Lat. PŎRTŬLĀCA (DCECH: verdolaga; DEHLP: beldroega; cf. DEM: 347). The given inherited form and the attestation date may not coincide because the original source could not be consulted (cf. DEHLP: beldroega).

- ***verdolaga* (OSp.)**

  Etymology: Lat. PŎRTŬLĀCA (root/stem: PORTULA)

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: Sp. *verdolaga* through Mozarab. **berdolaca* from Lat. PŎRTŬLĀCA (DCECH: verdolaga; cf. DEHLP: beldroega); DRAE (verdolaga); DEEH (884); CORDE; Mozarab. *bardilâqa* is already attested in the year 1100 (DCECH).

- ***vermejo* (OSp.)**

  Etymology: Lat. VERMĬCŬLUS (root/stem: VERMIS)

  Attestation date: 12th century, OL palatalization: yes

  Sources and notes: CRC (438, 446); GCLI (278); LS (vermiculus); DRAE (bermejo); DCECH (bermejo); REW (9230); DEEH (1057); CORDE.

- ***viejo* (OSp.)**

  Etymology: Lat. VĔTŬLUS (root/stem: VĔTUS)

  Attestation date: 11th century, OL palatalization: yes

  Sources and notes: CRC (437, 445); GCLI (279); DRAE (viejo); REW (9291); DEEH (1062). According to DCECH (viejo), there are already examples of OSp. *viejo* in the 11th century (the earliest examples found in CORDE date from the 12th century).

- ***vinclo* (OSp.)**

  Etymology: Lat. VĬNCŬLUM (root/stem: VĬNCĪRE)

  Attestation date: 14th century, OL palatalization: no

  Sources and notes: With the meaning 'ring, jewel'; CRC (259, 269); DRAE (brinco). According to DCECH (brincar) (see also for the context of attested *vinclo*), Sp. *brincar/brinco* are borrowings from Pt. *brincar/brinco* (cf. REW: 9341). OSp. *vinclo* seems to have fallen into disuse and disappeared quite rapidly (DCECH: vinclo), which could have contributed to the lack of OL palatalization.

- ***viniebla* (Sp.)**

  Etymology: Late Lat. *BISLĬGŬLA (root/stem: LĬGŬLA) (u.o.)

  Attestation date: 16th century

  Sources and notes: It is uncertain whether Sp. *viniebla* comes from Late Lat *BISLĬGŬLA or *BISLINGUA (CRC: 102, 440; DCECH: viniebla; Roberts 2014: 697; DEEH: 508).

- ***vinqu* (GP)**

  Etymology: Lat. vĭncŭlum (root/stem: vĭncīre)

  Other forms: *brinco*

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: With the meaning '(ear)ring'; CRC (259); DDGM (vinco, especially Tato Plaza 1999); DCECH (brincar); cf. DEHLP (brinco/brinc-/vinco/brincar); DELG (brinco); DEM (407-8, 2171); DXL (193); TMILG (CSM; GP *brinco* attested in 15th-century VFD); DELG (vinco) suggested that Gal. *vinco* comes from Lat. *vincus (cf. REW: 8342).

- ***ygreioa* (GP)**

  Etymology: Late Lat. ec(c)lesĭŏla (root/stem: ecclēsĭa) (u.e.)

  Other forms: *Eirexúa*

  Attestation date: 13th century, OL palatalization: no

  Sources and notes: Lat. ecclēsia > Late Lat. eclēsia; FF (184, also cf. 130-131); DELG (eirexa); cf. DEHLP (igrejola); TMILG (GP *Irijoa* and *Igreioa* attested in MSCDR, 13th and 15th centuries). Most sources gave Late Lat. ecclesĭŏla as etymon, with a geminate stop. However, given that /k:/ underwent voicing like in GP *eigreja/egleja* (< Lat. eclēsĭa), then either /k:/ became short or the original consonant was influenced by GP *eigreja/egleja*.

- ***yncha* (OSp.)**

  Etymology: Lat. ĭnflāre (root/stem: ĭnflāre)

  Attestation date: 13th century, OL palatalization: yes

  Sources and notes: CRC (272); GCLI (233); REW (4406); DCECH (hinchar); DEEH (742); DRAE (hinchar); Lat. īnflāre and īnflātus in Georges (no vowel length information in OLD, 901-2). It is unclear whether OSp. *inchado* (CORDE, 13th century) came from Lat. ĭnflātus or whether it was the regular participle form of OSp. *inchar*. Attempted root or stem reconstruction for words like Lat. ădinflo, inflātĭlis, inflātus, and sŭbinflo (see LS for words containing the root -*infl*-): *inch*, *jnch*, *ynch* (CORDE).

B. Overview on the outcomes of OL clusters

The outcomes of inherited words with original OL clusters are presented in the tables below. The outcomes are separated into two tables: Table B.1 is an overview of the outcomes that resulted from OL palatalization; and Table B.2 is an overview of the outcomes that resulted from other sound changes or where OL palatalization is uncertain.

Table B.1.: Number of instances of a particular outcome that resulted from OL palatalization. The outcomes are grouped by language (Galician, Portuguese, and Galician-Portuguese, or Spanish), OL_type (primary OL clusters or secondary O(V)L clusters), OL_cluster (grouped by voicing and length of the obstruent) and OL_position.

Language	OL_cluster	OL_type	OL_position	Outcome	n_instances
Gal., Pt.	/bl gl dl/	O(V)L	C_	/(n)ʎ/	2
Gal., Pt.	/bl gl dl/	O(V)L	C_	/nʎ/	1
Gal., Pt.	/bl gl dl/	O(V)L	C_	/nʎ/, /ɲ/	3
Gal., Pt.	/bl gl dl/	O(V)L	C_	/ɲ/	1
Gal., Pt.	/bl gl dl/	O(V)L	C_	/ʎ/	1
Gal., Pt.	/bl gl dl/	O(V)L	C_	/ʧ/	1
Gal., Pt.	/bl gl dl/	O(V)L	V_	/ʎ/	8
Gal., Pt.	/p:l f:l k:l t:l/	O(V)L	V_	/ʧ/	4
Gal., Pt.	/pl fl kl tl sl/	O(V)L	C_	/ʎ/	1
Gal., Pt.	/pl fl kl tl sl/	O(V)L	C_	/ʧ/	13
Gal., Pt.	/pl fl kl tl sl/	O(V)L	V_	/(n)ʎ/	1
Gal., Pt.	/pl fl kl tl sl/	O(V)L	V_	/nʎ/	1
Gal., Pt.	/pl fl kl tl sl/	O(V)L	V_	/ʎ/	47
Gal., Pt.	/pl fl kl tl sl/	O(V)L	V_	/ʧ/	5
Gal., Pt.	/bl gl dl/	OL	V_	/ʎ/	1
Gal., Pt.	/p:l f:l k:l t:l/	OL	V_	/ʧ/	2
Gal., Pt.	/pl fl kl tl sl/	OL	#_	/ʧ/	46
Gal., Pt.	/pl fl kl tl sl/	OL	C_	/ʧ/	9
Gal., Pt.	/pl fl kl tl sl/	OL	V_	/ʎ/	1
Sp.	/bl gl dl/	O(V)L	C_	/ɲ/	6
Sp.	/bl gl dl/	O(V)L	C_	/ʎ/	1
Sp.	/bl gl dl/	O(V)L	C_	/ʎ/, /ɲ/	1
Sp.	/bl gl dl/	O(V)L	C_	/ʒ/	1

Sp.	/bl gl dl/	O(V)L	C_	/ʧ/	1
Sp.	/bl gl dl/	O(V)L	V_	/ʎ/	1
Sp.	/bl gl dl/	O(V)L	V_	/ʒ/	5
Sp.	/p:l f:l k:l t:l/	O(V)L	V_	/ʧ/	3
Sp.	/pl fl kl tl sl/	O(V)L	C_	/ʒ/	2
Sp.	/pl fl kl tl sl/	O(V)L	C_	/ʧ/	12
Sp.	/pl fl kl tl sl/	O(V)L	V_	/ʒ/	48
Sp.	/pl fl kl tl sl/	O(V)L	V_	/ʧ/	3
Sp.	/g:l/	OL	V_	/ʎ/	1
Sp.	/p:l f:l k:l t:l/	OL	V_	/ʎ/	5
Sp.	/pl fl kl tl sl/	OL	#_	/ʎ/	23
Sp.	/pl fl kl tl sl/	OL	#_	/ʧ/	4
Sp.	/pl fl kl tl sl/	OL	C_	/ʧ/	6
Sp.	/pl fl kl tl sl/	OL	V_	/ʒ/	2

Table B.2.: Number of instances of a particular outcome that did not result from OL palatalization. The outcomes are grouped by language (Galician, Portuguese, and Galician-Portuguese, or Spanish), OL_type (primary OL clusters or secondary O(V)L clusters), OL_cluster (grouped by voicing and length of the obstruent) and OL_position.

Language	OL_cluster	OL_type	OL_position	Outcome	n_instances
Gal., Pt.	/bl gl dl/	O(V)L	C_	/O/	1
Gal., Pt.	/bl gl dl/	O(V)L	C_	/Oɾ/	1
Gal., Pt.	/bl gl dl/	O(V)L	V_	/O(ɾ)/	1
Gal., Pt.	/bl gl dl/	O(V)L	V_	/O/	6
Gal., Pt.	/bl gl dl/	O(V)L	V_	/Ovl/	1
Gal., Pt.	/bl gl dl/	O(V)L	V_	/Oɾ/	3
Gal., Pt.	/bl gl dl/	O(V)L	V_	/l/	2
Gal., Pt.	/pl fl kl tl sl/	O(V)L	C_	/O(ɾ)/	1
Gal., Pt.	/pl fl kl tl sl/	O(V)L	C_	/O/	2
Gal., Pt.	/pl fl kl tl sl/	O(V)L	C_	/Ol/	1
Gal., Pt.	/pl fl kl tl sl/	O(V)L	C_	/Ovɾ/	1
Gal., Pt.	/pl fl kl tl sl/	O(V)L	C_	/Oɾ/	1
Gal., Pt.	/pl fl kl tl sl/	O(V)L	V_	/(l)O/	1
Gal., Pt.	/pl fl kl tl sl/	O(V)L	V_	/O(ɾ)/	1
Gal., Pt.	/pl fl kl tl sl/	O(V)L	V_	/O/	9
Gal., Pt.	/pl fl kl tl sl/	O(V)L	V_	/Oɾ/	6
Gal., Pt.	/pl fl kl tl sl/	O(V)L	V_	/l/	1
Gal., Pt.	/bl gl dl/	OL	#_	/Ovl/	2
Gal., Pt.	/bl gl dl/	OL	#_	/Oɾ/	6

Gal., Pt.	/bl gl dl/	OL	#_	/l/	11
Gal., Pt.	/bl gl dl/	OL	C_	/O/	1
Gal., Pt.	/bl gl dl/	OL	V_	/O/	1
Gal., Pt.	/bl gl dl/	OL	V_	/Oɾ/	4
Gal., Pt.	/bl gl dl/	OL	V_	/l/	1
Gal., Pt.	/bl gl dl/	OL	V_	/lO/, /Ol/	1
Gal., Pt.	/g:l/	OL	V_	/l/	1
Gal., Pt.	/p:l f:l k:l t:l/	OL	V_	/O(ɾ)/	2
Gal., Pt.	/p:l f:l k:l t:l/	OL	V_	/Oɾ/	3
Gal., Pt.	/pl fl kl tl sl/	OL	#_	/Oɾ/	16
Gal., Pt.	/pl fl kl tl sl/	OL	C_	/Ol/	2
Gal., Pt.	/pl fl kl tl sl/	OL	C_	/Oɾ/	5
Gal., Pt.	/pl fl kl tl sl/	OL	V_	/O(ɾ)/	1
Gal., Pt.	/pl fl kl tl sl/	OL	V_	/O/	1
Gal., Pt.	/pl fl kl tl sl/	OL	V_	/Oɾ/	3
Gal., Pt.	/pl fl kl tl sl/	OL	V_	/lO/	1
Gal., Pt.	/pl fl kl tl sl/	OL	V_	/ʎ/	1
Sp.	/bl gl dl/	O(V)L	C_	/O/	1
Sp.	/bl gl dl/	O(V)L	C_	/Ol/	2
Sp.	/bl gl dl/	O(V)L	V_	/O/	1
Sp.	/bl gl dl/	O(V)L	V_	/Ol/	10
Sp.	/bl gl dl/	O(V)L	V_	/Oɾ/	3
Sp.	/bl gl dl/	O(V)L	V_	/lO/	2
Sp.	/bl gl dl/	O(V)L	V_	/ʎ/	1
Sp.	/pl fl kl tl sl/	O(V)L	C_	/O/	1
Sp.	/pl fl kl tl sl/	O(V)L	C_	/Ol/	2
Sp.	/pl fl kl tl sl/	O(V)L	C_	/Ovl/	1
Sp.	/pl fl kl tl sl/	O(V)L	C_	/Ovɾ/	1
Sp.	/pl fl kl tl sl/	O(V)L	C_	/Oɾ/	1
Sp.	/pl fl kl tl sl/	O(V)L	C_	/l/	1
Sp.	/pl fl kl tl sl/	O(V)L	V_	/O/	1
Sp.	/pl fl kl tl sl/	O(V)L	V_	/Ol/	5
Sp.	/pl fl kl tl sl/	O(V)L	V_	/Ol/, /Oɾ/	1
Sp.	/pl fl kl tl sl/	O(V)L	V_	/Ovl/	1
Sp.	/pl fl kl tl sl/	O(V)L	V_	/Ovn/	1
Sp.	/pl fl kl tl sl/	O(V)L	V_	/Oɾ/	2
Sp.	/pl fl kl tl sl/	O(V)L	V_	/lO/	5
Sp.	/bl gl dl/	OL	#_	/Ol/	5
Sp.	/bl gl dl/	OL	#_	/Oɾ/	3
Sp.	/bl gl dl/	OL	#_	/l/	6

Sp.	/bl gl dl/	OL	V_	/Ol/	2
Sp.	/bl gl dl/	OL	V_	/l/	2
Sp.	/bl gl dl/	OL	V_	/lO/	1
Sp.	/bl gl dl/	OL	V_	/lO/, /Ol/	1
Sp.	/bl gl dl/	OL	V_	/ʎ/	1
Sp.	/p:l f:l k:l t:l/	OL	V_	/Oɾ/	3
Sp.	/pl fl kl tl sl/	OL	#_	/Ol/	14
Sp.	/pl fl kl tl sl/	OL	#_	/Oɾ/	1
Sp.	/pl fl kl tl sl/	OL	#_	/l/	1
Sp.	/pl fl kl tl sl/	OL	C_	/Ol/	6
Sp.	/pl fl kl tl sl/	OL	V_	/O(l)/	1
Sp.	/pl fl kl tl sl/	OL	V_	/O/	1
Sp.	/pl fl kl tl sl/	OL	V_	/Ol/	4
Sp.	/pl fl kl tl sl/	OL	V_	/Oɾ/	1
Sp.	/pl fl kl tl sl/	OL	V_	/lO/	1
Sp.	/pl fl kl tl sl/	OL	V_	/ʧ/	1

C. Stimuli list

Table C.1.: Complete stimuli list for the articulatory experiment. Non-words are indicated with **.

Segment	Word	Translation	Position within the word	Lexical stress
/k/	*cava*	‘it digs’	word-initial	stressed
	encama	‘it puts to bed’	postconsonantal	stressed
	acaba	‘it finishes’	postvocalic	stressed
/kl/	*clava*	‘it nails down’	word-initial	stressed
	clavaba	‘it nailed down’	word-initial	pretonic
	enclava	‘it nails down’	postconsonantal	stressed
	enclavaba	‘it nailed down’	postconsonantal	pretonic
	***pencla*	non-word	postconsonantal	posttonic
	anclaba	‘it droped anchor’	postconsonantal	stressed
	ancladero	‘anchorage’	postconsonantal	pretonic
	ancla	‘anchor’	postconsonantal	posttonic
	aclama	‘it clamours’	postvocalic	stressed
	aclamaba	‘it clamoured’	postvocalic	pretonic
	macla	geological term	postvocalic	posttonic
/g/	*gas*	‘gas’	word-initial	stressed
	chingado	‘annoy’ (coll. Mexic.)	postconsonantal	stressed
	pagaba	‘it paid’	postvocalic	stressed
/gl/	*glas*	‘icing sugar’	word-initial	stressed
	glasea	‘it puts cake frosting’	word-initial	pretonic
	tinglado	‘plot, mess’	postconsonantal	stressed
	tingladillo	‘a small “tinglado” ’	postconsonantal	pretonic
	***pingla*	non-word	postconsonantal	posttonic
	manglar	‘mangrove’	postconsonantal	stressed
	bangladesí	‘from Bangladesh’	postconsonantal	pretonic
	***mangla*	non-word	postconsonantal	posttonic
	***aglaba*	non-word	postvocalic	stressed
	***aglababa*	non-word	postvocalic	pretonic
	***agla*	non-word	postvocalic	posttonic
/l/	*lava*	‘it washes’	word-initial	stressed
	laca	‘hair-spray’	word-initial	stressed

Segment	Word	Translation	Position within the word	Lexical stress
	lana	'wool'	word-initial	stressed
	las	'the' (plural)	word-initial	stressed
	enlama	'it covers in mud'	postconsonantal	stressed
	enlata	'it cans up'	postconsonantal	stressed
	enlato	'I can up'	postconsonantal	stressed
	alaba	'it praises'	postvocalic	stressed
	halaga	'it flatters'	postvocalic	stressed

D. On the statistical models

D.1. Further information on model fitting

This structuring of the data was chosen over a model with “singleton/cluster” and “voiceless/voiced” as predictors for two reasons: (1) adding the predictors “singleton/cluster” and “voiceless/voiced” would further compartmentalize the data and add complexity to the model, even when the interpretation of such a model would be more straightforward; (2) the category “phone” could only be divided in “singleton/cluster” and “voiceless/voiced” in the models for the velars; in the models for the laterals - /l/ /kl/ /gl/, “voicing” only applies to the clusters. To rightly structure the data in this manner, the data would have to be divided into subsets requiring more models.

D.2. Overview of all fitted models

The study object column indicates the sensor and contrasted phone levels for each model: for models 1-3 (lateral models), it compares /l kl gl/ in the tongue tip (TT), tongue blade posterior (TM2) and tongue blade anterior (TM1); for models 4-6 (velar models), it compares /k g kl gl/ in the tongue back (TB), tongue blade posterior (TM2) and tongue blade anterior (TM1).

Table D.1.: Overview of all fitted models

Model code	Study object	Response	Predictor	Random effect
Model 1a	TT /l kl gl/	vertical position	phone*position within the word + token repetition	phone|speaker + token
Model 1b	TT /l kl gl/	horizontal position	phone*position within the word + token repetition	phone|speaker + token
Model 2a	TM2 /l kl gl/	vertical position	phone*position within the word + token repetition	phone|speaker + token
Model 2b	TM2 /l kl gl/	horizontal position	phone*position within the word + token repetition	phone|speaker + token (optimizer = bobyqa)
Model 3a	TM1 /l kl gl/	vertical position	phone*position within the word + token repetition	phone|speaker + token

Model code	Study object	Response	Predictor	Random effect
Model 3b	TM1 /l kl gl/	horizontal position	phone*position within the word + token repetition	phone|speaker + token
Model 4b	TB /k g kl gl/	horizontal position	phone*position within the word + token repetition	speaker + token
Model 5b	TM2 /k g kl gl/	horizontal position	phone*position within the word + token repetition	speaker + token
Model 6b	TM1 /k g kl gl/	horizontal position	phone*position within the word + token repetition	speaker + token

D.3. Pairwise contrast tables

The following table contains the contrasts between phone categories for all models (Section D.2). The columns provide information on the model, the studied sensor and axis, the contrast and its position within the word, and several coefficients, such as estimate = difference in the contrasted categories/estimates, SE = standard error, and df = degrees of freedom. The standard error shown in these tables refers to the contrasts and not to the estimates (as is the case for the standard errors shown in the prediction plots).

The contrast is the difference between the estimate of the right element (baseline) and the estimate of left element (compared category) of the contrast. In the case of the first row in Table D.2, the contrast "gl - kl" in word-initial position (model 1a, y axis) should be read as follows: there is an increase in height of 0.39 mm from /kl/ to /gl/ in word-initial position or, similarly, the lateral in /gl/ is 0.39 mm higher than in /kl/.

Table D.2.: Pairwise phone contrasts for all models. The number of the model, the analysed sensor (TT = tongue tip, TM1 = tongue blade anterior, TM2 = tongue blade posterior, TB = tongue back), the axis (y = vertical, x = horizontal), the contrasted categories and the cluster position (ini = word-initial, pcon = postconsonantal, pvoc = postvocalic) are given next to different coefficients of the pairwise post-hoc comparisons.

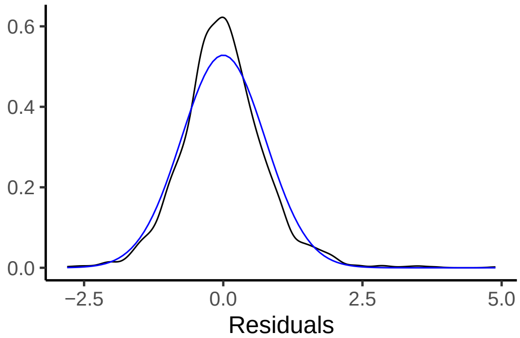
model	sensor	contrast	axis	pos	estimate	SE	df	t.ratio	p.value
1a	TT	gl - kl	y	ini	0.39	0.17	42.26	2.26	0.0725
1a	TT	gl - l	y	ini	0.41	0.18	33.94	2.24	0.0780
1a	TT	kl - l	y	ini	0.03	0.18	36.41	0.14	0.9889
1a	TT	gl - kl	y	pcon	0.13	0.11	35.85	1.17	0.4773
1a	TT	gl - l	y	pcon	-0.34	0.17	27.07	-2.06	0.1180

1a	TT	kl - l	y	pcon	-0.47	0.16	29.39	-2.98	0.0153
1a	TT	gl - kl	y	pvoc	-0.05	0.14	41.91	-0.36	0.9294
1a	TT	gl - l	y	pvoc	0.57	0.19	35.77	3.02	0.0127
1a	TT	kl - l	y	pvoc	0.63	0.18	38.03	3.43	0.0041
1b	TT	gl - kl	x	ini	0.88	0.43	42.19	2.03	0.1167
1b	TT	gl - l	x	ini	-0.43	0.41	34.97	-1.06	0.5439
1b	TT	kl - l	x	ini	-1.31	0.49	24.73	-2.68	0.0331
1b	TT	gl - kl	x	pcon	0.31	0.31	25.22	1.00	0.5842
1b	TT	gl - l	x	pcon	0.27	0.36	28.08	0.74	0.7439
1b	TT	kl - l	x	pcon	-0.04	0.45	20.00	-0.09	0.9956
1b	TT	gl - kl	x	pvoc	1.28	0.38	36.66	3.41	0.0044
1b	TT	gl - l	x	pvoc	0.37	0.42	36.72	0.88	0.6574
1b	TT	kl - l	x	pvoc	-0.91	0.50	26.18	-1.82	0.1821
2a	TM2	gl - kl	y	ini	-0.66	0.49	45.31	-1.35	0.3756
2a	TM2	gl - l	y	ini	4.48	0.50	34.86	9.02	0.0000
2a	TM2	kl - l	y	ini	5.13	0.46	40.70	11.20	0.0000
2a	TM2	gl - kl	y	pcon	0.05	0.33	32.79	0.16	0.9861
2a	TM2	gl - l	y	pcon	1.90	0.45	28.15	4.24	0.0006
2a	TM2	kl - l	y	pcon	1.84	0.40	34.35	4.56	0.0002
2a	TM2	gl - kl	y	pvoc	-3.15	0.42	42.79	-7.54	0.0000
2a	TM2	gl - l	y	pvoc	3.67	0.51	36.66	7.17	0.0000
2a	TM2	kl - l	y	pvoc	6.82	0.47	42.01	14.35	0.0000
2b	TM2	gl - kl	x	ini	0.80	0.60	42.53	1.32	0.3930
2b	TM2	gl - l	x	ini	-0.44	0.61	31.43	-0.72	0.7560
2b	TM2	kl - l	x	ini	-1.23	0.72	22.93	-1.71	0.2237
2b	TM2	gl - kl	x	pcon	0.42	0.44	25.76	0.95	0.6133
2b	TM2	gl - l	x	pcon	-0.03	0.55	25.21	-0.05	0.9984
2b	TM2	kl - l	x	pcon	-0.45	0.68	18.95	-0.67	0.7857
2b	TM2	gl - kl	x	pvoc	1.02	0.53	36.86	1.93	0.1433
2b	TM2	gl - l	x	pvoc	-0.24	0.63	33.21	-0.39	0.9208
2b	TM2	kl - l	x	pvoc	-1.27	0.74	24.20	-1.72	0.2181
3a	TM1	gl - kl	y	ini	-0.15	0.38	43.48	-0.38	0.9239
3a	TM1	gl - l	y	ini	3.37	0.65	15.93	5.19	0.0003
3a	TM1	kl - l	y	ini	3.52	0.73	14.67	4.79	0.0007
3a	TM1	gl - kl	y	pcon	0.08	0.27	27.64	0.29	0.9540
3a	TM1	gl - l	y	pcon	0.65	0.63	14.26	1.04	0.5672
3a	TM1	kl - l	y	pcon	0.57	0.71	13.45	0.80	0.7100
3a	TM1	gl - kl	y	pvoc	-2.55	0.33	38.97	-7.65	0.0000
3a	TM1	gl - l	y	pvoc	2.59	0.66	16.49	3.94	0.0030
3a	TM1	kl - l	y	pvoc	5.13	0.74	15.08	6.93	0.0000

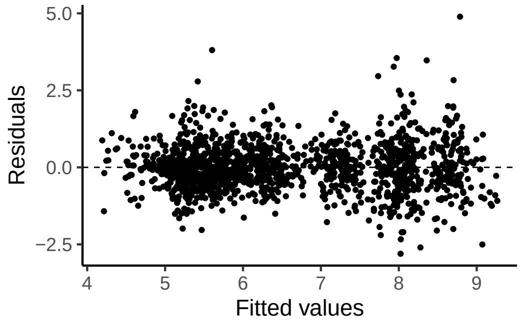
3b	TM1	gl - kl	x	ini	0.91	0.57	43.88	1.59	0.2593
3b	TM1	gl - l	x	ini	-0.32	0.69	23.17	-0.46	0.8898
3b	TM1	kl - l	x	ini	-1.23	0.82	18.30	-1.49	0.3185
3b	TM1	gl - kl	x	pcon	0.31	0.41	27.71	0.77	0.7244
3b	TM1	gl - l	x	pcon	-0.17	0.65	19.10	-0.26	0.9644
3b	TM1	kl - l	x	pcon	-0.48	0.79	15.84	-0.61	0.8165
3b	TM1	gl - kl	x	pvoc	0.91	0.50	39.00	1.83	0.1736
3b	TM1	gl - l	x	pvoc	-0.17	0.70	24.49	-0.24	0.9678
3b	TM1	kl - l	x	pvoc	-1.08	0.83	19.11	-1.29	0.4168
4b	TB	g - gl	x	ini	-1.54	2.22	45.88	-0.70	0.8984
4b	TB	g - k	x	ini	1.79	2.56	45.82	0.70	0.8970
4b	TB	g - kl	x	ini	0.89	2.22	45.88	0.40	0.9781
4b	TB	gl - k	x	ini	3.33	2.21	45.69	1.51	0.4423
4b	TB	gl - kl	x	ini	2.43	1.81	45.70	1.34	0.5398
4b	TB	k - kl	x	ini	-0.90	2.21	45.68	-0.41	0.9768
4b	TB	g - gl	x	pcon	-3.51	1.95	45.69	-1.80	0.2869
4b	TB	g - k	x	pcon	1.10	2.55	45.70	0.43	0.9726
4b	TB	g - kl	x	pcon	-1.99	1.95	45.68	-1.02	0.7375
4b	TB	gl - k	x	pcon	4.61	1.95	45.72	2.36	0.0987
4b	TB	gl - kl	x	pcon	1.52	1.04	45.74	1.45	0.4739
4b	TB	k - kl	x	pcon	-3.10	1.95	45.72	-1.59	0.3958
4b	TB	g - gl	x	pvoc	-1.25	2.09	45.70	-0.60	0.9312
4b	TB	g - k	x	pvoc	2.70	2.55	45.70	1.06	0.7162
4b	TB	g - kl	x	pvoc	2.09	2.09	45.70	1.00	0.7484
4b	TB	gl - k	x	pvoc	3.96	2.09	45.70	1.90	0.2436
4b	TB	gl - kl	x	pvoc	3.35	1.48	45.71	2.27	0.1208
4b	TB	k - kl	x	pvoc	-0.61	2.09	45.70	-0.29	0.9911
5b	TM2	g - gl	x	ini	-2.32	2.24	45.85	-1.04	0.7274
5b	TM2	g - k	x	ini	1.60	2.58	45.79	0.62	0.9245
5b	TM2	g - kl	x	ini	-0.15	2.24	45.84	-0.07	0.9999
5b	TM2	gl - k	x	ini	3.93	2.23	45.66	1.76	0.3044
5b	TM2	gl - kl	x	ini	2.17	1.82	45.68	1.19	0.6343
5b	TM2	k - kl	x	ini	-1.76	2.23	45.66	-0.79	0.8595
5b	TM2	g - gl	x	pcon	-4.31	1.97	45.67	-2.19	0.1410
5b	TM2	g - k	x	pcon	0.55	2.57	45.67	0.21	0.9965
5b	TM2	g - kl	x	pcon	-2.94	1.97	45.66	-1.50	0.4471
5b	TM2	gl - k	x	pcon	4.86	1.97	45.70	2.47	0.0783
5b	TM2	gl - kl	x	pcon	1.36	1.05	45.71	1.30	0.5699
5b	TM2	k - kl	x	pcon	-3.50	1.97	45.70	-1.78	0.2971
5b	TM2	g - gl	x	pvoc	-1.49	2.10	45.68	-0.71	0.8937

5b	TM2	g - k	x	pvoc	3.70	2.57	45.67	1.44	0.4835
5b	TM2	g - kl	x	pvoc	2.21	2.10	45.67	1.05	0.7204
5b	TM2	gl - k	x	pvoc	5.18	2.10	45.68	2.47	0.0790
5b	TM2	gl - kl	x	pvoc	3.70	1.49	45.69	2.49	0.0756
5b	TM2	k - kl	x	pvoc	-1.49	2.10	45.67	-0.71	0.8932
6b	TM1	g - gl	x	ini	-2.38	2.17	45.79	-1.10	0.6926
6b	TM1	g - k	x	ini	1.82	2.50	45.74	0.73	0.8852
6b	TM1	g - kl	x	ini	-0.33	2.17	45.79	-0.15	0.9987
6b	TM1	gl - k	x	ini	4.20	2.16	45.64	1.94	0.2247
6b	TM1	gl - kl	x	ini	2.05	1.76	45.65	1.16	0.6535
6b	TM1	k - kl	x	ini	-2.15	2.16	45.64	-0.99	0.7534
6b	TM1	g - gl	x	pcon	-4.74	1.91	45.64	-2.49	0.0756
6b	TM1	g - k	x	pcon	-0.06	2.50	45.65	-0.02	1.0000
6b	TM1	g - kl	x	pcon	-3.57	1.91	45.64	-1.87	0.2539
6b	TM1	gl - k	x	pcon	4.68	1.91	45.67	2.45	0.0812
6b	TM1	gl - kl	x	pcon	1.17	1.02	45.68	1.15	0.6626
6b	TM1	k - kl	x	pcon	-3.51	1.91	45.66	-1.84	0.2680
6b	TM1	g - gl	x	pvoc	-1.54	2.04	45.65	-0.76	0.8733
6b	TM1	g - k	x	pvoc	3.78	2.50	45.65	1.52	0.4361
6b	TM1	g - kl	x	pvoc	1.86	2.04	45.65	0.91	0.7972
6b	TM1	gl - k	x	pvoc	5.33	2.04	45.65	2.61	0.0565
6b	TM1	gl - kl	x	pvoc	3.41	1.44	45.66	2.36	0.0989
6b	TM1	k - kl	x	pvoc	-1.92	2.04	45.65	-0.94	0.7820

D.4. Model residuals

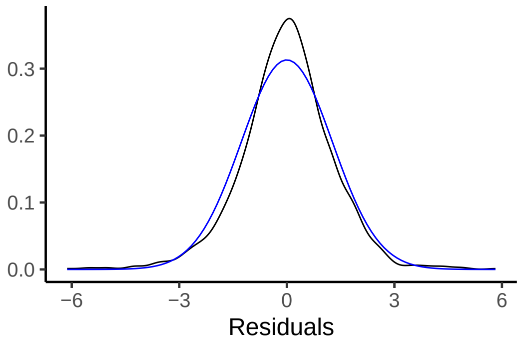


(a) Normal distibution test for the residuals in model 1a. The distribution shows some measure of high kurtosis.

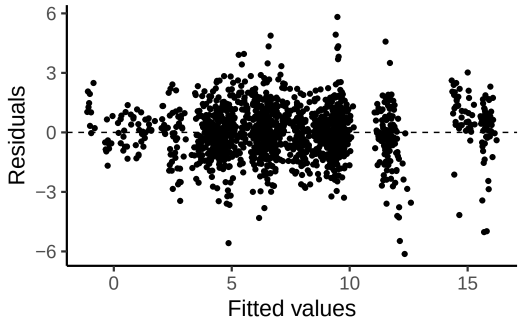


(b) Homoscedasticity test for the residuals in model 1a. The residuals seem distributed homeoscedastically.

Figure D.1.: Residuals of the model comparing TT height during C_2 /l/ (model 1a)



(a) Normal distibution test for the residuals in model 3a. The distribution shows some measure of high kurtosis.



(b) Homoscedasticity test for the residuals in model 3a. The residuals seem slightly heteroscedastic.

Figure D.2.: Residuals of the model comparing TM1 height during C_2 /l/ (model 3a)

E. Ancient descriptions of the quality of the Latin lateral

The testimonies of ancient scholars regarding the pronunciation /l/ are given below, both the Latin source and their corresponding translation (cf. Parker 1986: 31-6). For an extensive overview with more examples see Müller (2011). Bold and underlined parts are meant to highlight noteworthy sections used for the summary in Table 2.1. and are not part of the original translations.

E.1. Plinius Secundus Maior (1th CE) (quoted by Priscianus in the 6th CE)

Original Latin source: "L triplicem, ut Plinio videtur, sonum habet: exilem, quando geminatur secundo loco posita ut 'ille', 'Metellus'; plenum, quando finit nomina vel syllabas et quando aliquam habet ante se in eadem syllaba consonantem, ut 'sol', 'silva', 'flavus', 'clarus'; medium in aliis, ut 'lectum', 'lectus'." (Keil 1981b: 29)

Translation: "L, according to Plinius, has **three varieties**: '**exilis**', when it is the <u>second part of a geminate</u>, as in 'ille', 'Metellus'; '**plenus**', when it is <u>word-final or syllable-final</u> and when <u>it is preceded by another consonant in the same syllable</u>, as in 'sol', 'silva', 'flavus', 'clarus', '**medius**' in the <u>remaining positions</u>, as in 'lectum', 'lectus'." (Müller 2011: 193)

E.2. Diomedes Grammaticus (4th CE)

Original Latin source: "labdacismi similiter, si lucem prima syllaba vel almam nimium plene pronuntiemus." (Keil 1981a: 453)

Translation: "It is a lambdacism when we pronounce **the first syllable of 'lux' or 'alma' too 'plene'**." (Müller 2011: 190)

E.3. Martianus Felix Capella (4th CE)

Original Latin source: "L uero littera tripliciter sonat. nam exilem sonum reddit cum geminatur, ut sollers Sallustius, medium autem cum terminat nomina, ut sol sal, item leniter sonat cum uocales anteuenit, ut lapis lepus liber locus lucerna, plenum uero sonum habet, cum ei praeferuntur litterae PGCF, ut in Plauto glebis Claudio Flauo. L autem numquam ulli semiuocali uel mutae praeponitur." (Dick and Préaux 1978: 90)

Translation: "The letter l has **three types of realisation**. For it is '**exilis**' when geminated, as in 'sollers', 'Sallustius', but '**medius**' when it is word-final, as in 'sol', 'sal', moreover, it is weak when it *precedes a vowel*as in 'lapis', 'lepus', 'liber', 'locus', 'lucerna'; it is '**plenus**' when it is preceded by the letters p g c f as in 'Plautus', 'gleba', 'Claudius', 'Flavus'. But l never occurs before a semivowel or a voiceless obstruent." (Müller 2011: 190)

E.4. Servius Honoratus (4-5th CE)

Original Latin source: "labdacismi fiunt, si aut unum *l* tenuius dicis [solocismum], ut Lucius, aut geminum pinguius, ut Metellus." (Keil 1981c: 445)

Translation: "Lambdacisms arise when one either pronounces **a singleton l too 'tenuis'**, as in 'Lucius', or a **geminate l too 'pinguis'**, as in 'Metellus'." (Müller 2011: 190)

E.5. Pompeius Maurus (5th CE)

Original Latin source: "Labdacismus est ille, qui aut per unum l fit aut per duo; sed per unum, si tenuius sonet, per duo, si pinguius sonet. puta llargus; debemus dicere largus. ut pingue sonet; et si dicas llex, non lex: vitiosa sunt per labdacismum. item in gemino l [quando fuerint duo l], si volueris pinguius sonare, si dicamus Metelus Catulus. in his etiam agnoscimus gentium vitia; labdacismis scatent Afri, raro est ut aliquis dicat l: per geminum l sic locuntur Romani, omnes Latini sic locuntur, Catullus Metellus." (Keil 1981d: 286-287)

Translation: "Lambdacism occurs with both singleton and geminate l: in the **singleton when it sounds too 'tenuis'**, and **in the geminate when it sounds too 'pinguis'**. Consider 'llargus'; we need to say 'largus' so that it sounds 'pingue'; and if one should say 'llex' [. . .], not 'lex' [. . .]: it's incorrect because of the lambdacisms. The same holds for geminate l, if one would want to pronounce it too 'pinguis' and say 'Metelus', 'Catulus'. In such habits we can recognise peoples' incorrect usages; lambdacisms abound with the Afri (inhabitants of Carthage), and it is rare that someone pronounces l: for geminate l, the Romans pronounce it thus, and thus all Latins speak: 'Catullus', 'Metellus'." (Müller 2011: 191)

E.6. Cosentius (5th CE)

Original Latin source: "Per detractionem fiunt barbarismi sic: litterae, ut siquis dicat vilam pro villam, mile pro mille [. . .]. labdacismum vitium in eo esse dicunt, quod eadem littera uel subtilius a quibusdam vel pinguius ecfertur. et re vera alterutrum vitium quibusdam gentibus est. nam ecce Graeci subtiliter hunc sonum efferunt. ubi enim dicunt 'ille mihi dixit', sic sonant duae ll primae syllabae, quasi per unum l sermo ipse consistat. contra alii sic pronuntiant 'ille meum comitatus est iter' et 'illum ego per flammas eripui', ut aliquid illic soni etiam consonantis ammiscere videantur, quod pinguissimae prolationis est. Romana lingua emendationem habet in hoc quoque distinctione. nam alicubi pinguius, alicubi debet exilius proferri; pinguius, cum vel b sequitur, ut *in* albo, vel c, *ut* in pulchro, vel f, ut in adelfis, vel g, ut in alga, vel m, ut in pulmone, vel p, ut in scalpro; exilius autem proferenda est, ubicumque ab ea verbum incipit, ut in lepore lana lupo, vel ubi in eodem verbo et prior syllaba in hac finitur, et sequens ab ea incipit, ut ille et Allia." (Keil 1981d: 392, 394)

Translation: "Barbarisms arise through subtractions in the following way: subtraction of letters, so when one says 'vila' for 'villa' or 'mile' for 'mille'. [. . .] The error called lambdacism is said to lie in the fact that some people pronounce the same letter either too 'subtilis' or too 'pinguis'. And indeed, one or the other of these errors can be found with some peoples. The Greek, for instance, pronounce this sound 'subtiliter'. For when they say 'ille mihi dixit', the two laterals of the first syllable sound as if there would be but one lateral. Conversely, others pronounce 'ille meum comitatus est iter' and 'illum ego per flammas eripui' in a way that they seem to mix it with a consonantal sound which is a very 'pinguis' pronunciation. The Roman speech makes this distinction better. For it must be pronounced in some places more 'pinguis' and in other places more 'exilis'; more '**pinguis**' when b follows as in 'albus', or c as in 'pulcher', or f as in 'adelfi', or g as in 'alga', or m as in 'pulmo', or p as in 'scalper'; but it needs to be pronounced more '**exilis**' whenever it is word-initial as in 'lepus', 'lana', 'lupus', or when within the same word also the preceding syllable finishes in it and the following one starts with it as in 'ille' and 'Allia'." (Müller 2011: 191-2)