

[illegible]

## Appendix 2 - Symbols

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$\Psi$	<b>Phylogeny</b> The (possibly unknown) relationship between entities resulting from an evolutionary tree
$\tau$	<b>Tree topology</b> Information on the relationships of the languages
$\mu$	<b>Substitution rate</b> the rate at which the language changes
$N$	<b>Sampled languages</b> The number of languages in a sample
$\nu$	<b>Expected events</b> The expected number of evolutionary events that occurred between two languages
$t$	<b>Past times</b> Times of branch events
$B$	<b>Possible rooted trees</b>
$A$	<b>Segmental alignment</b> Constructed by combining the word segment information for the languages of interest with information on the homology of the segments
$S$	<b>Segmental information</b> Information on the homology of the segments
$s$	<b>Segment</b> Linguistic segment
$s_i$	<b>ith segment</b>
$H$	<b>Homology map</b> The map describing the alignment of the segments
$Q$	<b>Rate Matrix</b>
$\beta$	<b>Rate matrix scaling factor</b> Scales the rate matrix such that the average rate of segmental substitution is one
$P$	<b>Probability</b> The probability the process ends in certain state
$P$	<b>Marginal Likelihood</b>
$\pi$	<b>Equilibrium distribution</b>
$\lambda$	<b>Rate of segment insertion</b>
$\mu$	<b>Rate of segment deletion</b>

## Appendix 2 - Symbols

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$n$	<b>Word length</b> Number of segments in a word
$r$	<b>Rate parameter</b>
$\theta$	<b>Rate parameters</b> Parameters associated with the rate matrix
$\theta'$	<b>Proposal</b> New value proposal
$q$	<b>Proposal probability</b> Probability of new proposal
$u$	<b>Random number</b>
$R$	<b>Acceptance probability</b> Probability of accepting a proposed value
$M$	<b>Model</b> Mathematical model for linguistic parameters
$BF$	<b>Bayes Factor</b> A numerical factor related to the quality of the model fit
$X$	<b>Unknown</b>

### Appendix 3 - Segments used in the word list

Char.	Segment	Words containing this segment
0	e	<p>ego:, ew, jew, usted, vose, vose, voste, embra, femmina, femev, femjv, fembra, femeje, mulierem, muxer, moλλe, muλεv, muλεr, muλε, mujere, done, hominem, ombre, infantem, infante, fante, nenēj, nen, epuz, esposa, mulier, muxer, moλλe, muλεv, muλεr, muλε, mujere, epu, esposo, matrem, mev, maðre, ma:dre, mev, patre, pev, paðre, pa:dre, nema:l, noma:je, piskem, peθ, peffe, pev, pevte, awem, abe, awikellum, useλ, passerem, passero, pasare, peduklus, pedoli, pædukje, flo:rem, fjo:re, flqare, ne, nariſſe, so:lem, sole, sqare, soreli, lune, etwal, estreja, stella, istrelv, iftrelv, stele, age, ploje, plqaje, mare, mev, sa:lem, sale, se, sare, terra, tev, tjera, tev, tjere, ka:li:ginem, kaliðine, nebula, njebla, nebbja, newlæ, neguræ, tene:braj, tenebre, tene:bra:s, tenebv, tinjeblas, tenebre, tanebræs, fyne, fumate, θjelo, ſſer, wentum, bjento, ben, fwego, no:men, no:me, nume, no:minem, nombre, leſſgwa, bibere, beber, bere, bebev, biſſer, bevi, komedere, komer, kome, kumer, mandukare, mǎze, mandgare, morder:re, morðer, morder:re, morðev, murðer, morsika:re, morsikare, murseka, sugere, syse, suðe, konspuere, kōspyē, eskupir, sputere, esputar, sputare, ski:re, sapere, saber, sabev, seber, kogno:skere, konother, konoffere, konesev, kupiser, kunqafte, ko:gita:re, kqide, koðgitare, kuðgeta, pe:nsare, pǎse, pensar, pensare, pēse, pe:nsa:, timere, temer, temere, temev, timer, temæ, temi, teme, tremere, tremev, tremare, tremev, trimer, dormi:re, dormire, wi:were, vivere, vivev, viver, morire, moxev, muver, nekare, nwaje, neka, anegar, annegare, tqe, tuwe, maktare, mate, okki:dere, utſidere, uſſide, pugna:re, pu:nnare, battuere, battere, batev, betev, bate, kaptia:re, ſase, katſfare, pulsa:re, puse, pulsare, seka:re, sje, segar, segare, segav, sea:, kurta:re, ekskurta:re, eku:te, skortare, ta:lia:re, taje, taλλa:re, di:widere, dividere, divide, skindere, sēde, ſindere, findere, ender, fendere, fēdev, fēder, parti:re, partire, se:para:re, sǎvæ, separar, separare, separav, separa:, separa, pungere, punðgere, punðe, jugula:re, zygye, jugula:re, ra:dere, raer, radere, bæv, væv, rade, vaze, rasare, fodere, kawa:re, kavare, çavle, ekskaware, eskabar, skavare, nata:re, nwotare, naviga:re, naze, nabegar, navigare, wola:re, vole, volare, volve, zvolare, ſamine, kamminare, ſimine, maſſe, mergere, merðgere, merðe, ambita:re, andare, wen:re, benir, venire, veni, ekstendere, etǎdv, ekstender, estendere, istēdev, iſtēder, østendæ, ekstinde, jake:re, zezi:, jaθer, ðaſſere, zæv, zæv, ðere, jesi, sedere, ser, sedere, sev, ſedga, sedenta:re, sentar, senta:, stare, estar, stare, levare, love, jebar, levare, levav, leva:, altiare, ose, alsare, torna:re, tuvne, tornare, turne, gyra:re, zive, ðirare, vive, virare, tork<sup>w</sup>:re, torθer, torſſere, turser, tqarſſe, kadere, kaer, kadere, ſjade, tōbe, tume, tenere, tener, tenere, tev, ter, tsine, segurar, eksprimere, epvēdv, eksprimir, sprēmere, iſprēmev, iſprēmerv, æspremæ, esprimi, skreme, serrere, serar, seka, serare, seve, θerar, serrare, sere, appekto:re, apretar, stringere, etvēdv, estrepir, strindgere, stringe, strindge, frika:re, fveje, fregar, fregare, frea, freka, frikta:re, fvote, frettare, lawa:re, lave, lavare, tergere, terðgere, ekstergere, estarsir, ſterðge, eksuka:re, esqije, enxugar, affugare, suwe, limpida:re, tira:re, tixe, tirare, tire, puse, trahere, trarre, traze, trezer, tradge, impingere, impindgere, impindge, jakta:re, zote, etſar, ðettare, ðete, lankea:re, lǎse, lanſſare, erunka:re, arronſſare, liga:re, lie, legar, legare, lea:, lega, apta:re, ko:nsuere, koser, kuſſire, kuzer, qase, komputare, kōte, kontare, ennumera:re, enumev, enumerar, enumerare, enumera, dikere, deθir, dire, dizer, ziſſe, ekspone:re, sporre, spune, kanta:re, ſǎte, kantare, ſǎte, ludere, joka:re, zve, ðokare, ðuwe, fluktuare, flyktqe, fluttuare, fluitare, fluitare, fluere, flye, fluire, ko:lare, kule, kolare, kole, ekskurrere, eskurir, skorrere, iſkovv, iſkurer, skurðge, kurrere, korer, korrere, kovv, kuver, kurðge, gela:re, zole, elar, ðelare, ðale, glakia:re, glase, gjatſſare, inglakia:re, inge</p> <p>tsa, bryle, brufare, bryle, krema:re, kvame, kemas, kremare, kevmare, kevmake, flamma:re, flǎbe, flamear, fjammar, arde:re, arder, ardere, avdev, vder, arde, flagra:re, flagve, flagrare, inkendere, ēsǎdje, enθender, inſſendjare, isenðjar, ønsendæ, inſſindze, ustula:re, ustolare, alter, grandem, grande, grande, majjorem, mare, le, grabe, greve, grew, grew, lerdo, pesaðo, pesante, pezadu, pezant, pekepo, pekenu, pikenu, brewis, brebe, breve, brew, bæf, etvwa, estreſſo, stretto, menudo, delyaðo, delikato, dewgadu, subtil:em, sottile, subsire, dekstrum, djestro, destræ, dereſſo, drept, ruber, vermikulus, bermexo, vermiλλo, vevmeλu, rubeus, rubeo, ruðge, wiridem, vev, berde, verde, verdi, verde, due, tres, tre, tref, k<sup>w</sup>:ink<sup>w</sup>e, ſſinkwe, ekkumhi:k, k<sup>w</sup>em, kjen, ſſine, ke, ſſe, kome, ſſemut, nek, ne, et, e</p>

### Appendix 3 - Segments used in the word list

1	g	ego:, agwə, lago, lagu, ka:li:ginem, negurə, fwego, fogu, lāg, lengwa, lingwa, ligwə, musəga, musəgar, sugere, sugaḡ, sugar, kogno:skere, ko:gita:re, nəga, anegar, annegare, segaḡ, pungere, jugula:re, zygylye, nabegar, navigare, nəbəga, naviga, segurar, siguraḡ, fregar, frəga, iffrigar, tergere, ekstergere, enxugar, affugare, ɛfugar, əfuga, liga:re, legar, legare, zogax, zuga, flugtwar, gela:re, glakia:re, glase, gjattfjare, gləsa, inglakia:re, flagra:re, flagxə, flagrar, flagrare, flagrar, awgū, ałgū, əlgu, gḡā, grande, grande, grēdʒi, grēdi, longum, lungu, lōgu, largo, laxgu, largu, grawis, gḡav, grabe, greve, gravi, gravi, grew, angustus, angosto, angusto, dewgadu
2	o:	ego:, no:s, no:i, no:, wo:s, vo:i, vo:, homo:, spo:s, flo:rem, fjo:re, flo:r, so:lem, no:men, no:me, no:minem, kogno:skere, ko:gita:re, ko:nsuere, ekspo:nere, ko:la:re, to:tus, po:k, duo:s, k <sup>w</sup> ando:, k <sup>w</sup> o:modo, no:n
3	ʒ	ʒə, ʒə, pluʒə, kalizēj, kəlizēj, māʒe, mēʒax, mēʒar, məʒa, kuzitaḡ, kuzitar, pūʒix, pūʒir, zygylye, naʒe, zeʒix, ʒeʒeḡ, ʒeʒer, ʒawrə, ʒixə, ʒirar, ʒira, əftrizir, əftrizir, əstərzi, ʒəte, ʒejtar, ʒwe, zogax, ʒuʒar, zuga, zuka, ʒəle, ʒilar, ʒəla, infindʒe, laxʒ, du:ʒe:, xuz
4	ə	ʒə, dənə, dɔamənə, ɔmə, əspoʒə, mərit, əspəs, marə, parə, tatə, nəmajə, pasəre, pədukje, bokə, bukə, gurə, ʌnə, lunə, əstəl, əjwə, apə, pluʒə, tərə, tsarə, newlə, negurə, tənəbrəs, ʃəaʃə, limbə, bəwrə, məʒa, musəga, musəgar, musəʒa, əskupi, səʃe, kuneʃə, pənsa, pəsa, temə, biwrə, nəga, mətə, batrə, kəsa, səya, tələ, təja, fəndrə, pərti, səvke, səpərə, rawrə, rəza, rəska, kəba, nəda, nəbəga, fəmine, kəmina, vənix, bəni, əstendrə, ʒawrə, ʒəʃə, əsta, ləve, ʌbə, əlsa, tərə, kawrə, kəʒə, tənix, təni, ifprəmek, ifprəmer, əspremə, sərar, səra, əftrizir, əftrizir, əstərjə, frəga, frəsa, əstərzi, əfuga, trəwrə, əmpərə, ʒəte, ʌnsa, kəntə, əskorə, korə, ʒəle, ʒəla, gləsa, krəma, ənsendrə, əlgu, altrə, amplə, pəʒā, pəʒat, pəti, pətit, əstret, məny, mənut, mərunt, dəlikat, destrə, bərməʌ, dowə, kwatrə, əʌa
5	j	jə, estreja, jubja, jaθer, jebər, aja
6	o	jə, io, jo, nos, no, bos, vof, vos, vose, veste, moʌʌe, domina, doʒa, donə, hominem, ombre, omēj, om, homo:, wəmo, nipo, nino, sponsa, esposa, ispoza, ifpozə, moʌʌe, mariðo, marito, sponsus, esposo, spoʒo, ispozu, ifpozu, sokius, səʃo, sots, omaj, wazo, utʃello, paxaro, passero, pjoxo, pidəkkjo, pioʌu, poʌ, pedoli, fruto, frutto, flor, flox, naso, na:so, boka, bokka, boke, bokə, sol, sole, solikulus, soreli, o, pjodɔʒa, ploje, lago, lago, θjelo, ʃelo, bjento, vento, fokum, fwego, fwəko, fogu, foʒu, fok, aʒo, anno, nomi, nomi, nombre, komedere, komer, kome, morde:re, moʌdɔx, moʌðer, moʌdɔx, morsika:re, moskar, morsikare, konspuere, kogno:skere, konəθer, konəʃere, kopeseḡ, koposi, koʒita:re, dormire, dormir, dormire, doʌmɔx, dormi, morir, morire, moʌx, okki:dere, kortar, koʌtaḡ, skortare, kosaɹ, fodere, nwotare, wola:re, vole, bolar, volare, voax, zvolare, zvola, ose, tornare, tornar, tornare, toʌnax, torna:, toʌk <sup>w</sup> e:re, toʌθer, appekto:re, fʌote, frotar, arrontʃare, koser, komputa:re, kontar, kontare, konta:, sporre, jəka:re, ɔʒokare, zogax, kolar, kolare, koax, skorrere, ifkoʌx, əskorə, skorir, korer, korrere, koʌx, korə, kori, ustolare, omne:s, oʒni, todo, tutto, todə, toðu, tot, muʃo, molto, mol, molc, tanto, okə, alguno, alkuno, poko, pəko, powku, otə, otro, altro, owtru, maʒo, maʒno, majjorem, longum, longo, lungu, ʌoʒ, larʒo, largo, lato, anʃo, ampjo, lerdo, lordo, pesaðo, pekeʒo, pitʃino, pikkolo, korto, korto, angosto, angusto, estreʃo, stretto, menudo, minuto, dəʒaðo, delikato, sottile, djestro, destro, dereʃo, rubro, roxo, rosso, koʃu, koʃu, ros, roʃu, bermexo, vermɔʌo, rubjo, rəbbjo, rubeo, uno, dos, dowə, k <sup>w</sup> attwor, kwatro, kwattro, θinko, kwando, k <sup>w</sup> o:modo, komo, kome, komu, no, non

### Appendix 3 - Segments used in the word list

7	i	io, noi, voi, femina, femmina, femine, mulierem, domina, hominem, infantem, infante, ifēfi, nipo, nino, ispoza, mulier, maži, mariđo, marito, maridu, meriđu, marit, mērit, ispozu, sokius, mari, pari, animalia, alimapa, be:stia, biffa, bife, bis, piskem, pejfi, avi, awikellum, pidakkjo, piođu, pedoli, fęqi, nariđ, nariŋe, naris, neriŋ, solikulus, soreli, istrelę, pluwia, plqi, kaliginem, kalina, kalidžine, kalizęj, kelizęj, tinjeblas, kajkia, vint, nomi, no:minem, ling <sup>wa</sup> , lingwa, limbę, bibere, bevi, mwardi, morsika:re, morsikare, kuspix, kuspir, eskupir, askupi, sti, kinđh, koposi, ko:gita:re, kuide, kwidar, kodžitare, kuzitař, kuzitar, time:re, temi, trima:, dęmiř, dormir, dormire, dęmiř, durmir, durmi, dwařmi, dormi, vivę, bibir, vivere, viveř, viver, biwra, vivi, via, muřix, morir, morire, muri, męri, muri, tuta:ri, aksix, utfidere, uksi, ufide, batir, bati, kaptia:re, talia:re, di:widere, dibidir, dividere, đividžix, diviđir, dibidi, dividi, divide, skindere, findere, findere, pařtiř, partir, partire, pařfiř, pęrtir, pęrti, pę:rti, pęziř, pęzir, pupi, fwiř, ifkęvař, ifkęvar, naviga:re, navigare, naviga:, naviga, fęmine, kaminar, kamminare, kęmiņař, kęmiņař, kęmina, fimine, camina:, ambita:re, vęniř, benir, venire, viř, vir, bęni, vini, vipi:, veni, istędeř, istęder, ekstinde, zezix, jesi, altia:re, zixę, xirar, đirare, zirar, zira, đira:, viřę, birar, virare, virar, bira, kęir, tęniř, tęni, tini, tinji, sine, eksprimere, ekspremir, ifpręmeř, ifpręmer, esprimi, stringere, estrepiř, strindžere, ařtrizir, ařtrizir, stringe, frika:re, frika:re, frisar, estarsir, estęrzi, esqije, limpidare, limpjar, tira:re, tiřę, tirar, tirare, fira, tira, tire, tira:, impingere, impindžere, impindę, xita, liga:re, lie, liya, kutfire, kuzi, kuzi, diř, deđir, dire, dizer, di, ziŋe, ludir, fluita:re, fluitare, fluir, fluire, flwiř, flwir, flui, eskurir, ifkọeř, ifkureř, kuřix, kori, glakia:re, inglakia:re, inkendere, inřendjare, inřindze, oņni, altri, alius, gręđi, grawis, gravi, grevi, pittitus, pęti, pętit, piti, pittinus, pitfino, putsin, pitulus, pikkolo, piřful, brewis, brevi, striktus, istrejtę, minutus, minuto, miudu, miuđu, minu, minut, de:lika:tus, delikato, dęlikat, sutil, sottile, suřiw, suřtil, su:ti, subtsire, direjtę, direjtę, vermikulus, vermiđu, wiridem, kwatri, řinko, řinķwe, řinķ, řinķ, řinķ, isi, aki, kwi, eki, illa:k, ibi:, vi, ai, ei, k <sup>is</sup> , ki, kwi, fine, k <sup>id</sup> , ni, i, fi
8	w	ew, jew, wo:s, węmo, pwasę, awem, aw, awikellum, wazo, sęw, etwal, aywa, akkwa, agwę, ajywa, ęw, pluwia, saw, newwę, newlę, sęw, wentum, fwego, fwęko, lengwa, lingwa, ligwę, bwęř, bęwra, mwardi, sawwę, kwidar, dwařmi, wi:were, biwra, nwaje, tuwe, di:widere, pweđę, rawra, fwiř, kawa:re, ekskawa:re, nwotare, wola:re, vwar, wenire, zawra, swęř, fwař, kawra, lawa:re, suwe, tawra, zwe, đuwe, flugtwar, flwiř, flwir, awgę, powku, owtru, aw, grawis, grew, grew, brewis, brew, etęwa, dewgadu, suřiw, dęwat, wiridem, dowę, tęwa, k <sup>att</sup> wor, kwatro, kwattro, kwatru, kwatra, kwat, kwatri, řinķwe, kwi, kwi, kwa, kwe:, kwando, kweđu, kwan, kwand, kwant
9	o	zę, nęjs, nęř, vęjs, vęse, dęnna, dęnę, dęne, ęm, ęmej, ęmę, ęm, węmo, spęza, ęspęzę, spęzo, ęspęs, sęřo, pidakkjo, flę, bęk, bęce, sęw, sęř, sęř, sęř, sęř, nęly, fwęko, fęk, nęm, nęę, męrdere, kęnetę, kinđh, dęmiř, męri, aksix, vęle, tęwđę, tęřfere, tęrsę, lęji:, kęle, tę, pęko, pęk, ręs, rębbjo, ręř, kęmę, kęmę
10	đ	đi, pjodđę, kalidžine, mandžare, suđę, kodžitare, kuđęta, đividžix, punđere, punđę, neđi:, merđere, merđę, đatfe:re, đere, đirare, đira:, strindžere, strindę, tęřđere, řterđę, trađę, impindžere, impindę, đettare, đęte, đokare, đuwe, đuja:, skurđę, kurđę, đelare, đale, isendžar, gręđi, ruđę
11	ř	đi, na:ris, isendžar
12	j	jo, jew, nęjs, vęjs, femję, femeje, mujere, mujere, omaj, nęmaje, ufjel, pjoxo, pidakkjo, pju, pędukje, frujt, fjo:re, jubja, pjodđę, ploje, plęaje, tjera, tjere, nęly, nębla, nebbja, tinjeblas, řjel, řjelo, bjento, skujpa, kujda, sje, tęje, tęji:, taja:, tęja, jugula:re, jugula:re, jake:re, jesi, řjade, tinji, esqije, suja:, limpjar, jaktare, lęji:, joka:re, đuja:, gjatřjare, fjammare, ęsęđę, inřendjare, isęđjar, majjorem, ampjo, djestro, rubjo, rębbjo, kjen

### Appendix 3 - Segments used in the word list

13	n	no:s, nu, nos, no:i, nojs, noʃ, no, no:, noj, fe:mina, femmina, femine, domina, dōnna, done, dōnə, dōne, dōamnə, hominem, infantem, infante, fante, niʃo, nino, nenēj, nen, sponsa, sponsus, animalia, nema:l, nəmaje, na:sus, ne, naso, na:so, nas, na:s, nas, nariθ, nariʃfe, naris, nəriʃ, na:rɪs, lu:na, lyn, luna, ʎunə, lən, lune, lunə, ka:li:ginem, kalina, kaliɖʒine, nebula, nʃɔly, njebla, nebbja, nəvwə, newlə, negurə, tene:braj, tɛ:nebre, tene:bra:s, tenebɤ, tinjeblas, tɛ:nebre, tənebrəs, wentum, bjento, vento, ben, vint, vint, annum, anno, ɐnu, an, no:men, nɔ̃, no:me, nomi, nomi, nɔm, nɔ̃, nɔɲ, nume, no:minem, nombre, lingʷa, lingwa, lɛnge, manduka:re, mandukar, mandɖare, minka, konspuere, kogno:skere, kɔnɛtɤ, konoθer, konoffere, kunɛʃə, kinɔh, kunqaste, pe:nsa:re, pensar, pensare, pənsa, neka:re, nwaje, nəga, neka, anegar, annegare, pugna:re, skindere, findere, findere, ender, fəndere, fəndrə, pungere, punɖgere, punɖge, nata:re, nadar, nwotare, nadaɤ, nəðar, nəða, nada:, navigare, nəze, nabegar, navigare, naviʃaɤ, nəviʃar, nəbəga, nəɖʒi:, naviga:, naviga, ʃəmine, kaminar, kamminare, kəmina, ʃimine, camina:, andar, andare, wen:re, vənɪɤ, benir, venire, bəni, vini, veni, ekstendere, ekstender, estendere, əstendrə, ekstinde, sedenta:re, sentar, senta:, torna:re, tuɤne, tornar, tornare, toɤnaɤ, turnar, turna, tu:rne, torna:, turna, tene:re, tənɪɤ, tener, tenere, tənɪ, tini, tinji, tɪne, stringere, strinɖgere, stringe, strengi:, strinɖge, enxugar, impingere, impinɖgere, impinɖge, lankeare, lanθar, lanʃare, ʎənsa, lancit, lanʃar, ɛ:runka:re, arankar, arrontʃare, ko:nsuere, kontar, kontare, konta:, ɛ:numera:re, enumere, enumerar, enumerare, enumera, numara, ekspɔnere, spune, kanta:re, kantar, kantare, kənta, cantar, kinta, inglakia:re, ingetsa, inkendere, enʃənder, inʃəndʒar, isendʒar, ənsendrə, inʃindʒe, omnes, tantus, tanto, tant, tanc, alguno, alkuno, magnum, grandem, grande, grande, gran, grant, longum, longo, lungo, lunk, lung, anʃo, pe:sant, pesante, pezant, pittinus, pitʃino, pekenu, pikenu, putɪn, angustus, angosto, angusto, minu:tus, mənɪ, menudo, minuto, mənut, minu, minu:t, mərunt, u:num, uno, un, unu, kʷi:nkʷe, θinko, ʃinʃ, kjen, ʃine, kʷando:, kwando, kwan, kwand, kwant, kind, no:n, nɔ̃, no, non, nəw, nu, nek, ni, ne, nəj, nəj, nə
14	s	no:s, nos, nojs, wo:s, bos, vɔjs, bus, vos, usted, vose, vɔse, voste, sponsa, esposa, spɔza, ispoza, əspɔzə, maritus, sponsus, esposo, spɔzo, ispozu, əspɔs, spo:s, sokius, sɔʃo, sots, be:stia, bis, piskem, pɛs, pwasɔ, useʎ, passerem, passero, paseru, pasəre, peduklus, fruktus, na:sus, naso, na:so, nas, na:s, nas, naris, na:rɪs, so:lem, sol, sole, sɔw, sɔʎ, sɔl, sɔʎ, sqare, solikulus, sɔlej, soreli, ste:lla, estreja, stella, istrelɛ, əstɛl, stɔ:l, stele, stɛa, sa:lem, sɛl, sal, sale, saw, se, sa:l, sare, tene:bra:s, tinjeblas, tənebrəs, fumasə, sjɛl, sɛw, sɛl, si:ɤ, morsikare, moskar, morsikare, musəga, musəgar, musəya, murseka, su:gere, syse, sugaɤ, sugar, sysi:, suɖge, konspuere, kɔspyɛ, kuspiɤ, eskupiɤ, əskupi, skuɟpa, sputere, esputar, sputare, spuda:, ski:re, sapere, savwaɤ, saber, sabɤ, səber, səʃɛ, savɔɤ, save:, kogno:skere, koɤseɤ, kupiser, koɤosi, pe:nsa:re, pāse, pensar, pensare, pɛsaɤ, pɛsar, pənsa, pɛse, peɤsar, pəsa, ɔksiɤ, uksi, ʃase, kasəɤ, kɛsar, kəsa, ʃesi:, pulsa:re, puse, pulsare, pulsa:, pulsa, sekare, sje, segar, segare, segaɤ, siyar, səya, sea:, ekskurtare, skortare, skurta:, skurta, skindere, sɛde, se:para:re, səvɛ, separar, separare, separaɤ, sipɛrar, səpəra, separa:, separa, rasar, rasare, rasa:, raskar, rəska, kosaɫ, kusar, ekskaware, eskabar, skavare, ekstendere, ekstender, estendere, istɛdeɤ, əstendrə, ekstinde, jesi, sede:re, swaɤ, ser, sedere, sɛɤ, sedenta:re, sentar, sɛtar, senta:, stare, estar, stare, əsta, ɛs, sta:, sta, ose, aʎsa, aʎsar, əʎsa, hɔ:si:, turser, tɔrsə, segurar, siguraɤ, siyurar, eksprimere, ekspremiɤ, spremerɛ, əspremə, esprimi, skreme, serrere, serar, sɛɤa, sərar, səra, serare, seɤe, serrare, siɤar, sɛre, stringere, estreɤir, strinɖgere, əstreɤə, stringe, strengi:, strinɖge, frisar, frasa, ekstergere, estarsir, əstərzi, eksu:kare, esqije, suwe, suja:, uska, puse, pu:si:, pulsa:, lase, ləsa, ləsar, ʎənsa, ko:nsuere, koser, qɔase, ekspɔnere, sporre, spune, ekskurrere, eskurir, skorrere, əskorə, skori:, skurɖge, glase, gləsa, ɛsədje, isendʒar, isɛdʒar, ənsendrə, ustula:re, ustolare, ustura, omne:s, to:tus, multus, tantus, paɤkus, alius, grawis, lurdus, pe:sant, pesaɔo, pesante, pittitus, pittinus, pitulus, kurtus, brewis, angustus, angosto, angusto, ingust, striktus, estreʃo, stretto, istrejtɪ, əstret, stɔ̃, stret, strimt, minu:tus, de:lika:tus, subtilɛm, sutil, sottile, sufjiw, suptil, suti, suti:l, subtsire, dekstrum, djestro, dɛstro, destrɪ, destrə, di:re:ktus, dɛstra, russus, rosso, ros, rɔs, vermikulus, rubeus, duo:s, dos, dojs, duas, duɛs, tre:s, tres, trɛs, sɛk, siku, siɤk, isi, kʷis, si:k

### Appendix 3 - Segments used in the word list

15	u	nu, vu, bus, tu, usted, mulierem, muxer, му́лє, му́лє, му́лє, muir, mujere, epuz, mulier, muxer, му́лє, му́лє, му́лє, muir, mujere, mari:tus, maridu, meriðu, sponsus, epu, ispozu, ifpozu, sokius, awikellum, uttfello, useł, utfjel, paseru, peduklus, pu, piołu, pju, pädukje, fruktus, fruto, frutto, frute, frujt, frut, frukt, na:sus, bukka, buf, bukə, gula, gurə, solikulus, luna, lue, łunə, lune, lunə, pluwia, jubja, fuve, pluzə, lakum, lagu, layu, nebula, negurə, fumata, fuma:ta, fumasə, fumate, kajlum, wentum, vētu, fokum, fogu, foyu, annum, enu, nume, kumer, manduka:re, mandukar, murðer, musəga, musəgar, musəya, murseka, sugaḡ, sugar, cucar, suḡe, konspuere, kuspiḡ, kuspir, eskupir, əskupi, skujpa, sputere, esputar, sputare, spuda:, kupiser, kunefə, kunqaste, kuzitaḡ, kuzitar, kujda, kuḡeta, durmir, durmi, durmi:, muḡiḡ, muḡer, muri, muri:, muri, tuwe, uttfidere, uksi, utfide, pugna:re, puḡar, puḡḡare, puḡa, battuere, pulsa:re, puse, puxar, pulsare, puḡaḡ, puḡar, pulsa:, pulsa:re, kurtar, ekskurta:re, ekuste, skurtar, skurtar, pungere, punḡere, puni, punḡe, jugula:re, jugula:re, kusar, bula, zbura, lua, tuḡne, turnar, turna, turna, turser, tumbar, tumba, tume, segurar, siguraḡ, siḡurar, enxugar, əffugare, ɛfugar, ɛfuḡar, əfuga, suwe, suja:, uska, puse, pulsa:, ɛ:runka:re, aruḡka, ko:nsuere, kudḡ, kuḡfire, kuzer, kuzi, kuzi, komputa:re, kumta, ɛ:numera:re, enumexə, enumerar, enumerare, enumera, numara, spune, ludir, xugar, zuḡar, zuga, ḡuwe, ḡuja:, zuka, flu:ktua:re, flugtwar, fluttuare, flutuax, flutuar, fluktua, fluctua, fluita:re, fluitare, fluere, fluir, fluire, flui, kule, kuar, kuł, ekskurrere, eskurir, ifkurer, skurḡe, kurrere, kuḡiḡ, kuḡer, kuḡḡe, bruḡfare, bruza:, ustulare, ustolare, ustura, to:tus, tu, tutto, todū, toḡu, dut, multus, mu, muḡo, mūḡtu, mult, tantus, tētu, tētū, alguno, alkuno, əlgu, paḡkus, powku, owtru, alius, magnum, longum, lungu, lōgu, lunk, lung, largum, laḡgu, largu, la:tum, latu, amplum, ɛfu, lurdus, luḡ, pezadu, pizaḡu, pittitus, pittinus, pekenu, pikenu, putsin, pitulus, piḡful, kurtus, kuḡ, kuḡtu, kurtu, kurt, kurt, angustus, angusto, ingust, striktus, istreḡtu, iftreḡtu, minu:tus, menudo, minuto, miudu, miuḡu, mənūt, minu, mərunt, de:lika:tus, dewgadu, deḡyaḡu, subti:lem, sutil, sufjiw, suptil, suti:il, subtsire, dekstrum, destru, deḡtru, di:re:ktus, ruber, rubro, russus, ɤu, ɤofu, rofu, vermikulus, vɛmɛłu, virmɛjłu, rubeus, ɤuz, rubjo, rubeo, ruḡe, u:num, uno, un, uḡ, unu, duo:s, duaj, due, duas, duəs, duɛf, kwatru, patru, siku, ekkumhi:k, kwēdu, komu, kum, nu
16	f	nɔf, vof, ifpozə, ifpozu, biffa, bife, peḡfe, peḡfi, peḡ, peḡte, nɛrif, buf, iftrele, fuve, treveḡf, kuspir, fti, konoffere, kunefə, kunqaste, fase, puḡaḡ, puḡar, findere, ɤafkaḡ, ɤeḡkar, ifkeḡaḡ, ifkeḡar, ɤəmine, maḡfe, iftēder, fedəa, iftar, altfa:, ɤwaḡ, ifprəmeḡ, ifprəmer, əstriḡzir, əstriḡzir, iffrigar, iffriḡar, fterḡe, əffugare, ɛfugar, ɛfuḡar, əfuga, ɤāte, ifkoḡeḡ, ifkurer, ɛfu, iftreḡtu, deḡtru, ɤofɔ, ɤofu, rofu, doḡf, duɛf, treḡf, fi
17	oj	noj, voj, froj, rojb, dojs, doḡf, doj
18	v	vu, vo:i, vɔs, vof, vos, vo:, voj, vose, vɔse, voste, avi, avi, fuve, nɛvwɛ, treveḡf, vā, vento, vētu, vē, vint, vint, bevi, savwaḡ, savɔ:r, save:, vivḡ, vivere, viveḡ, viver, vivi, via, dividere, ḡividiḡiḡ, dividiḡr, dividi, divide, sɔvke, kavare, keḡaḡ, keḡar, ɤa:vle, java:, skavare, ifkeḡaḡ, ifkeḡar, zjava:, navigare, navigare, naviḡaḡ, naviḡar, naviga:, naviga, vole, volare, voaḡ, vwar, vɔle, zvolare, zvolā:, vənḡ, venire, viḡ, vir, vini, viḡi:, veni, leva:re, ləve, levare, levaḡ, livar, leva:, viḡe, virare, virar, lave, lavare, leḡar, lava:, gɤav, greve, gravi, gravi, grav, grevi, breve, brevi, brevi, vermikulus, vɛmɛj, vermiłɔ, vɛmɛłu, virmɛjłu, vɛḡ, verde, verdi, vɛrt, vɛḡ, vɛrt, verde, vi
19	b	bos, bus, embra, fembra, ombre, be:stia, biffa, bife, bis, abe, bukka, buf, boka, bokka, bokə, bokə, bɔk, bɔce, bukə, jubja, nebula, njebla, nebbja, tene:braj, tenebre, tene:bra:s, tenɛbḡ, tinjeblas, tenebre, tənebrəs, bjento, ben, nombre, limbə, bibere, bwəḡ, beber, bere, bebeḡ, biḡer, bɛwɛrə, bɔ:ḡ, bevi, bea, saber, sabəḡ, səber, bibir, biwɛrə, battuere, batḡ, batir, battere, bateḡ, bəter, batrə, bate, bati, dibidir, dibidi, kabar, kəba, eskabar, nabegar, nəbəga, bolar, bula, zbura, ambita:re, benir, bəni, jebar, ləba, birar, bira, tɔbe, tumbar, tɔbaḡ, tɔbar, tumba, bɤyle, bruḡfare, bɤu:le, bruza:, flābe, grabe, brewis, bɛɛf, brebe, breve, brevi, brevi, brew, bɛɛf, subti:lem, subtsire, ruber, rubro, bermexo, bərmɛł, rubeus, rubjo, rɔbbjo, rubeo, rojb, berde, ibi:



### Appendix 3 - Segments used in the word list

20	t	tu:, ty, tu, usted, voste, infantem, infante, fante, ifēti, mari:tus, marito, marit, mari:t, mērit, ma:trem, patre, tata, tatā, be:stia, pe:ste, utfello, fruk:tus, fruto, frutto, frute, frujt, frut, frukt, ste:l:la, etwal, estreja, stella, istrele, iftrele, əstəl, stəl, stēle, stēa, la:t, terra, tēx, tjera, tēra, tēxə, tēxə, tēxə, tēx, tjere, tene:braj, tē:nebre, tene:bra:s, tenēb, tinjeb:las, tē:nebre, trēvəf, tēnebrəs, fu:ma:ta, fumata, fuma:ta, fumate, wentum, bjento, vento, vētu, vint, vint, sputere, esputar, sputare, fti, kōnetx, kunqafte, ko:gita:re, kođitare, kuzita, kuzitar, kuđeta, time:re, temer, temere, temex, timer, temā, temi, teme, tremere, tremar, tremare, tremex, trimer, trima:, tu:ta:ri, tpe, tuwe, maktare, mate, matar, matax, mētar, mēta, utfidere, battuere, batx, batir, battere, bate, bēter, batrā, bate, bati, kaptiare, katfare, kurta:re, kortar, kōtax, kurtar, ekskurta:re, ekuxte, skortare, skurta, skurta, ta:lia:re, taje, taxar, ta:lla:re, ta:la, tēlar, tēla, tēji:, taja:, tēja, fēt, partire, partix, partir, partire, pertir, pēti, pō:rti, parti:, nata:re, nwotare, ambita:re, ekstendere, etādx, ekstender, estendere, istēdex, iftēder, əstendrā, ekstinde, sedenta:re, sentar, sētar, senta:, sta:re, etx, estar, stare, iftar, əsta, sta:, sta, altia:re, altja:, torna:re, tu:ne, tornar, tornare, tōnax, turnar, turna, tu:rne, torna:, turna, tork <sup>w</sup> :ere, tōdx, torθer, tōrfere, turser, tōrsə, tōarfe, tōbe, tumbax, tōbax, tōbar, tumba, tume, tene:re, tēnix, tener, tenere, tēx, ter, tēni, tini, tinji, appekto:re, apretar, əpirtar, stringere, etxēdx, estrepir, strindgere, əftrizir, əftrizir, əstrepa, stringe, strēngi:, strindge, frikta:re, fōte, frotar, frettare, tergere, tēdgere, ekstergere, estarsir, əstərzi, fterdge, tira:re, tixē, tirar, tirare, tira, tire, tira:, trahere, tēx, trarre, traze, trēzer, trēwra, traj, trađe, jaktare, zōte, dgettare, zejtar, xita, dgete, aptare, atar, ətār, komputare, kōte, kontar, kontare, kōtar, kumta, kontar, kanta:re, fāte, kantar, kantare, kētar, kēta, fāte, cantar, kinta, fluktuare, flyktpe, flugtwar, fluttuare, flutuax, flutuar, fluktua, fluctua, fluitare, fluitare, gjatfjare, ustula:re, ustolare, ustura, to:tus, tu, todo, tutto, todū, tođū, tot, tō, dut, multus, molto, mūjtu, mult, tantus, tanto, tētu, tētu, tant, tanc, alter, otx, otro, altro, owtu, altrā, ot, altri, alt, grant, la:tum, lato, latu, lat, pesant, pesante, pēzat, pezant, pittitus, pēti, pētit, piti, pittinus, pitfino, pitulus, kurtus, korto, korto, ku:tu, kurtu, kurt, kurt, angustus, angosto, angusto, ingust, striktus, etxwa, estrefo, stretto, istrejtū, iftrejtū, əstret, stxō:, stret, strimt, minu:tus, minuto, mēnut, minu:t, mērun, delika:tus, delikato, dēlikat, subtil:em, sutil, sottile, suptil, su:ti, sutil, dekstrum, djestro, destro, destrū, dēftru, destrā, di:re:ktus, dēwat, destra, di:rejtē, di:rejtē, dret, drō:t, dret, drept, vert, vert, tres, tēwa, tres, tre, tref, tres, trō:, tre:, trej, k <sup>w</sup> attwor, katx, kwatro, kwattro, kwatru, kwatrā, kwat, kwatri, patru, kwant, fjemut, et
21	u:	tu:, u:hē:, fruk:tus, lu:na, plu:x, fu:ma:ta, fu:k, su:gere, tu:ta:ri, tu:rne, eksu:ka:re, pu:si:, lu:dere, fluktuare, bēu:le, ku:x, minu:tus, minu:t, du:ze:, su:ti, u:num, fjemut
22	y	ty, fry, lyn, njoly, fyne, syse, sysi:, kōspyē, zygye, gyra:re, flyktpe, flye, bēyle, mēny
23	d	usted, domina, dam, do:na, dōnna, donē, dōnā, dēm, dōne, dōamnā, maridu, ma:dre, ma:dre, peduklus, pidōkkjo, pedoli, pēdukje, pjōdđja, komedere, manduka:re, mandukar, mōdere, mōdx, mōdere, mōdx, mwardi, spuda:, kūide, kwidar, kujda, kēdx, dormi:re, dōmīx, dormir, dormire, dōmīx, durmir, durmi, dwaxmi, durmi, dormi, okki:dere, utfidere, ufide, di:widere, dibidir, dividere, dividi, dibidi, dividi, divide, skindere, sēde, findere, findere, fādx, ender, fēdere, fēdex, fēder, fēdrā, pēdx, radere, radere, rada:, rade, fodere, nadar, nada, nāda, nada:, andar, andare, ēdar, ēdar, ekstendere, etādx, ekstender, estendere, istēdex, iftēder, əstendrā, ekstinde, sede:re, sedere, fedēa, sedenta:re, tōdx, kadere, kadere, fjadē, kēdēa, epēdx, etēdx, limpida:re, kudx, di:kere, di:, deθir, dire, dize:, di, di:, di:, lu:dere, ludir, arde:re, aēdx, arder, ardere, aēdx, erder, arde, inkendere, ēsādje, enθender, infēndjare, isēdjar, ənsendrā, infēndje, todo, todū, dut, grandem, grande, grande, grēdi, lurdus, lerdo, lordo, pezadu, menudo, miudu, delika:tus, du:ze:, dēyađo, delikato, dewgadu, dēyađo, dēlikat, dekstrum, djestro, destro, destrū, dēftru, destrā, di:re:ktus, dēwat, dērefo, destra, di:rejtē, di:rejtē, dret, drō:t, dret, drept, wiridem, berde, verde, verdi, verde, duo:s, dō, dos, dojs, dojf, dō:, doj, duaj, due, dowā, duas, dues, duef, k <sup>w</sup> id, k <sup>w</sup> ando:, kwando, kwēdu, kwand, kind, k <sup>w</sup> o:modo
24	f	femina, fam, femmina, femē, femjē, fembra, fōem, fēmine, femeje, infantem, āfā, infante, fante, ifēfi, ifēti, efā, fruk:tus, fūqi, fruto, frutto, frute, frujt, fry, frut, frukt, flo:rem, flōx, flor, fjo:re, flox, flō, flōx, flor, floare, fu:ma:ta, fyne, fumata, fuma:ta, fumasē, fumate, fokum, fō, fwego, fwōko, fogu, fōyū, fōk, fō:, fu:k, fok, findere, fādx, fēdere, fēdex, fēder, fēdrā, fēt, fodere, fwix, frika:re, fēje, fregar, fegare, frāga, froj, frea, freka, iffrigar, iffriyar, frikta:re, fōte, frotar, frettare, frisar, frāsa, fluktuare, flyktpe, flugtwar, fluttuare, flutuax, flutuar, fluktua, fluctua, fluitare, fluitare, fluere, flye, fluir, fluire, flwix, flwir, flui, flammare, flābe, flamear, fjammarē, flāma, flagrare, flagxē, flagrar, flagrare, flagxax, flagrar, bēf, bēf

### Appendix 3 - Segments used in the word list

25	e:	fe:mina, be:stia, ste:lla, tene:braj, tene:bra:s, morde:re, save:, pe:nsa:re, time:re, se:para:re, jake:re, dʒaʃfe:re, sede:re, tork <sup>w</sup> e:re, tene:re, e:runka:re, e:numera:re, arde:re, omne:s, pe:sant, de:lika:tus, du:ze:, di:re:ktus, tre:s, tre:
26	m	femina, fam, embra, femmina, femev, femje, fembra, fœm, fēmine, femeje, mulierem, muxer, moλλe, muлeв, мулeт, мулe, muir, mujere, domina, dam, dœm, dʒamnə, hominem, ɔm, ombre, omēj, ɔmēj, ɔmə, ɔm, om, homo:, wɔmo, infantem, mulier, muxer, moλλe, muлeв, мулeт, мулe, muir, mujere, maritus, маѝ, marido, marito, maridu, mēridu, marit, mari:t, mērit, ma:trem, meв, maðre, ma:dre, mēj, maɾə, meв, mari, animalia, omaj, alimaɾa, nema:l, nɔmajə, piskem, awem, awikellum, passerem, flo:rem, so:lem, lakum, mare, meв, maɾ, маѝ, maɾ, meв, ma:ɾ, sa:lem, ka:li:ginem, fu:ma:ta, fyne, fumata, fuma:ta, fumasə, fumate, kajlum, wentum, fokum, annum, no:men, no:me, nomi, nomi, nɔm, nume, no:minem, nombre, limbə, komedere, komeɾ, kome, kumer, manduka:re, mǎze, mandukaɾ, mandɟare, mēzav, mēzar, mǎɾza, mari:, maɾja:, minka, morde:re, moɾdɐ, moɾðeɾ, mɔrdere, moɾdeв, muɾðeɾ, mwardi, morsika:re, moskaɾ, morsikare, musəga, musəgaɾ, musəya, murseka, time:re, temer, temere, temev, timer, temə, temi, teme, tremere, tremer, tremare, tremev, trimer, trimar, dormi:re, dɔvmiв, dormiɾ, dormire, dɔvmiв, durmir, durmi, dwaɾmi, durmi:, dormi, muɾiв, moriɾ, morire, moɾev, muxer, muri, mɔri, muri:, muri, makta:re, mate, matar, mataв, metar, mɔta, maʃa:, ʃəmine, kaminar, kamminare, kəmiɾav, kəmiɾar, kəmina, ʃimine, camina:, mavʃe, ma:ɾʃi:, mergere, mēɾɟere, merɟe, ambita:re, tumbar, tumba, tume, eksprimere, ekspremiɾ, spremerə, iʃpɾəmeв, iʃpɾəmeɾ, əspremə, esprimi, skreme, limpidare, limpjar, impingere, impinɟere, əmpɾəɾə, impinɟe, komputa:re, kumta, e:numera:re, enumeve, enumerar, enumerare, enumera, numara, krema:re, kvame, kemaɾ, kremare, kəjmare, kejmave, krəma, flamma:re, flamear, fjammare, fłama, omne:s, multus, mu, muʃo, molto, mǔjtu, mol, molc, mult, magnum, маɾno, маɾno, grandem, majjorem, mare, longum, largum, la:tum, amplum, ampjo, amplə, strimt, minu:tus, mɔny, menudo, minuto, miudu, miuðu, mənut, minu, minu:t, mərunt, subti:lem, dekstrum, vermikulus, vɛvmej, bermexo, vermiλλo, vɛvmeɫu, viɾmejɫu, bərmel, wiridem, u:num, ekkumhi:k, k <sup>w</sup> em, k <sup>w</sup> o:modo, kɔmā, komo, kome, komu, kɔm, kɔmē, ʃemu:t, kum

### Appendix 3 - Segments used in the word list

27	a	<p>fe:mina, fam, embra, femmina, fembra, domina, dam, doṇa, dōnna, infantem, infante, fante, sponsa, esposa, spoza, ispoza, maritus, maṣi, mariḏo, marito, maridu, marit, marit, maḏre, marə, mari, patre, paḏre, paṛə, pari, tata, tatə, animalia, omaj, alimaṇa, nəmaje, be:stia, biṣṣa, pwasō, awem, abe, avi, avī, aw, awikellum, wazo, passerem, paxaro, passero, paseru, pasere, naso, nas, nas, nariḡ, nariṭe, naris, bukka, boka, bokka, gula, lu:na, luna, ste:lla, etwal, estreja, stella, ak<sup>w</sup>a, aywa, akkwa, agwə, age, apə, pluwia, jubja, pjodḡa, lakum, lak, lago, lago, lagu, layu, lak, mare, mar, maṣ, mar, sal, sale, saw, sare, terra, tjera, tər̄ra, tsarə, kalina, kaliḡine, kaliḡē, nebula, njebla, nebbja, tinjeblas, fu:ma:ta, fumata, fuma:ta, fumasə, fumate, kajkia, annum, ap̄o, anno, ap, aṇ, an, ling<sup>w</sup>a, lengwa, lingwa, manduka:re, mandukar, mandḡare, mēzaṣ, mēzar, məṇza, maṇi, maṇja, minka, mwardi, moskar, morsikare, musəga, musəgar, musəḡa, murseka, sugaṣ, sugar, skujpa, esputar, sputare, sapere, savwaṣ, saber, sabəṣ, savə:ṛ, save:, kwidar, koḡitare, kuḡitar, kuḡitar, kujda, kuḡeta, pensar, pensare, pēsṣaṣ, pēsar, pənsa, pəsa, tremare, dwaṣmi, via, nəga, neka, anegar, annegare, makta:re, mate, matar, mataṣ, mət̄ar, mət̄a, maṭṭa, puṇar, puṇṇare, puṇa, battuere, batṣ, batiṛ, battere, bateṣ, batrə, bate, bati, kapti:re, fase, kaḡar, katṭfare, kasṣaṣ, kəsar, kəsa, caṭṭa, puxar, pulsare, puṭaṣ, puṭar, pulsa, segar, segare, segaṣ, siḡar, səḡa, kortar, koṭtaṣ, kurtar, skortare, skurta, taxar, taḡḡa:re, taḡaṣ, tēḡar, tēḡa, taja, taja, parti:re, paṭtiṣ, partiṛ, partire, paṭṭiṣ, partiṛ, se:para:re, separar, separare, separaṣ, sipərar, səpəra, separa:, separa, raer, radere, waṣ, rawrə, rada:, rade, rasar, rasare, wa:zaṣ, wəzar, rəza, rasa:, raskar, waṭkaṣ, wəṭkar, rəska, kosaḡ, kusar, kaware, kabar, kavare, kevaṣ, kevar, kəba, ḡava:, ekskaware, eskabar, skavare, iṭkeṇaṣ, iṭkeṇar, zḡava:, nata:re, nadar, nwotare, nadaṣ, nēḡar, nəda, nada:, naviga:re, naḡe, nabegar, navigare, naviḡaṣ, nēviḡar, nəbəga, naviga:, naviga, bolar, volare, voaṣ, vwar, bula, zvolare, zbura, kaminar, kamminare, kəmiṇaṣ, kəmiṇar, kəmina, camina:, maṣṭe, ambita:re, andar, andare, ēḡaṣ, ēḡar, jakere, jaḡer, ḡaṭṭe:re, zaṇrə, swaṣ, sentar, sētar, estar, stare, iṭtar, əsta, sta, jebar, levare, levaṣ, livar, ləba, lua, alti:re, alḡar, altsare, aḡsa, aḡsar, əlsa, alṭa:, tornar, tornare, toṇnaṣ, turnar, turna, turna, xirar, ḡirare, zirar, zira, birar, virare, virar, bira, kadere, ḡwaṣ, kaer, kadere, kawrə, ṭḡjade, tumbar, tōbaṣ, tōbar, tumba, segurar, siguraṣ, siḡurar, serar, səḡa, sərar, səra, serare, ḡerar, serrare, siḡar, appektora:re, apretar, epirtar, fregar, fregar, frəga, frea, freka, iṭfrigar, iṭfriḡar, frotar, frettare, frisar, frəsa, lawa:re, lave, laḡar, lavare, levar, lava:, la, estarsir, enxugar, affugare, ēḡugar, ēḡuḡar, əḡuga, uska, limpj̄ar, lipar, tirar, tirare, ṭḡira, tira, trahere, trarre, traze, traḡe, jaktare, eṭṭar, ḡettare, zejtar, xita, lanke:re, lanḡar, lanṭfare, lēsa, lēsar, lənsa, lanci:, lanṭa:, arankar, arronṭare, aruṅka, legar, legare, liḡa, lega, apta:re, atar, vtar, kontar, kontare, kōtar, kumta, enumerar, enumerare, enumera, numara, kanta:re, kantar, kantare, kētar, kənta, canta:, kinta, xugar, ḡokare, zogṣ, zuḡar, zuga, zuka, flugtwar, fluttuare, flutuṣ, flutuar, fluktua, fluctua, fluitare, kolar, kolare, koṣ, kuṭa, elar, ḡelare, zilar, zəla, ḡale, glakia:re, glase, ḡjatṭḡare, gləsa, glaṭṭa:, inglakia:re, ingetsa, bruṭṭare, kṣame, kemar, kremare, kējmaṣ, kējmaṣ, krəma, flamma:re, flamear, fjammare, flama, ardere, aṛḡ, arder, ardere, aṛḡ, arde, flagra:re, flagṣ, flagrar, flagrare, flagṣaṣ, flagrar, inṭendḡare, isendḡar, isēḡar, ustolare, ustura, tantus, tanto, tant, tanc, alguno, alkuno, awḡ, aḡḡ, alter, altro, altrə, altri, alt, alius, aw, aḡ, magnum, maṇo, maṇṇo, grandem, grande, grande, gran, grant, mare, largum, laḡz, larḡo, largo, laḡgu, largu, lak, lark, larg, lato, latu, lat, amplum, anṭo, ampjo, amplə, grawis, ḡav, grabe, gravi, gravi, grav, pe:sant, pesaḡo, pesante, pezadu, piḡaḡu, pəzat, pezant, angustus, angos to, angusto, eṭṭwa, deḡaḡo, delikato, dewḡadu, deḡaḡu, dəlikat, dḡwat, destra, duas, k<sup>w</sup>attwor, katṣ, kwatro, kwattro, kwatrə, kwat, kwatri, patru, aki, la, aja, əḡa, ai, kwa, k<sup>w</sup>ando, kwando, kwan, kwand, kwant</p>
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### Appendix 3 - Segments used in the word list

28	r	embra, fembra, muxer, muſer, ombre, muxer, muſer, mariðo, maridu, mæriðu, marit, maðre, mað, paðre, pað, paxaro, paseru, pasære, fruto, frutæ, frujt, flor, fjo:re, floare, narið, naris, nerið, gurð, sære, estreja, istrele, iftrele, mar, trevef, tænebras, fer, nombre, beber, bere, biðer, bæwra, komer, kumer, mandukar, mandgare, mēzar, morðer, murðer, moskar, morsikare, sugar, kufpir, eskupir, esputar, sputare, saber, seber, konoðer, kuniser, kwidar, kuzitar, pensar, pensare, pēsar, temer, timer, tremet, tremex, trimer, dormir, durmir, bibir, viver, biwra, morir, muxer, muri, anegar, matar, metar, utfidere, pupar, batir, bēter, batra, kaðar, kesar, puxar, pufar, segar, siyar, kortar, kurtar, taxar, tēlar, dibidir, diviðir, ender, fēder, fendra, partir, pertir, separar, separax, siperar, sōpara, pūzir, raer, vœer, rawra, rasar, vœzar, raskar, vœfkar, kusar, kabar, kavar, eskabar, ifkavar, nadar, nwotare, nēðar, nabegar, nēviyar, bolar, volare, vwar, zvolare, zbura, kaminar, kamminare, kēminar, andar, ēðar, benir, venire, vir, ekstender, iftēder, æstendra, jaðer, dgafer, zæzer, zawra, ser, sentar, sētar, estar, iftar, jebat, livar, alðar, ałsar, tornar, turnar, xirar, dgarare, zilar, zira, birar, virare, virar, bira, torðer, kaer, kadere, kēir, tumbat, tōbat, tener, tenere, ter, segurar, sigurar, siyurar, ekspremir, æspremæ, serar, sōrar, ðerar, siyar, apretar, epirtar, estrepir, æstrepa, fregar, fraga, iffrigar, iffriyar, frotar, frisar, fræsa, laðar, lvar, estarsir, enxugar, efugar, efuyar, limpjar, lipar, tirar, fira, tira, traze, trezer, tæwra, efar, zeftar, lanðar, lēsar, arankar, aruſka, legar, atar, etar, koser, kuzer, kontar, kōtar, enumerar, enumera, deðir, dizer, kantar, kētar, ludir, xugar, zuyar, flugtwat, flutuar, fluir, flwir, kolar, kuar, eskurir, ifkurer, skurdge, korer, kuver, kurðge, elar, zilar, kēmar, kējmare, flamear, arder, erder, arde, flagrar, flagrar, enðender, isendjar, isēðar, ænsendra, otro, owtru, altræ, grande, grēdi, grēdi, mare, laryo, largu, lark, grabe, gravi, gravi, grew, grew, lerdo, korto, kurtu, kurt, brebe, brevi, brevi, brew, estrefo, istrejt, iftrejt, æstret, djestro, destr, dēstru, destræ, derefo, dirējt, dret, drept, rofu, bermexo, virmēju, berde, verdi, vert, verde, tres, tref, kwatro, kwatru, kwatra
29	v	feme, femje, done, ifpozæ, mæriðu, bife, paseru, frutæ, nerið, bokæ, luv, istrele, iftrele, agwæ, fuwæ, tæw, tæw, kēlizē, nēwæ, trevef, fumasæ, enu, ligwæ, seber, metar, bēter, kesar, tēlar, pertir, siperar, vœer, vœzar, vœfkar, kēvax, kavar, ifkēvax, ifkavar, nēðar, nēviyar, kēminar, kēminar, zæzer, zezer, kēir, epirtar, lvar, trezer, etar, erder, dirējt, dirējt, duæ, duæf, eki, ei
30	œ	fœm, dœm, floæ
31	ε	femine, efā, pes, pehō, utfello, utfjel, bocæ, æstel, stele, mæx, sel, terra, tæw, tæw, tjere, nēwæ, tenebæ, trevef, sjel, felo, sew, sel, vento, lengæ, bæwra, sōæ, kōnetæ, kuneð, fesi, teji, fendere, fendra, nēdi, merðgere, estendere, etæ, es, spremere, sere, æstrepa, strengi, terðgere, tæw, tæwra, æmpæ, dgete, infendjare, greve, grevi, bæf, breve, brevi, brevi, æstret, stret, dēyaðu, destro, destr, dēstru, destræ, dret, dret, vœmæj, bœmæ, vert, vœ, vert, tres, kē, ε
32	l	mulierem, mulier, animalia, alimapa, nema:l, awikellum, utfello, utfjel, peduklus, pedoli, flo:rem, floæ, flor, floæ, flo, flōæ, flor, floare, gula, solem, sol, sole, sol, sol, solikulus, sōlej, soreli, luna, lyn, luna, luv, lōn, lune, lunæ, ste:lla, etwal, stella, istrele, iftrele, æstel, stō:l, stele, pluwia, pluqi, pluza, pluæ, ploje, ploaje, lakum, lak, lago, lago, lagu, layu, la:t, sa:lem, sel, sal, sale, sa:l, ka:li:ginem, kalina, kalidjine, kalizēj, kēlizēj, nebula, njoly, njebla, newlæ, tinjeblas, kajlum, sjel, θjelo, felo, sel, f:il, ling <sup>w</sup> a, lōg, lengwa, lingwa, ligwæ, lēu, lengæ, limbæ, pulsa:re, pulsare, pulsa:re, pulsa, ta:li:are, jugula:re, zygyte, jugula:re, çavle, wola:re, vole, bolar, volare, bula, vōle, zvolare, zvola:re, levare, lōve, levare, levax, livar, leva: lua, altia:re, alðar, altsare, əlsa, altfar, lawa:re, lave, laðar, lavare, lvar, lava: la, limpida:re, limpjar, lipar, pulsa: lankeare, lōse, lanðar, lanfare, lēsa, lēsar, lanc: lanfar, liga:re, lie, legar, legare, lōji: lea: lega, ludere, ludir, flu:ktuare, flyktæ, flugtwat, fluttuare, flutuax, flutuar, fluktua, fluctua, fluitare, fluitare, fluere, flye, fluir, fluire, flwir, flwir, flui, ko:la:re, kule, kolar, kolare, kōle, gela:re, zōle, elar, dgelare, zilar, zōla, dgal, glakia:re, glase, glōsa, gla:fa, inglakia:re, bōyle, bōu:le, flamma:re, flōbe, flamear, flagra:re, flagæ, flagrar, flagrare, flagæ, flagrar, ustula:re, ustolare, multus, molto, mol, molc, mult, alguno, alkuno, əlgu, alter, altro, altræ, altri, alt, alius, longum, lō, longo, lungo, lōgu, lō, lunk, lung, largum, læz, laryo, largo, lægu, largu, lark, larg, la:tum, le, lato, latu, lat, amplum, āpl, amplæ, lurdus, luv, lerdo, lordo, pitulus, pikkolo, pi:ful, de:lika:tus, dēyaðu, delikato, dēlikat, subti:lem, sutil, sottile, suptil, suti:l, vermikulus, illa:k, la

### Appendix 3 - Segments used in the word list

33	r	mulierem, mui:r, mujere, mulier, mui:r, mujere, mari:tus, marito, mari:t, mōrit, mā:trem, mā:dre, mari, patre, pā:dre, pē:r, pari, passerem, passero, fru:ktus, frutto, frut, frukt, flo:rem, flo:r, nari:fē, nā:rīs, soreli, mare, mar, mā:r, sare, terra, tjera, terra, tērā, tjere, tsarā, negurā, tene:braj, tē:nebre, tene:bra:s, tē:nebre, bibere, komedere, manduka:re, mordre:re, mōrdere, mwardi, morsika:re, morsikare, musəgar, murseka, su:gere, konspuere, sputere, ski:re, sapere, kogno:skere, konoffere, ko:gita:re, kođitare, pē:nsa:re, time:re, temere, tremere, tremare, trima:, dormi:re, dormire, durmi, durmi:, dormi, wi:were, vivere, morire, muri:, muri, neka:re, annegare, tu:tari, maktā:re, okki:dere, pugna:re, puṇṇare, battuere, battere, kaptia:re, katffare, pulsa:re, pulsare, seka:re, segare, kurtā:re, ekskurtā:re, skortare, skurta:, skurta, ta:lia:re, ta:llā:re, di:widere, dividere, skindere, findere, findere, fendere, parti:re, partire, pōrti, parti:, se:para:re, separare, separa:, separa, pungere, punđere, jugula:re, jugula:re, rā:dere, rāer, radere, rawrā, rada:, rade, rasar, rasare, rāza, rasa:, raskar, rāska, fodere, kawa:re, kavare, ekskawa:re, skavare, nata:re, naviga:re, navigare, wola:re, mergere, mērdžere, mērdže, ambita:re, andare, weni:re, ekstendere, estendere, jake:re, đere, sedere, sedere, sedenta:re, sta:re, stare, leva:re, levare, altia:re, alsare, torna:re, tornare, turna, tu:rne, torna:, turna, gyra:re, đirare, đirā:, virare, tork <sup>w</sup> :ere, tōrtfere, turser, tōrsā, tōartfē, kadere, kawrā, tene:re, eksprimere, spremere, iṣprāmēk, iṣprāmer, esprimi, skreme, serrere, serar, sēra, serare, θerar, serrare, appektora:re, stringere, strindžere, əṣtrīzir, əṣtrīzir, stringe, strēngi:, strindže, frikare, fregare, froj, frea, freka, frikta:re, frettare, frisar, lawa:re, lavare, tergere, tērdžere, ekstergere, əstərgi, ʃterdže, eksu:ka:re, əṣṣugare, limpidare, tira:re, tirare, tire, tira:, trahere, trarre, traj, trađe, impingere, impindžere, jakta:re, đettare, lankea:re, lanffare, e:runka:re, arankar, arrontffare, liga:re, legare, apta:re, ko:nsuere, kuṭfire, komputa:re, kontare, e:numera:re, enumerare, numara, di:kere, dire, ekspo:nere, sporre, kanta:re, kantare, lu:dere, joka:re, đokare, flu:ktua:re, fluttuare, fluita:re, fluitare, fluere, fluire, ko:lare, kolare, ekskurrere, eskurir, skorrere, əskorā, skori:, kurrere, korer, korrere, korā, kori, gela:re, đelare, glakia:re, gjattfjare, inglakia:re, bruṣfare, bruza:, kremare, kremare, krāma, flamma:re, fjammarē, arde:re, ardere, flagra:re, flagrare, inkendere, inṣendjare, ustula:re, ustolare, ustura, alter, altro, altri, grandem, grande, gran, grant, majjorem, largum, largo, lark, larg, grawis, grēve, grav, gravi, lurdus, lordo, kurtus, korto, kurt, brewis, brēve, striktus, stretto, strēt, strimt, mārunt, subtsire, dekstrum, destro, di:re:ktus, destra, dirējte, drō:t, drēt, ruber, rubro, russus, roxo, rosso, ros, rōs, vermikulus, vermi:llō, bērmēl, rubeus, rubjo, rōbbjo, rubeo, ruđe, rōṣ, rojb, wiridem, verde, vert, tre:s, tre, trēs, trō:, tre:, trej, k <sup>w</sup> attwor, kwattro, kwatri, patru
34	x	muxer, muxer, pa:xaro, pjoxo, puxar, taxar, xirar, enxugar, xita, xugar, roxo, bermexo
35	λ	moλλe, muλeκ, muλer, muλe, moλλe, muλeκ, muλer, muλe, useλ, pioλu, poλ, λunā, λak, taλλā:re, taλav, teλar, tēλa, λēba, λēnsa, λiγa, λoγ, λark, vermiλλo, vērmeλu, vīrmējλu, bērmēl, əλa
36	к	muλeκ, muλeκ, makī, meκ, peκ, fēqi, flōeκ, floeκ, flō:κ, plu:κ, meκ, maκ, teκ, teκe, teκe, teκe, teκ:, tenebκ, si:κ, bwak, bebek, bō:κ, mēžav, moκdκ, moκdek, sugav, kuspiκ, savwav, sabek, kōnetκ, kopeseκ, kuzitaκ, pēsav, temek, kvēdκ, tremek, dōvmiκ, dovmiκ, dwaκmi, vivκ, viveκ, muviκ, moveκ, muκer, mataκ, əksiκ, batκ, bateκ, kasav, puṣav, segav, koκtaκ, ekuκte, taλav, điviđiκ, fādκ, fēdek, paκtiκ, paκṣiκ, sāvve, separav, pōwēdκ, rūziκ, kaek, κeer, vaze, vazav, vazar, vāṣkaκ, vēṣkar, fwiκ, kēvav, iṣkēvav, nadaκ, naviyav, voav, kēmiṇav, mavfe, ēdaκ, vōniκ, viκ, etādκ, istēdek, zeziv, zēzek, swav, seκ, etκ, levav, tuκne, toκnav, ziκe, viκe, tōvdκ, ʃwav, tōbav, tāniκ, teκ, siğurav, epvēdκ, iṣprāmēk, seka, seve, siṣar, etvēdκ, fēje, fōte, tiκe, tēκ, kudκ, enumeκe, diκ, di:κ, zogav, flutuav, flwiκ, koav, iṣkoκeκ, kuviκ, koκeκ, kuκer, bōyle, bō:le, kēame, kejmav, avdκ, avdek, flagve, flagvav, otκ, gṽā, gṽā, laκz, laκgu, gṽav, luκ, kuκ, kuκtu, ku:κ, bēf, bēf, etvwa, stvō:, dōwat, ku, vofv, vofu, vēmej, vērmeλu, vuz, vek, vek, tēwa, katv
37	i:	mui:r, mui:r, mari:tus, mari:t, ka:li:ginem, si:κ, ʃi:l, ma:ni:, sysi:, ski:re, dormi:re, durmi:, wi:were, muri:, okki:dere, ʃēsi:, tēji:, di:widere, parti:re, parti:, neđzi:, ma:ṣṣi:, weni:re, vipi:, hō:si:, strēngi:, pu:si:, lanci:, lōji:, di:kere, di:κ, di:, skori:, subti:lem, suti:l, di:re:ktus, k <sup>w</sup> :ink <sup>w</sup> e, ekkumhi:k, ibi:, ki:, si:k
38	п	dona, niṇo, alimaṇa, apo, ap, mārza, ma:ni:, kopeseκ, kupiser, koposi, puṇar, puṇṇare, puṇa, puṇi, kēmiṇav, kēmiṇar, vipi:, estrepir, əstreṇā, əmpeṇā, oṇṇi, maṇo, maṇṇo, pekeṇo
39	qa	dōamnā, floare, sōare, ploaje, kunqaste, tqartfē, cōase
40	h	hominem, homo:, pēhō, u:hē:, kinōh, hō:si:, trahere, ekkumhi:k
41	ēj	omēj, omēj, nenēj, kalizēj, kēj, nēj
42	ō	ō, nō, kōspyē, lō, nō
43	ā	āfā, efā, vā, ā, lāg, māže, pāse, fādκ, etādκ, lāse, fāte, ʃāte, flābe, ēsādje, gṽā, gṽā, āpl, pāzā, kā, kōmā
44	ī	īfēṣi, īfēti, liğwē, əṣtrīzir, əṣtrīzir, lipar, īsenđiar, īsēdjar, siku
45	ē	īfēṣi, īfēti, mēžav, mēžar, ēdaκ, ēdar, lēsa, lēsar, kētar, tētu, tētu, grēđzi, grēdi, ēfu, kwēdu

### Appendix 3 - Segments used in the word list

46	f	ifēfi, soŋfo, uttfello, utfjel, nariŋfe, fŋeatfə, fŋelo, fŋi:l, fŋer, maŋfa:, uttfidere, utfide, katŋfare, fŋesi:, caŋfa:, paŋŋfiŋ, fŋimine, ma:ŋfi:i, dŋaŋfe:re, zəŋŋə, təŋŋere, təŋŋfe, fŋe:ŋ, fŋjade, fŋira, eŋfa:, lanŋfare, lanŋfa:, arronŋfare, kuŋfire, ziŋfe, fŋōte, gŋatŋfare, glaŋfa:, bruŋfare, inŋŋendjare, inŋŋindze, muŋfo, anŋfo, pitŋfino, piŋful, estreŋfo, suŋfiw, dereŋfo, rəŋf, fŋiŋkwe, fŋiŋk, fŋintf, fŋine, fŋe, fŋemu:t
47	i	ifēti, iŋpoze, iŋpozu, peŋfi, avi, iŋtrele, vint, nomi, biŋer, minka, kuŋiser, timer, trimer, siyar, siŋerar, naviyax, neviyar, iŋtar, livar, ŋigurar, ŋigurar, ŋigurar, eŋirtar, strindŋe, iŋfrigar, iŋfriyar, impindŋe, kinta, zilar, inŋetsa, inŋindze, grēdi, gravi, pizađu, pikenu, brēvi, inŋust, iŋtrējtu, strimt, virmeŋlu, verdi, ki, kind
48	p	sponsa, epuz, esposa, spəza, ispoza, iŋpoze, əspəzə, sponsus, epu, esposo, spəzo, ispozu, iŋpozu, əspəs, spo:s, patre, peŋ, paðre, pa:ðre, paj, paŋə, pə:r, pari, piskem, peθ, peŋfe, peŋfi, peŋfi, peŋ, pəs, peŋte, pwaŋō, pəhō, passerem, paxaro, passero, pasəru, pasəre, peduklus, pu, pjoxo, pidəkkjo, piołu, pəł, pju, pedoli, pədukje, apə, pluwia, plqi, pjodŋa, pluŋə, plu:ŋ, ploje, pləaje, konspuere, kōspy, kuŋpiŋ, kuŋpiŋ, eskupiŋ, əskupi, skuŋpa, sputere, esputar, sputare, spuda:, sapere, pənsa:re, pāse, pensar, pensare, pēsax, pēsar, pənsa, pēse, pənsa:, pəsa, pugnare, puŋar, puŋŋare, puŋa, kaptia:re, pulsa:re, puse, puxar, pulsare, puŋax, puŋar, pulsar, pulsa, partire, paŋtiŋ, partir, partire, paŋfiŋ, pərtir, pərti, pə:rti, partir, se:para:re, separar, separare, separax, siŋerar, səpəra, separa:, separa, pungere, pweđx, punŋere, pūziŋ, pūzir, puŋi, punŋe, eksprimere, epweđx, ekspremir, spremere, iŋpŋemə, iŋpŋemir, əspremə, esprimi, appektora:re, apretar, eŋirtar, limpidare, limpjar, lipar, puse, pu:si:, pulsa:, impingere, impindŋere, əmpəŋə, impindŋe, aptare, komputa:re, eksponere, sporre, spune, paŋkus, pə, pəko, pəko, powku, pək, pə, pə:k, amplum, āpl, ampjo, amplə, pəsant, pəzā, pesado, pesante, pezadu, pizađu, pəzat, pezant, pittitus, pəti, pətit, piti, pittinus, pekeŋo, pitŋino, pekenu, pikenu, putsin, pitulus, pikkolo, piŋful, suptil, drept, patru
49	z	epuz, spəza, ispoza, iŋpoze, əspəzə, spəzo, ispozu, iŋpozu, wazo, ɤaze, ɤazaŋ, ɤezar, rəza, zɤavar, zvolare, zvolar, zbura, zeziŋ, zezeŋ, zezer, zəŋŋə, traze, trezer, kuzer, kuzi, kə:z, kuzi, dizer, ziŋfe, bruza:, pəzā, pezadu, pizađu, pəzat, pezant
50	ð	mariđu, mēriđu, maðre, paðre, morðer, murðer, diviðir, neðar, toðu, pesaðo, pizađu, miuðu, delyaðo, dēɤaðu
51	k	sokius, piskem, awikellum, peduklus, pidəkkjo, pədukje, fru:ktus, frukt, bukka, boka, bokka, bokə, bokə, bək, bukə, solikulus, akkwa, lakum, lak, ɤak, ka:li:ginem, kalina, kaliŋŋine, kaliŋŋe, kəliŋŋe, kajkia, kajlum, fokum, fwəko, fək, fu:k, fok, komedere, komer, kome, kumer, mandukare, mandukar, minka, morsika:re, moskar, morsikare, murseka, konspuere, kōspy, kuŋpiŋ, kuŋpiŋ, eskupiŋ, əskupi, skuŋpa, ski:re, kogno:skere, kənetɤ, konoθer, konoffere, koŋesə, kuŋiser, kuŋfə, kinəh, koposi, kuŋqaste, ko:gita:re, kuŋide, kwidar, koŋitare, kuŋitaŋ, kuŋitar, kujda, kuŋŋeta, kweđx, neka:re, neka, maktare, okki:dere, əksiŋ, uksi, kaptia:re, kaθar, katŋfare, kasax, kəsar, kəsa, seka:re, kurtare, kortar, koŋtaŋ, kurtar, ekskurta:re, ekusəte, skortare, skurta:, skurta, skindere, raskar, ɤafkax, ɤəfkar, rəska, kosaɤ, kusar, kawa:re, kabar, kavare, kəvax, kəvar, kəba, ekskawa:re, eskabar, skavare, iŋkəvax, iŋkəvar, kaminar, kamminare, kəmiŋax, kəmiŋar, kəmina, ekstendere, ekstender, ekstinde, jake:re, kadere, kaer, kadere, kəir, kawrə, kəŋə, eksprimere, ekspremir, skreme, appektora:re, frika:re, freka, frikta:re, ekstergere, eksu:ka:re, uska, jakta:re, lankeare, e:runka:re, arankar, aruŋka, ko:nsuere, kudx, koser, kuŋfire, kuzer, kuzi, kə:z, kuzi, komputa:re, kōte, kontar, kontare, kōtar, kumta, kontar, di:kere, eksponere, kantare, kantar, kantare, kētar, kənta, kinta, jəka:re, dŋokare, zuka, flu:ktuare, flyktŋe, fluktua, ko:la:re, kule, kolar, kolare, koax, kuar, kuła, kəle, ekskurre, eskurir, skorrere, iŋkoŋə, iŋkurer, əskorə, skori:, skurŋe, kurrere, kuŋiŋ, korer, korrere, koŋə, kuŋer, korə, kori, kurŋe, glakia:re, inglakia:re, kremare, krame, kemar, kremare, kəjmare, kəjmaŋe, krəma, inkendere, okə, alkuno, paŋkus, pəko, pəko, powku, pək, pə:k, lunk, ɤark, lark, pekeŋo, pekenu, pikenu, pikkolo, kurtus, kuŋ, korto, korto, kuŋtu, kurtu, kurt, ku:ŋ, kurt, striktus, de:lika:tus, delikato, dəlikat, dekstrum, di:re:ktus, vermikulus, katx, kwatro, kwattro, kwatru, kwatrə, kwat, kwatri, sək, θinko, fŋiŋkwe, siŋku, siŋk, fŋiŋk, ekkumhi:k, aki, kwi, eki, illa:k, ki, ki:, kwi, kjen, kēj, kēj, kwa, ke, ki, kə, kwe:, kā, kwando, kweđu, kwan, kwand, kwant, kind, kəmə, komo, kome, komu, kəmə, kum, nek, si:k
52	ts	sots, tsarə, altsare, tsine, inŋetsa, putsin, subsire

### Appendix 3 - Segments used in the word list

53	a:	ma:trem, ma:dre, pa:dre, nema:l, na:sus, na:so, na:s, na:rɪs, la:t, ma:r, sa:lem, sa:l, ka:li:ginem, tene:bras, fu:ma:ta, fuma:ta, manduka:re, maŋja:, morsika:re, cuca:, spuda:, ko:gi:ta:re, pe:nsa:re, pe:nsa:, trima:, neka:re, tu:ta:ri, makta:re, maŋja:, pugna:re, kaptia:re, ca:ŋa:, pulsa:re, pulsa:, seka:re, sea:, kurtare, ekskurta:re, skurta:, ta:lia:re, ta:ʎa:re, taja:, sepa:ra:re, sepa:ra:, jugula:re, jugula:re, ra:dere, rada:, rasa:, kawa:re, java:, ekskawa:re, zjava:, nata:re, nada:, naviga:re, naviga:, wola:re, zvola:, camina:, ma:rʃi:, ambita:re, sedenta:re, senta:, sta:re, sta:, leva:re, leva:, altia:re, altfa:, torna:re, torna:, gyra:re, dʒira:, appekto:re, frika:re, frikta:re, lawa:re, lava:, eksu:ka:re, suja:, limpida:re, tira:re, tira:, pulsa:, jakta:re, lankea:re, lanŋa:, erunka:re, liga:re, lea:, apta:re, komputa:re, konta:, e:numera:re, kanta:re, canta:, joka:re, dʒuja:, flu:kтуа:re, fluita:re, ko:la:re, gela:re, glakia:re, glaŋfa:, inglakia:re, bruza:, krema:re, flamma:re, flagra:re, ustula:re, la:tum, de:lika:tus, illa:k
54	ēj	mēj, kēlɪzēj, kēj, nēj
55	r	mer, fry, savø:r, mōri, pō:rti, ma:rʃi:, ʃe:r, sərər, sere, ifkurer
56	aj	paj, aɣwə, tene:braj, kajkia, kajlum, nwaje, traj, majjorem, duaj
57	ε:	pər, u:hε:, ε:w, tε:ɤ, tε:nebre, tε:nebre, ʃe:r, kwε:
58	θ	peθ, nariθ, θjelo, konoθer, kaθar, jaθer, alθar, torθer, θerar, lanθar, deθir, enθender, θinko
59	ej	pejʃi, zejtar, kejmæ, istrejtu, trej
60	ej	pejʃi, kejmæ, iftrejtu, direjtε, direjtε, virmejlu
61	ō	pwasō, pēhō, nō, tōbe, tōbaɤ, tōbar, kōte, kōtar, pō, ōt, lōgu, lō, ō
62	ɥ	fɥqi, plɥi, kɥide, tɥe, esɥije, flyktɥe
63	ø:	flø:r, stø:l, fø:, bø:ɤ, savø:r, kø:z, stø:, drø:t, dø:, trø:
64	c	bōce, cuca:, ca:ŋa:, camina:, lancɪ:, cōase, canta:, fluctua, molc, tanc
65	g	gula, gurə, age, lago, lengε, pugna:re, segar, segare, jugula:re, naviga:re, naviga:, mergere, gyra:re, stringere, stringe, strēngɪ:, fregare, impingere, lega, xugar, glaŋfa:, ingetsa, flagɤaɤ, alguno, magnum, grandem, gran, gɤā, grant, longo, lung, largum, larg, grav, grevi, grew, ingust
66	ł	sɔł, ałsa, ałsar, kuł, fłama, ałgū, ał, dełɣaðu
67	ej	sɔlej, fɤeje, vɤɤmej
68	ø	løn, fø, pø, dø
69	ɛa	stɛa, ʃɛaʃə, bɛa, zəʃɛa, fedɛa, kəɛa
70	k <sup>w</sup>	ak <sup>w</sup> a, tork <sup>w</sup> ere, k <sup>w</sup> attwor, k <sup>w</sup> i:nk <sup>w</sup> e, k <sup>w</sup> is, k <sup>w</sup> em, k <sup>w</sup> id, k <sup>w</sup> ando:, k <sup>w</sup> o:modo
71	ɣ	aɣwa, aɣwə, laɣu, foɣu, musəɣa, siɣar, səɣa, naviɣaɤ, neviɣar, siɣurar, iffriɣar, ɛsuɣar, ʎiɣa, zuɣar, larɣo, deɣaðu, deɣaðu
72	ē	vētu, vē, pēsax, pēsar, kɤēdɤ, fēdɤ, fēder, istēdɤ, iftēder, sētar, ɛʃugar, ɛsuɣar, isēdjar, sēk, nē
73	η	aη, nɔη, leŋgwa, maŋja:, peŋsa:, aruŋka, ʎoη, ingust, uη, ʃiηkwe, siηk, ʃiηk
74	g <sup>w</sup>	ling <sup>w</sup> a
75	l̥u	l̥u
76	a	bwaɤ, taje, ɤaze, tɤwa
77	β	biβer, səβe, laβar
78	ʃ	maŋja:, java:, zjava:
79	ē	pēse, sēde, fēt, pwēdɤ, epwēdɤ, etwēdɤ, ɛsādje, kɔmē
80	ɔ:	pɔ:rti, hɔ:si:
81	ū	pūzɪɤ, pūzir, mūjtu, awgū, ałgū, ū
82	ɭ	kosaɭ
83	ç	çavle
84	a:	çavle
85	j	mūjtu
86	œ	okœ, œ
87	aɥ	paɥkus
88	ʊ	ɤofʊ
89	ēw	nēw

## Appendix 4 - Word Lists by Language

### Latin

Cognate	IPA	Sounds
I	-ego:	ay-g-O
We	no:-s	n-O-s
YouPlural	wo:-s	w-O-s
YouSingular	tu:	t-U
Woman	fe:-mi-n-a	f-ai-m-e-n-ah
Woman-Mulier	mulierem	m-u-l-e-ay-r-ay-m
Woman-Domina	domina	d-oh-m-e-n-ah
ManHumanBeing	homi-nem	h-oh-m-e-n-ay-m
ManHumanBeing-Homo	-homo:	h-oh-m-O
Child	infantem	e-n-f-ah-n-t-ay-m
Wife	-sponsa	s-p-oh-n-s-ah
Wife-Mulier	mulier-	m-u-l-e-ay-r
Husband	mari:tus	m-ah-r-E-t-u-s
Husband-Sponsus	-sponsus	s-p-oh-n-s-u-s
Husband-Socius	sokius	s-oh-k-e-u-s
Mother	ma:trem	m-A-t-r-ay-m
Father	patre	p-ah-t-r-ay
Father-Tata	tata	t-ah-t-ah
Animal	animalia	ah-n-e-m-ah-l-e-ah
Animal-Bestia	be:stia	b-ai-s-t-e-ah
Fish-Piskem	piskem	p-e-s-k-ay-m
Bird-Avem	awem	ah-w-ay-m
Bird-Avicellum	-awi-k-ellum	ah-w-e-k-ay-l-l-u-m
Bird-Passerem	passerem	p-ah-s-s-ay-r-ay-m
Louse	p-edu-klus	p-ay-d-u-k-l-u-s
Fruit	fru:ktus	f-r-U-k-t-u-s
Flower	flo:rem	f-l-O-r-ay-m
Nose	na:sus	n-A-s-u-s
Mouth	bukka	b-u-k-k-ah
Mouth-Gula	gula	j-u-l-ah
Sun	so:lem	s-O-l-ay-m
Sun-Soliculus	solikulus	s-oh-l-e-k-u-l-u-s
Moon	lu:na	l-U-n-ah
Star	-st-e:lla	s-t-ai-l-l-ah
Water	a-k <sup>w</sup> -a	ah-kw-ah
Rain	plu-wia	p-l-u-w-e-ah
Lake	lakum	l-ah-k-u-m
Sea	mare	m-ah-r-ay
Salt	'sa:lem	s-A-l-ay-m
Earth	t-erra	t-ay-r-r-ah
Fog	ka:li:ginem	k-A-l-E-g-e-n-ay-m
Fog-Nebula	n-e-bula	n-ay-b-u-l-ah
Fog-Tenebrae	tene:braj	t-ay-n-ai-b-r-aj_diphthong
Fog-Tenebras	t-en-e:bra:s	t-ay-n-ai-b-r-A-s
Fog-Fumata	fu:ma:ta	f-U-m-A-t-ah
Fog-Caecia	kajkia	k-aj_diphthong-k-e-ah
Sky	'k-ajlum	k-aj_diphthong-l-u-m
Wind	w-entum	w-ay-n-t-u-m
Fire-Focus	f-okum	f-oh-k-u-m
Year	annum	ah-n-n-u-m
Name-Nomen	no:men	n-O-m-ay-n
Name-Nominem	no:min-em	n-O-m-e-n-ay-m
Tongue	ling <sup>w</sup> -a	l-e-n-gw-ah



## Appendix 4 - Word Lists by Language

ToDrink	'bib:ere	b-e-b-ay-r-ay
ToEat	komedere	k-oh-m-ay-d-ay-r-ay
ToEat-Manducare	manduka:re	m-ah-n-d-u-k-A-r-ay
ToBite	m-orde:re	m-oh-r-d-ai-r-ay
ToBite-Morsicare	morsika:re	m-oh-r-s-e-k-A-r-ay
ToSuck	su:gere	s-U-g-ay-r-ay
ToSpit	konspuere	k-oh-n-s-p-u-ay-r-ay
ToSpit-Sputare	-sputere	s-p-u-t-ay-r-ay
ToKnow	ski:re	s-k-E-r-ay
ToKnow-Sapere	sap:ere	s-ah-p-ay-r-ay
ToKnow-Cognoscere	kogno:skere	k-oh-g-n-O-s-k-ay-r-ay
ToThink	k-o:gita:re	k-O-g-e-t-A-r-ay
ToThink-Pensare	pe:nsa:re	p-ai-n-s-A-r-ay
ToFear	time:re	t-e-m-ai-r-ay
ToFear-Tremere	trem:ere	t-r-ay-m-ay-r-ay
ToSleep	d-ormi:re	d-oh-r-m-E-r-ay
ToLive	wi:were	w-E-w-ay-r-ay
ToKill	n-eka:re	n-ay-k-A-r-ay
ToKill-Tutari	tu:-ta:ri	t-U-t-A-r-e
ToKill-Mactare	makta:re	m-ah-k-t-A-r-ay
ToKill-Occidere	okki:dere	oh-k-k-E-d-ay-r-ay
ToFight	pugna:re	p-u-j-n-A-r-ay
ToFight-Battuere	battuere	b-ah-t-t-u-ay-r-ay
ToHunt-Captiare	kaptia:re	k-ah-p-t-e-A-r-ay
ToHit	pulsa:re	p-u-l-s-A-r-ay
ToCut	s-eka:re	s-ay-k-A-r-ay
ToCut-Curtare	kurta:re	k-u-r-t-A-r-ay
ToCut-Excurtare	ekskurta:re	ay-k-s-k-u-r-t-A-r-ay
ToCut-Taliare	ta:-lia:re	t-A-l-e-A-r-ay
ToSplit	di:widere	d-E-w-e-d-ay-r-ay
ToSplit-Scindere	skindere	s-k-e-n-d-ay-r-ay
ToSplit-Findere	findere	f-e-n-d-ay-r-ay
ToSplit-Partire	parti:re	p-ah-r-t-E-r-ay
ToSplit-Separare	se:para:re	s-ai-p-ah-r-A-r-ay
ToStab	p-ungere	p-u-n-g-ay-r-ay
ToStab-Iugulare	jugula:re	jg-u-g-u-l-A-r-ay
ToScratch	ra:dere	r-A-d-ay-r-ay
ToDig	fodere	f-oh-d-ay-r-ay
ToDig-Cavare	kawa:re	k-ah-w-A-r-ay
ToDig-Excavare	ekskawa:re	ay-k-s-k-ah-w-A-r-ay
ToSwim	n-ata:re	n-ah-t-A-r-ay
ToSwim-Navigare	naviga:re	n-ah-v-e-j-A-r-ay
ToFly	wola:re	w-oh-l-A-r-ay
ToWalk-Mergere	mergere	m-ay-r-j-ay-r-ay
ToWalk-Ambitare	ambita:re	ah-m-b-e-t-A-r-ay
ToCome	weni:re	w-ay-n-E-r-ay
ToLieAsInABed	ekstendere	ay-k-s-t-ay-n-d-ay-r-ay
ToLieAsInABed-lacere	ja-ke:re	jg-ah-k-ai-r-ay
ToSit	s-ede:re	s-ay-d-ai-r-ay
ToSit-Sedentare	sedenta:re	s-ay-d-ay-n-t-A-r-ay
ToStand	-sta:re	s-t-A-r-ay
ToStand-Levare	leva:re	l-ay-v-A-r-ay
ToStand-Altiare	-altia:re	ah-l-t-e-A-r-ay
ToTurnIntransitive	torna:re	t-oh-r-n-A-r-ay
ToTurnIntransitive-Gyrare	gyra:re	j-eeh-r-A-r-ay
ToTurnIntransitive-Torquere	tork <sup>w</sup> e:re	t-oh-r-kw-ai-r-ay
ToFall	k-adere	k-ah-d-ay-r-ay

## Appendix 4 - Word Lists by Language

ToHold	ten-e:re	t-ay-n-ai-r-ay
ToSqueeze	eksprim-ere	ay-k-s-p-r-e-m-ay-r-ay
ToSqueeze-Serrere	serrere	s-ay-r-r-ay-r-ay
ToSqueeze-Serare	se-rare	s-ay-r-ah-r-ay
ToSqueeze-Appetorare	appetora:re	ah-p-p-ay-k-t-oh-r-A-r-ay
ToSqueeze-Stringere	-stringere	s-t-r-e-n-j-ay-r-ay
ToRub	frika:re	f-r-e-k-A-r-ay
ToRub-Frictare	frikta:re	f-r-e-k-t-A-r-ay
ToWash	lawa:re	l-ah-w-A-r-ay
ToWipe	tergere	t-ay-r-g-ay-r-ay
ToWipe-Extergere	ekstergere	ay-k-s-t-ay-r-g-ay-r-ay
ToWipe-Exsucare	eks-u:k-a:re	ay-k-s-U-k-A-r-ay
ToWipe-Limpidare	limpida:re	l-e-m-p-e-d-A-r-ay
ToPull	tira:re	t-e-r-A-r-ay
ToPull-Pulsare	pulsa:re	p-u-l-s-A-r-ay
ToPull-Trahere	trahere	t-r-ah-h-ay-r-ay
ToPush	impingere	e-m-p-e-n-j-ay-r-ay
ToThrow	jakta:re	jg-ah-k-t-A-r-ay
ToThrow-Lanceare	lankea:re	l-ah-n-k-ay-A-r-ay
ToThrow-Eruncare	e:-runka:re	ai-r-u-n-k-A-r-ay
ToTie	liga:re	l-e-g-A-r-ay
ToTie-Aptare	apta:re	ah-p-t-A-r-ay
ToSew	ko:n-suere	k-O-n-s-u-ay-r-ay
ToCount	komputa:re	k-oh-m-p-u-t-A-r-ay
ToCount-Enumerare	e:numera:re	ai-n-u-m-ay-r-A-r-ay
ToSay	di:kere	d-E-k-ay-r-ay
ToSay-Exponere	ekspo:nere	ay-k-s-p-O-n-ay-r-ay
ToSing-AncestralClass	kanta:re	k-ah-n-t-A-r-ay
ToPlay-Ludere	lu:dere	l-U-d-ay-r-ay
ToPlay-Jiocare	jo-ka:re	jg-oh-k-A-r-ay
ToFloat	flu:ktua:re	f-l-U-k-t-u-A-r-ay
ToFloat-Flutare	fluita:re	f-l-u-e-t-A-r-ay
ToFlow	fluere	f-l-u-ay-r-ay
ToFlow-Colare	ko:la:re	k-O-l-A-r-ay
ToFlow-Excurrere	ekscurrere	ay-k-s-k-u-r-r-ay-r-ay
ToFlow-Currere	kurrere	k-u-r-r-ay-r-ay
ToFreeze	gela:re	g-ay-l-A-r-ay
ToFreeze-Glaciare	gla-kia:re	g-l-ah-k-e-A-r-ay
ToFreeze-Inglaciare	inglakia:re	e-n-g-l-ah-k-e-A-r-ay
ToBurn-Cremare	krema:re	k-r-ay-m-A-r-ay
ToBurn-Flammare	flamma:re	f-l-ah-m-m-A-r-ay
ToBurn-Ardere	arde:re	ah-r-d-ai-r-ay
ToBurn-Flagrare	flagra:re	f-l-ah-g-r-A-r-ay
ToBurn-Incendere	inkend-ere	e-n-k-ay-n-d-ay-r-ay
ToBurn-AncestralClass8	ustula:re	u-s-t-u-l-A-r-ay
All	omne:s	oh-m-n-ai-s
All-Totus	to:-tus	t-O-t-u-s
Many	multus	m-u-l-t-u-s
Many-Tantus	tantus	t-ah-n-t-u-s
Few	paukus	p-au_diphthong-k-u-s
Other	alter-	ah-l-t-ay-r
Other-Alius	alius	ah-l-e-u-s
Big	magnum	m-ah-j-n-u-m
Big-Grandem	grandem	j-r-ah-n-d-ay-m
Big-Majjorem	majjorem	m-aj_diphthong-jg-oh-r-ay-m
Long-Longum	'lo-ngum	l-oh-n-g-u-m
Long-Largum	largum	l-ah-r-j-u-m

## Appendix 4 - Word Lists by Language

Wide	'la:tum	l-A-t-u-m
Wide-Amplum	amplum	ah-m-p-l-u-m
Heavy	grawis	g-r-ah-w-e-s
Heavy-Lurdus	lurdus	l-u-r-d-u-s
Heavy-Pesant	pe:sant-	p-ai-s-ah-n-t
Small	pittitus	p-e-t-t-e-t-u-s
Small-Pittinus	'pittinus	p-e-t-t-e-n-u-s
Small-Pitulus	pi-tulus	p-e-t-u-l-u-s
Short	kurtus	k-u-r-t-u-s
Short-Brevis	brewis	b-r-ay-w-e-s
Narrow	angustus	ah-n-g-u-s-t-u-s
Narrow-Strictus	-str-i-ktus	s-t-r-e-k-t-u-s
Thin	minu:-tus	m-e-n-U-t-u-s
Thin-Delicatus	de:lika:tus	d-ai-l-e-k-A-t-u-s
Thin-Subtilis	subti:lem	s-u-b-t-E-l-ay-m
Right-Dextrem	d-ekstrum	d-ay-k-s-t-r-u-m
Right-Directum	di:r-e:ktus	d-E-r-ai-k-t-u-s
Red	ruber-	r-u-b-ay-r
Red-Russus	russus	r-u-s-s-u-s
Red-Vermiculus	vermikulus	v-ay-r-m-e-k-u-l-u-s
Red-Rubeus	ru-beus	r-u-b-ay-u-s
Green	'wiridem	w-e-r-e-d-ay-m
One	'u:num	U-n-u-m
Two-Duos	duo:s	d-u-O-s
Two-Duae	du-aj	d-u-aj_diphthong
Two-Duas	duas	d-u-ah-s
Three	tr-e:s	t-r-ai-s
Four	k <sup>w</sup> -attwor-	kw-ah-t-t-w-oh-r
Five	'k <sup>wi</sup> :nk <sup>w</sup> -e	kw-E-n-kw-ay
Here	-ekkumhi:k	ay-k-k-u-m-h-E-k
There	illa:k	e-l-l-A-k
There-Ibi	ibi:	e-b-E
Who-Qui	k <sup>w</sup> -is	kw-e-s
Who-Quem	k <sup>w</sup> -em-	kw-ay-m
What	'k <sup>w</sup> -id	kw-e-d
When-Quando	k <sup>w</sup> -ando:	kw-ah-n-d-O
How-Quomodo	'k <sup>w</sup> o:modo	kw-O-m-oh-d-oh
Not	no:n	n-O-n
Not-Nec	nek	n-ay-k
And-Et	et	ay-t
And-Si	si:k	s-E-k

## French

Cognate	IPA	Sounds
I	ʒə--	gzah-aah
We	nu--	n-u
YouPlural	vu--	v-u
YouSingular	ty	t-eeh
Woman	fə-m-----	f-ah-m
Woman-Domina	dam---	d-ah-m
ManHumanBeing	-ɔm-----	euh-m
ManHumanBeing-Homo	-ɔ--	oon
Child	ɑ̃-fɑ̃----	NasalA-f-NasalA
Wife	e-pu-z-	ay-p-u-zz
Husband	maʁi---	m-ah-rr-e

## Appendix 4 - Word Lists by Language

Husband-Sponsus	e-pu----	ay-p-u
Mother	me-ʁ--	m-ay-rr
Father	pe-ʁ-	p-ay-rr
Animal	o---ma-j	oh-m-ah-jg
Fish-Pescion	pwasō	p-w-ah-s-on
Bird-Avicellum	wa---z-o----	w-ah-zz-oh
Louse	p-u-----	p-u
Fruit	fʁqi----	f-rr-eu-e
Flower	flœʁ--	f-l-OpenMidNearFrontRounded-rr
Nose	ne---	n-ay
Mouth	bu-ʃ-	b-u-shh
Sun-Soliculus	solej----	s-euh-l-eh_diphthong
Moon	lyn-	l-eeh-n
Star	e-twa-l-	ay-t-w-ah-l
Water	o----	oh
Rain	plɥ--i-	p-l-eu-e
Lake	lak--	l-ah-k
Sea	mœʁ-	m-eh-rr
Salt	sɛl--	s-eh-l
Earth	t-e-ʁ-	t-ay-rr
Fog-Nebula	nʝo---ly	n-jg-euh-l-eeh
Fog-Tenebras	t-en-ɛbʁ-	t-ay-n-eh-b-rr
Fog-Fumata	fyme--	f-eeh-m-ay
Sky	sjɛl--	s-jg-eh-l
Wind	v-ɑ----	v-NasalA
Fire-Focus	f-ø---	f-uu
Year	ã----	NasalA
Name-Nomen	nõ---	n-oon
Tongue	lɑ-g--	l-NasalA-g
ToDrink	b--waʁ-	b-w-a-rr
ToEat-Manducare	mã-ʒ--e--	m-NasalA-gzah-ay
ToBite	m-oʁd-ʁ-	m-oh-rr-d-rr
ToSuck	syse--	s-eeh-s-ay
ToSpit	kō-spye-	k-oon-s-p-eeh-ay
ToKnow-Sapere	savwaʁ-	s-ah-v-w-ah-rr
ToKnow-Cognoscere	kō-ne-tʁ-	k-euh-n-eh-t-rr
ToThink	kɥ--ide--	k-eu-e-d-ay
ToThink-Pensare	pɑ-se--	p-NasalA-s-ay
ToFear-Tremere	kʁɛ-d-ʁ-	k-rr-ehn-d-rr
ToSleep	d-ɔʁmik-	d-euh-rr-m-e-rr
ToLive	viv-ʁ-	v-e-v-rr
ToDie	mʉʁik-	m-u-rr-e-rr
ToKill	nwaʝe--	n-w-aj_diphthong-ay
ToKill-Tutari	t-q-e--	t-eu-ay
ToKill-Mactare	ma-te--	m-ah-t-ay
ToKill-Occidere	ɔksi--ʁ-	euh-k-s-e-rr
ToFight-Battuere	bat--ʁ-	b-ah-t-rr
ToHunt-Captiare	ʃa-s-e--	shh-ah-s-ay
ToHit	pu-se	p-u-s-ay
ToCut	sje----	s-jg-ay
ToCut-Excurtare	e--kuʁte--	ay-k-u-rr-t-ay
ToCut-Taliare	taj--e--	t-a-jg-ay
ToSplit-Scindere	s-ɛ-de--	s-ehnn-d-ay
ToSplit-Findere	fã-d-ʁ-	f-NasalA-d-rr
ToSplit-Partire	paktiʁ-	p-ah-rr-t-e-rr
ToSplit-Separare	sə-v---ʁe	s-aah-v-rr-ay
ToStab	pwɛ-d-ʁ-	p-w-ehnn-d-rr

## Appendix 4 - Word Lists by Language

ToStab-lugulare	zygyle--	gzah-eeh-g-eeh-l-ay
ToScratch-Rasare	ʁaze--	rr-a-zz-ay
ToDig	fwik	f-w-e-rr
ToSwim-Navigare	na--ʒe--	n-ah-gzah-ay
ToFly	vole--	v-oh-l-ay
ToWalk	ʃəmine--	shh-aah-m-e-n-ay
ToWalk-Marcher	maʁʃe	m-ah-rr-shh-ay
ToCome	vənik-	v-aah-n-e-rr
ToLieAsInABed	e-tā-d-ʁ-	ay-t-NasalA-d-rr
ToLieAsInABed-lacere	ʒe-zik-	gzah-ay-zz-e-rr
ToSit	swa--ʁ-	s-w-ah-rr
ToStand	ε-t-ʁ-	eh-t-rr
ToStand-Levare	lève--	l-aah-v-ay
ToStand-Altiare	-o-s-e--	oh-s-ay
ToTurnIntransitive	tuʁne--	t-u-rr-n-ay
ToTurnIntransitive-Gyrare	ʒike--	gzah-e-rr-ay
ToTurnIntransitive-AncestralClass3	vike--	v-e-rr-ay
ToTurnIntransitive-Torquere	tɔʁd-ʁ-	t-euh-rr-d-rr
ToFall	ʃwa--ʁ-	shh-w-ah-rr
ToFall-Tumbare	tō-be-	t-on-b-ay
ToHold	tən-iʁ-	t-aah-n-e-rr
ToSqueeze	e--pʁɛ̃-d-ʁ-	ay-p-rr-ehnn-d-rr
ToSqueeze-Serare	se-ʁe--	s-ay-rr-ay
ToSqueeze-Stringere	e-tʁɛ̃-d-ʁ-	ay-t-rr-ehnn-d-rr
ToRub	fʁeʃe--	f-rr-eh_diphthong-ay
ToRub-Frictare	fʁote--	f-rr-oh-t-ay
ToWash	lave--	l-ah-v-ay
ToWipe-Exsucare	e-sqi-je--	ay-s-eu-e-jg-ay
ToPull	tike--	t-e-rr-ay
ToPull-Pulsare	pu-se--	p-u-s-ay
ToPull-Trahere	tʁ--εʁ-	t-rr-eh-rr
ToThrow	ʒə-te	gzah-aah-t-ay
ToThrow-Lanceare	lā-s-e-	l-NasalA-s-ay
ToTie	li-e--	l-e-ay
ToSew	ku-d---ʁ-	k-u-d-rr
ToCount	kō---te--	k-on-t-ay
ToCount-Enumerare	enumere--	ay-n-u-m-ay-rr-ay
ToSay	dī--ʁ	d-e-rr
ToSing-AncestralClass	ʃā-te--	shh-NasalA-t-ay
ToPlay-Jiocare	ʒ-w-e--	gzah-w-ay
ToFloat	flyktʃe--	f-l-eeh-k-t-eu-ay
ToFlow	flye--	f-l-eeh-ay
ToFlow-Colare	kule--	k-u-l-ay
ToFlow-Currere	ku-ʁiʁ-	k-u-rr-e-rr
ToFreeze	ʒəle--	gzah-aah-l-ay
ToFreeze-Glaciare	gla-s-e--	g-l-ah-s-ay
ToBurn-Brojan	bʁyle--	b-rr-eeh-l-ay
ToBurn-Cremare	kʁame--	k-rr-ah-m-ay
ToBurn-Flammare	flā-be--	f-l-NasalA-b-ay
ToBurn-Ardere	aʁd-ʁ-	ah-rr-d-rr
ToBurn-Flagrare	flagʁe--	f-l-ah-g-rr-ay
ToBurn-Incendere	ε-sā-dje--	ehnn-s-NasalA-d-jg-ay
All-Totus	tu----	t-u
Many	mu---	m-u
Some	o-kæ-	oh-k-uuh
Few	pø---	p-uu
Other	o-t-ʁ-	oh-t-rr

## Appendix 4 - Word Lists by Language

Big-Grandem	gḡā---	g-rr-NasalA
Long-Longum	lō-----	l-oon
Long-Largum	lākz--	l-ah-rr-gzah
Wide	le---	l-ay
Wide-Amplum	ā-pl--	NasalA-p-l
Heavy	gḡav--	g-rr-ah-v
Heavy-Lurdus	luḡ---	l-u-rr
Heavy-Pesant	pəzā---	p-aah-zz-NasalA
Small	pə-ti---	p-aah-t-e
Short	kuḡ---	k-u-rr
Short-Brevis	bḡef--	b-rr-eh-f
Narrow-Strictus	e-tḡwa-----	ay-t-rr-w-ah
Thin	məny----	m-aah-n-eeh
Thin-Delicatus	du:--zē:---	d-U-gzah-ai
Right-Directum	d-ḡwa-t--	d-rr-w-ah-t
Red-Russus	ḡu----	rr-u
Red-Vermiculus	vḡmḡj----	v-eh-rr-m-eh_diphthong
Red-Rubeus	ḡu-z---	rr-u-gzah
Green	vḡḡ----	v-ay-rr
One	œ---	uuh
Two-Duos	d-ø-	d-uu
Three	tḡwa-	t-rr-w-a
Four	k-a-t--ḡ-	k-ah-t-rr
Five	sē-k--	s-ehn-k
Here	i--s---i-	e-s-e
There	--la-	l-ah
Who-Qui	k-i-	k-e
What	kwa-	k-w-ah
When-Quando	k-ā---	k-NasalA
How-Quomodo	kḡmā--	k-euh-m-NasalA
Not	nō-	n-oon
Not-Nec	ni-	n-e
And-Et	e-	ay

## Spanish

Cognate	IPA	Sounds
I	j--o	VdPalatalFricative-oh
We	no-s	n-oh-s
YouPlural	bo-s	b-oh-s
YouSingular	tu	t-u
YouSingular-VostramMercedem	-usted	u-s-t-ay-d
Woman	-e-m-br-a	ay-m-b-er-ah
Woman-Mulier	mux-er--	m-u-xha-ay-er
Woman-Domina	do--ḡa	d-oh-VdPalatalNasal-ah
ManHumanBeing	om-bre-	oh-m-b-er-ay
Child	infante-	e-n-f-ah-n-t-ay
Child-Ninnus	nijo	n-e-VdPalatalNasal-oh
Wife	espo-sa	ay-s-p-oh-s-ah
Wife-Mulier	mux-er-	m-u-xha-ay-er
Husband	mariḡo-	m-ah-er-e-dd-oh
Husband-Sponsus	espo-so-	ay-s-p-oh-s-oh
Mother	maḡre-	m-ah-dd-er-ay
Father	paḡre	p-ah-dd-er-ay
Father-Tata	tata	t-ah-t-ah
Animal	aliman-a	ah-l-e-m-ah-VdPalatalNasal-ah

## Appendix 4 - Word Lists by Language

Fish-Piskem	peθ---	p-ay-th
Bird-Avem	abe-	ah-b-ay
Bird-Passerem	pa-xaro-	p-ah-xha-ah-er-oh
Louse	pjo--x-o-	p-jg-oh-xha-oh
Fruit	fru--to-	f-er-u-t-oh
Flower	flor--	f-l-oh-er
Nose	naso-	n-ah-s-oh
Nose-Nares	nariθ-	n-ah-er-e-th
Mouth	bo-ka	b-oh-k-ah
Sun	sol--	s-oh-l
Moon	luna	l-u-n-ah
Star	estre-ja	ay-s-t-er-ay-VdPalatalFricative-ah
Water	'a-γwa	ah-juh-w-ah
Rain	j-u-bja	VdPalatalFricative-u-b-jg-ah
Lake	lago-	l-ah-j-oh
Sea	mar-	m-ah-er
Salt	sal--	s-ah-l
Earth	'tje-ra	t-jg-ay-r-ah
Fog	kali--na-	k-ah-l-e-n-ah
Fog-Nebula	nje-b-la	n-jg-ay-b-l-ah
Fog-Tenebras	t-injeblas	t-e-n-jg-ay-b-l-ah-s
Fog-Fumata	fumata	f-u-m-ah-t-ah
Sky	'θjelo	th-jg-ay-l-oh
Wind	'bjento-	b-jg-ay-n-t-oh
Fire-Focus	fwego-	f-w-ay-g-oh
Year	a-po-	ah-VdPalatalNasal-oh
Name-Nominem	nom-bre-	n-oh-m-b-er-ay
Tongue	'lengwa	l-ay-nya-g-w-ah
ToDrink	beb-er-	b-ay-b-ay-er
ToEat	kome--r-	k-oh-m-ay-er
ToEat-Manducare	mandukar-	m-ah-n-d-u-k-ah-er
ToBite	m-orðer-	m-oh-er-dd-ay-er
ToBite-Morsicare	mo-s-kar-	m-oh-s-k-ah-er
ToSpit-Exconspuere	esku-pir	ay-s-k-u-p-e-er
ToSpit-Sputare	esputar	ay-s-p-u-t-ah-er
ToKnow-Sapere	sab-er-	s-ah-b-ay-er
ToKnow-Cognoscere	ko-noθer-	k-oh-n-oh-th-ay-er
ToThink	kw--idar-	k-w-e-d-ah-er
ToThink-Pensare	pensar-	p-ay-n-s-ah-er
ToFear	temer-	t-ay-m-ay-er
ToFear-Tremere	trem-er-	t-er-ay-m-ay-er
ToSleep	d-ormir-	d-oh-er-m-e-er
ToLive	bibir-	b-e-b-e-er
ToDie	morir-	m-oh-er-e-er
ToKill-Adnecare	a-negar-	ah-n-ay-g-ah-er
ToKill-Mactare	ma-tar-	m-ah-t-ah-er
ToFight	pu-ñar-	p-u-VdPalatalNasal-ah-er
ToFight-Battuere	ba-t-ir-	b-ah-t-e-er
ToHunt-Captiare	ka-θ-ar-	k-ah-th-ah-er
ToHit	pu-xar-	p-u-xha-ah-er
ToCut	s-egar-	s-ay-j-ah-er
ToCut-Curtare	kortar-	k-oh-er-t-ah-er
ToCut-Taliare	ta-x-ar-	t-ah-xha-ah-er
ToSplit	dibidir-	d-e-b-e-d-e-er
ToSplit-Findere	-ender-	ay-n-d-ay-er
ToSplit-Partire	partir-	p-ah-er-t-e-er
ToSplit-Separare	separar-	s-ay-p-ah-er-ah-er

## Appendix 4 - Word Lists by Language

ToScratch	ra-er-	r-ah-ay-er
ToScratch-Rasare	rasar-	r-ah-s-ah-er
ToScratch-Rasicare	raskar	r-ah-s-k-ah-er
ToDig-Cavare	kabar	k-ah-b-ah-er
ToDig-Excavare	eskabar-	ay-s-k-ah-b-ah-er
ToSwim	n-adar-	n-ah-d-ah-er
ToSwim-Navigare	nabegar-	n-ah-b-ay-g-ah-er
ToFly	bolar-	b-oh-l-ah-er
ToWalk	kaminar-	k-ah-m-e-n-ah-er
ToWalk-Ambitare	and--ar-	ah-n-d-ah-er
ToCome	benir-	b-ay-n-e-er
ToLieAsInABed	ekstender-	ay-k-s-t-ay-n-d-ay-er
ToLieAsInABed-lacere	ja-θer-	VdPalatalFricative-ah-th-ay-er
ToSit	s-e--r-	s-ay-er
ToSit-Sedentare	se--ntar-	s-ay-n-t-ah-er
ToStand	estar-	ay-s-t-ah-er
ToStand-Levare	jebat-	VdPalatalFricative-ay-b-ah-er
ToStand-Altiare	-alθ-ar-	ah-l-th-ah-er
ToTurnIntransitive	tornar-	t-oh-er-n-ah-er
ToTurnIntransitive-Gyrate	xirar-	xha-e-er-ah-er
ToTurnIntransitive-AncestralClass3	bicar-	b-e-er-ah-er
ToTurnIntransitive-Torque	torθer-	t-oh-er-th-ay-er
ToFall	k-a-er-	k-ah-ay-er
ToFall-Tumbare	tumbar	t-u-m-b-ah-er
ToHold	ten-er-	t-ay-n-ay-er
ToHold-Segurar	segurar	s-ay-g-u-er-ah-er
ToSqueeze	eksprem-ir-	ay-k-s-p-er-ay-m-e-er
ToSqueeze-Serrere	se-rar	s-ay-r-ah-er
ToSqueeze-Serare	θe-rar-	th-ay-r-ah-er
ToSqueeze-Appetorare	a-p--retar-	ah-p-er-ay-t-ah-er
ToSqueeze-Stringere	estrep-ir-	ay-s-t-er-ay-VdPalatalNasal-e-er
ToRub	fregar-	f-er-ay-g-ah-er
ToRub-Frictare	frotar-	f-er-oh-t-ah-er
ToRub-Frictiare	frisar	f-r-e-s-ah-er
ToWash	laβar-	l-ah-bb-ah-er
ToWipe-Extergere	e-starsir-	ay-s-t-ah-er-s-e-er
ToWipe-Exsucare	enx-ug-ar-	ay-n-xha-u-g-ah-er
ToWipe-Limpidare	limpj-ar-	l-e-m-p-jg-ah-er
ToPull	tirar-	t-e-er-ah-er
ToPull-Pulsare	pu-xar-	p-u-xha-ah-er
ToThrow	-e-θar	ay-ts-ah-er
ToThrow-Lanceare	lanθ-ar-	l-ah-n-th-ah-er
ToThrow-Eruncare	a-rankar	ah-r-ah-n-k-ah-er
ToTie	legar-	l-ay-g-ah-er
ToTie-Aptare	a-tar-	ah-t-ah-er
ToSew	ko--s-er-	k-oh-s-ay-er
ToCount	kon--tar-	k-oh-n-t-ah-er
ToCount-Enumerare	enumerar-	ay-n-u-m-ay-er-ah-er
ToSay	deθir	d-ay-th-e-er
ToSing-AncestralClass	kantar-	k-ah-n-t-ah-er
ToPlay-Ludere	ludir-	l-u-d-e-er
ToPlay-Jiocare	xu-gar-	xha-u-j-ah-er
ToFloat	flugtwar-	f-l-u-g-t-w-ah-er
ToFlow	fluir-	f-l-u-e-er
ToFlow-Colare	kolar-	k-oh-l-ah-er
ToFlow-Excurrere	e-skurir-	ay-s-k-u-r-e-er
ToFlow-Currere	ko-rer-	k-oh-r-ay-er



## Appendix 4 - Word Lists by Language

ToFreeze	-clar-	ay-l-ah-er
ToBurn-Cremare	k-emar-	k-ay-m-ah-er
ToBurn-Flammare	fla-mear	f-l-ah-m-ay-ah-er
ToBurn-Ardere	arder-	ah-er-d-ay-er
ToBurn-Flagrare	flagrar	f-l-ah-g-er-ah-er
ToBurn-Incendere	enθend-er-	ay-n-th-ay-n-d-ay-er
All-Totus	to-do-	t-oh-d-oh
Many	mu-ŋo-	m-u-ts-oh
Many-Tantus	tanto-	t-ah-n-t-oh
Some	alguno	ah-l-j-u-n-oh
Few	poko-	p-oh-k-oh
Other	o-t-ro	oh-t-er-oh
Big	ma-ŋo-	m-ah-VdPalatalNasal-oh
Big-Grandem	grande-	g-er-ah-n-d-ay
Long-Longum	lo-ngo-	l-oh-n-j-oh
Long-Largum	laryo-	l-ah-er-juh-oh
Wide	lato-	l-ah-t-oh
Wide-Amplum	anŋ-o-	ah-n-ts-oh
Heavy	grabe-	g-er-ah-b-ay
Heavy-Lurdus	lerdo-	l-ay-er-d-oh
Heavy-Pesant	pesa-ðo	p-ay-s-ah-dd-oh
Small-Pittinus	pe-kepo-	p-ay-k-ay-VdPalatalNasal-oh
Short	korto-	k-oh-er-t-oh
Short-Brevis	brebe-	b-er-ay-b-ay
Narrow	angosto-	ah-n-g-oh-s-t-oh
Narrow-Strictus	estr-e--ŋo-	ay-s-t-er-ay-ts-oh
Thin	menu-do-	m-ay-n-u-d-oh
Thin-Delicatus	del-yaðo-	d-ay-l-juh-ah-dd-oh
Thin-Subtilis	su-til--	s-u-t-e-l
Right-Dextrem	dje-stro-	d-jg-ay-s-t-er-oh
Right-Directum	der-e-ŋo-	d-ay-er-ay-ts-oh
Red-Russus	ro-xo-	r-oh-xha-oh
Red-Vermiculus	bermexo---	b-ay-er-m-ay-xha-oh
Red-Rubeus	ru-bjo-	r-u-b-jg-oh
Green	ber-de-	b-ay-er-d-ay
One	'uno-	u-n-oh
Two-Duos	d-os	d-oh-s
Three	tr-es	t-er-ay-s
Four	kwa-t--ro	k-w-ah-t-er-oh
Five	'θink-o	th-e-n-k-oh
Here	-a-k---i-	ah-k-e
There	a-ja-	ah-VdPalatalFricative-ah
There-Adlbi	ai	ah-e
Who-Quem	kjen-	k-jg-ay-n
What	k-e-	k-ay
When-Quando	kwando	k-w-ah-n-d-oh
How-Quomodo	komo--	k-oh-m-oh
Not	no-	n-oh
Not-Nec	ni-	n-e
And-Et	i-	e

### Italian

Cognate	IPA	Sounds
I	i--o	e-oh
We	no:i-	n-O-e

## Appendix 4 - Word Lists by Language

YouPlural	'vo:i-	v-O-e
YouSingular	tu	t-u
Woman	femmi-n-a	f-ay-m-m-e-n-ah
Woman-Mulier	moʎʎe---	m-oh-yuh-yuh-ay
Woman-Domina	dɔn-na	d-euh-n-n-ah
ManHumanBeing-Homo	wɔmo	w-euh-m-oh
Child	--fante-	f-ah-n-t-ay
Child-Ninnus	nino	n-e-n-oh
Wife	-spɔ-za	s-p-euh-zz-ah
Wife-Mulier	moʎʎe--	m-oh-yuh-yuh-ay
Husband	marito-	m-ah-r-e-t-oh
Husband-Sponsus	-spɔ-zo-	s-p-euh-zz-oh
Husband-Socius	sɔʎf-o-	s-euh-ts-oh
Mother	ma:dre-	m-A-d-r-ay
Father	pa:dre	p-A-d-r-ay
Father-Tata	tata	t-ah-t-ah
Animal-Bestia	biʎʎ-a	b-e-shh-shh-ah
Fish-Piskem	peʎʎe-	p-ay-shh-shh-ay
Bird-Avicellum	--u-tʃf-ɛllo-	u-t-ts-ch-l-l-oh
Bird-Passerem	passero-	p-ah-s-s-ay-r-oh
Louse	p-idɔkkjo-	p-e-d-euh-k-k-jg-oh
Fruit	fru-tto-	f-r-u-t-t-oh
Flower	'fjo:re-	f-jg-O-er-ay
Nose	na:so-	n-A-s-oh
Nose-Nares	nariʎe	n-ah-r-e-ts-ay
Mouth	bokka	b-oh-k-k-ah
Sun	sole-	s-oh-l-ay
Moon	luna	l-u-n-ah
Star	-st-ella	s-t-ay-l-l-ah
Water	akkwa	ah-k-k-w-ah
Rain	pjɔddʒ-a	p-jg-oh-d-VdPalatoAlveolarSibilant-ah
Lake	lago-	l-ah-g-oh
Sea	mare	m-ah-r-ay
Salt	sale-	s-ah-l-ay
Earth	't-erra	t-eh-r-r-ah
Fog	kalidʒine-	k-ah-l-e-VdPalatoAlveolarSibilant-e-n-ay
Fog-Nebula	n-ebb-ja	n-ay-b-b-jg-ah
Fog-Tenebrae	tɛ:nebre	t-Eh-n-ay-b-r-ay
Fog-Tenebras	t-ɛ:n-ebre-	t-Eh-n-ay-b-r-ay
Fog-Fumata	fuma:ta	f-u-m-A-t-ah
Sky	'ʃf-ɛlo-	ts-eh-l-oh
Wind	'v-ento-	v-eh-n-t-oh
Fire-Focus	fwɔko-	f-w-euh-k-oh
Year	anno-	ah-n-n-oh
Name-Nomen	no:me-	n-O-m-ay
Tongue	'lingwa	l-e-n-g-w-ah
ToDrink	be---re	b-ay-er-ay
ToEat-Manducare	mandʒ--are	m-ah-n-VdPalatoAlveolarSibilant-ah-er-ay
ToBite	m-ordere	m-euh-r-d-ay-r-ay
ToBite-Morsicare	morsikare	m-oh-r-s-e-k-ah-er-ay
ToSpit-Sputare	-sputare	s-p-u-t-ah-er-ay
ToKnow-Sapere	sap-ere	s-ah-p-ay-r-ay
ToKnow-Cognoscere	ko-noʎʎere	k-oh-n-oh-shh-shh-ay-r-ay
ToThink	k-odʒitare	k-oh-VdPalatoAlveolarSibilant-e-t-ah-r-ay
ToThink-Pensare	pensare	p-ay-n-s-ah-er-ay
ToFear	temere	t-ay-m-ay-r-ay
ToFear-Tremere	trem-are	t-r-ay-m-ah-r-ay

## Appendix 4 - Word Lists by Language

ToSleep	d-ormire	d-oh-r-m-e-r-ay
ToLive	vivere	v-e-v-ay-r-ay
ToDie	morire	m-oh-r-e-r-ay
ToKill-Adnecare	annegare	ah-n-n-ay-g-ah-r-ay
ToKill-Occidere	utŋfidere	u-t-ts-e-d-ay-er-ay
ToFight	pugnare	p-u-VdPalatalNasal-VdPalatalNasal-ah-r-ay
ToFight-Battuere	batt-ere	b-ah-t-t-ay-r-ay
ToHunt-Captiare	katŋf-are	k-ah-t-ts-ah-r-ay
ToHit	pulsare	p-u-l-s-ah-r-ay
ToCut	s-egare	s-ay-j-ah-r-ay
ToCut-Excurtare	--skortare	s-k-oh-r-t-ah-r-ay
ToCut-Taliare	ta-ŋŋa:re	t-ah-yuh-yuh-A-r-ay
ToSplit	dividere	d-e-v-e-d-ay-r-ay
ToSplit-Scindere	ŋ-indere	shh-e-n-d-ay-r-ay
ToSplit-Findere	fendere	f-ch-n-d-ay-r-ay
ToSplit-Partire	partire	p-ah-r-t-e-r-ay
ToSplit-Separare	separare	s-ay-p-ah-r-ah-r-ay
ToStab	p-undgere	p-u-n-VdPalatoAlveolarSibilant-ay-r-ay
ToStab-Iugulare	jugula:re	ŋg-u-j-u-l-A-r-ay
ToScratch	radere	r-ah-d-ay-r-ay
ToScratch-Rasare	rasare	r-ah-s-ah-r-ay
ToDig-Cavare	kavare	k-ah-v-ah-r-ay
ToDig-Excavare	--skavare	s-k-ah-v-ah-r-ay
ToSwim	nwotare	n-w-oh-t-ah-er-ay
ToSwim-Navigare	navigare	n-ah-v-e-g-ah-r-ay
ToFly	volare	v-oh-l-ah-er-ay
ToFly-Exvolare	zvolare	zz-v-oh-l-ah-er-ay
ToWalk	kamminare	k-ah-m-m-e-n-ah-er-ay
ToWalk-Mergere	merdgere	m-eh-r-VdPalatoAlveolarSibilant-ay-r-ay
ToWalk-Ambitare	and--are	ah-n-d-ah-r-ay
ToCome	venire	v-ay-n-e-er-ay
ToLieAsInABed	e-stendere	ay-s-t-ch-n-d-ay-r-ay
ToLieAsInABed-Iacere	dza-ŋfe:re	VdPalatoAlveolarSibilant-ah-ts-ai-er-ay
ToSit	s-edere	s-ay-d-ay-r-ay
ToStand	-stare	s-t-ah-r-ay
ToStand-Levare	levare	l-ay-v-ah-r-ay
ToStand-Altiare	-altsare	ah-l-VlAlveolarSibilantAffricate-ah-r-ay
ToTurnIntransitive	tornare	t-oh-r-n-ah-r-ay
ToTurnIntransitive-Gyrate	dŋirare	VdPalatoAlveolarSibilant-e-r-ah-er-ay
ToTurnIntransitive-AncestralClass3	virare	v-e-r-ah-er-ay
ToTurnIntransitive-Torquere	torŋfere	t-euh-r-ts-ay-r-ay
ToFall	k-adere	k-ah-d-ay-er-ay
ToHold	ten-ere	t-ay-n-ay-er-ay
ToSqueeze	--sprem-ere	s-p-r-eh-m-ay-r-ay
ToSqueeze-Serare	serrare	s-ay-r-r-ah-r-ay
ToSqueeze-Stringere	-strindgere	s-t-r-e-n-VdPalatoAlveolarSibilant-ay-r-ay
ToRub	fregare	f-r-ay-j-ah-r-ay
ToRub-Frictare	frettare	f-r-ay-t-t-ah-r-ay
ToWash	lavare	l-ah-v-ah-r-ay
ToWipe	terdgere	t-eh-r-VdPalatoAlveolarSibilant-ay-r-ay
ToWipe-Exsucare	aŋŋ-ug-are	ah-shh-shh-u-g-ah-r-ay
ToPull	tirare	t-e-r-ah-r-ay
ToPull-Pulsare	pulsare	p-u-l-s-ah-r-ay
ToPull-Trahare	trar-re	t-r-ah-r-r-ay
ToPush	impindgere	e-m-p-e-n-VdPalatoAlveolarSibilant-ay-r-ay
ToThrow	dgettare	VdPalatoAlveolarSibilant-ay-t-t-ah-r-ay
ToThrow-Lanceare	lanŋfare	l-ah-n-ts-ah-r-ay

## Appendix 4 - Word Lists by Language

ToThrow-Eruncare	arrontfare	ah-r-r-oh-n-ts-ah-r-ay
ToTie	legare	l-ay-g-ah-r-ay
ToSew	ku--f-ire	k-u-ts-e-r-ay
ToCount	kon--tare	k-oh-n-t-ah-r-ay
ToCount-Enumerare	enumerare	ay-n-u-m-ay-r-ah-r-ay
ToSay	di--re	d-e-r-ay
ToSay-Exponere	--spor-re	s-p-oh-r-r-ay
ToSing-AncestralClass	kantare	k-ah-n-t-ah-r-ay
ToPlay-Jiocare	dzo-kare	VdPalatoAlveolarSibilant-oh-k-ah-r-ay
ToFloat	fluttuare	f-l-u-t-t-u-ah-r-ay
ToFloat-Fluitare	fluitare	f-l-u-e-t-ah-r-ay
ToFlow	fluire	f-l-u-e-r-ay
ToFlow-Colare	kolare	k-oh-l-ah-r-ay
ToFlow-Excurrere	--skorrere	s-k-oh-r-r-ay-r-ay
ToFlow-Currere	korrere	k-oh-r-r-ay-r-ay
ToFreeze	dzelare	VdPalatoAlveolarSibilant-ay-l-ah-r-ay
ToFreeze-Glaciare	gjatffjare	g-jg-ah-t-ts-jg-ah-r-ay
ToBurn-Brojan	bruffare	b-r-u-ts-ah-r-ay
ToBurn-Cremare	kremare	k-r-ay-m-ah-r-ay
ToBurn-Flammare	fjammare	f-jg-ah-m-m-ah-r-ay
ToBurn-Ardere	ardere	ah-r-d-ay-r-ay
ToBurn-Flagrare	flagrare	f-l-ah-g-r-ah-r-ay
ToBurn-Incendere	infjendjare	e-n-ts-eh-n-d-jg-ah-r-ay
ToBurn-AncestralClass8	ustolare	u-s-t-oh-l-ah-r-ay
All	onpi-	oh-VdPalatalNasal-VdPalatalNasal-e
All-Totus	tutto-	t-u-t-t-oh
Many	molto-	m-oh-l-t-oh
Many-Tantus	tanto-	t-ah-n-t-oh
Some	alkuno	ah-l-k-u-n-oh
Few	poko-	p-euh-k-oh
Other	alt-ro	ah-l-t-r-oh
Big	mappo-	m-ah-VdPalatalNasal-VdPalatalNasal-oh
Big-Grandem	grande-	g-r-ah-n-d-ay
Long-Longum	lu-ngo-	l-u-n-g-oh
Long-Largum	largo-	l-ah-r-g-oh
Wide	lato-	l-ah-t-oh
Wide-Amplum	ampjo-	ah-m-p-jg-oh
Heavy	greve-	g-r-eh-v-ay
Heavy-Lurdus	lordo-	l-oh-r-d-oh
Heavy-Pesant	pesante	p-ay-s-ah-n-t-ay
Small-Pittinus	pittfino-	p-e-t-ts-e-n-oh
Small-Pitulus	pikkolo-	p-e-k-k-oh-l-oh
Short	korto-	k-oh-r-t-oh
Short-Brevis	breve-	b-r-eh-v-ay
Narrow	angusto-	ah-n-g-u-s-t-oh
Narrow-Strictus	-str-e-tto-	s-t-r-ay-t-t-oh
Thin	minu-to-	m-e-n-u-t-oh
Thin-Delicatus	delikato-	d-ay-l-e-k-ah-t-oh
Thin-Subtilis	sottile-	s-oh-t-t-e-l-ay
Right-Dextrem	d-ε-stro-	d-eh-s-t-r-oh
Right-Directum	destra	d-eh-s-t-r-ah
Red	rub-ro	r-u-b-r-oh
Red-Russus	rosso-	r-oh-s-s-oh
Red-Vermiculus	vermiλ-λo-	v-ay-r-m-e-yuh-yuh-oh
Red-Rubeus	robbojo-	r-euh-b-b-jg-oh
Green	ver-de-	v-ay-r-d-ay
One	'uno-	u-n-oh

## Appendix 4 - Word Lists by Language

Two-Duae	du-e	d-u-ay
Three	'tr-e-	t-r-ay
Four	kwatt--ro	k-w-ah-t-t-r-oh
Five	'fɪŋkwe	ts-e-nya-k-w-ay
Here	---kw--i-	k-w-e
There	--la-	l-ah
There-Ibi	-vi	v-e
Who-Qui	k-i-	k-e
What	k-e-	k-ay
When-Quando	kwando	k-w-ah-n-d-oh
How-Quomodo	kome--	k-oh-m-ay
Not	non	n-oh-n
Not-Nec	ne-	n-ay
And-Et	e-	ay

### Brazilian Portuguese

Cognate	IPA	Sounds
I	-e-w	ay-w
We	nɔj-s	n-euh-jg-s
YouPlural	vɔjs	v-euh-jg-s
YouSingular	tu	t-u
YouSingular-VostramMercedem	vos-e-	v-oh-s-ay
Woman	fe-me---ø	f-ay-m-ay-ahh
Woman-Mulier	muʎ-eʁ--	m-u-yuh-ay-rr
Woman-Domina	do--nɐ	d-oh-n-ahh
ManHumanBeing	omɛj---	oh-m-nasal_diphthong_portuguese1
Child	ĩ-fɛ-ʎĩ-	een-f-ahn-ts-e
Child-Ninnus	nenɛj	n-ay-n-nasal_diphthong_portuguese1
Wife	ispo-za	e-s-p-oh-zz-ah
Wife-Mulier	muʎ-eʁ-	m-u-yuh-ay-rr
Husband	maridu-	m-ah-er-e-d-u
Husband-Sponsus	ispo-zu-	e-s-p-oh-zz-u
Mother	mɛj----	m-nasal_diphthong_portuguese2
Father	paj---	p-aj_diphthong
Father-Tata	tata	t-ah-t-ah
Animal-Bestia	bi-ʃ-ø	b-e-shh-ahh
Fish-Piskem	pɛjʃ-i-	p-ej_diphthong-shh-e
Bird-Avem	avi-	ah-v-e
Bird-Passerem	pa-sɐru-	p-ah-s-ahh-er-u
Louse	p-i-o-ʎu-	p-e-oh-yuh-u
Fruit	fru--tø-	f-er-u-t-ahh
Flower	floʁ--	f-l-oh-rr
Nose-Nares	naris-	n-ah-er-e-s
Mouth	bo-kɐ	b-oh-k-ahh
Sun	sɔw--	s-euh-w
Moon	lu-ø	l-u-ahh
Star	istre-lɐ	e-s-t-er-ay-l-ahh
Water	'a-gwɐ	ah-g-w-ahh
Rain	ʃ-u-v-ø	shh-u-v-ahh
Lake	lagu-	l-ah-g-u
Sea	maʁ-	m-ah-rr
Salt	saw--	s-ah-w
Earth	't-e-ʁɐ	t-ay-rr-ahh
Fog	kaliʒɛj---	k-ah-l-e-gzah-nasal_diphthong_portuguese1
Fog-Nebula	n-ɛ-vw-ø	n-eh-v-w-ahh

## Appendix 4 - Word Lists by Language

Fog-Fumata	fumasə	f-u-m-ah-s-ahh
Sky	s-ɛw--	s-ehn-w
Wind	'v-ɛ-tu-	v-ehn-t-u
Fire-Focus	f-ogu-	f-oh-g-u
Year	ɐ-nu-	ahh-n-u
Name-Nomen	nomi-	n-oh-m-e
Tongue	'li-gwɐ	l-ehn-g-w-ahh
ToDrink	beb-ek-	b-ay-b-ay-rr
ToEat	kome---	k-oh-m-ay
ToEat-Manducare	mɛ-ʒ--aɤ-	m-ahn-gzah-ah-rr
ToBite	m-okdek-	m-oh-rr-d-ay-rr
ToBite-Morsicare	mu-səga--	m-u-s-aah-g-ah
ToSuck	sugaɤ-	s-u-g-ah-rr
ToSpit	ku-spiɤ	k-u-s-p-e-rr
ToKnow-Sapere	sab-ek-	s-ah-b-ay-rr
ToKnow-Cognoscere	ko-ɲes-ek-	k-oh-VdPalatalNasal-ay-s-ay-rr
ToThink	k-uʒitaɤ-	k-u-gzah-e-t-ah-rr
ToThink-Pensare	pɛ-saɤ-	p-ehn-s-ah-rr
ToFear	temek-	t-ay-m-ay-rr
ToFear-Tremere	trem-ek-	t-er-ay-m-ay-rr
ToSleep	d-okmiɤ-	d-oh-rr-m-e-rr
ToLive	viveɤ-	v-e-v-ay-rr
ToDie	moɤek-	m-oh-rr-ay-rr
ToKill-Mactare	ma-taɤ-	m-ah-t-ah-rr
ToFight-Battuere	ba-t-ek-	b-ah-t-ay-rr
ToHunt-Captiare	ka-s-aɤ-	k-ah-s-ah-rr
ToHit	pu-ʃaɤ-	p-u-shh-ah-rr
ToCut	s-egaaɤ-	s-ay-g-ah-rr
ToCut-Curtare	koɤtaɤ-	k-oh-rr-t-ah-rr
ToCut-Taliare	ta-ʎ-aɤ-	t-ah-yuh-ah-rr
ToSplit	dʒividʒiɤ-	VdPalatoAlveolarSibilant-e-v-e-VdPalatoAlveolarSibilant-e-rr
ToSplit-Findere	fɛ-deɤ-	f-ehn-d-ay-rr
ToSplit-Partire	paɤʃiɤ-	p-ah-rr-ts-e-rr
ToSplit-Separare	separaɤ-	s-ay-p-ah-er-ah-rr
ToStab	p-ʉ-ʒiɤ-	p-ooo-gzah-e-rr
ToScratch	ka-ek-	rr-ah-ay-rr
ToScratch-Rasare	kaɤaɤ-	rr-ah-zz-ah-rr
ToScratch-Rasicare	kaʃkaɤ	rr-ah-shh-k-ah-rr
ToScratch-Coctiare	kosaʎ	k-oh-s-ah-VdRetroflexApproximant
ToDig-Cavare	kəvaɤ	k-ahh-v-ah-rr
ToDig-Excavare	i-ʃkəvaɤ-	e-shh-k-ahh-v-ah-rr
ToSwim	n-adaɤ-	n-ah-d-ah-rr
ToSwim-Navigare	naviɤaɤ-	n-ah-v-eee-juh-ah-rr
ToFly	vo-aɤ-	v-oh-ah-rr
ToWalk	kəmiɤaɤ-	k-ahh-m-e-VdPalatalNasal-ah-rr
ToWalk-Ambitare	ɛ-d--aɤ-	ahn-d-ah-rr
ToCome	v--iɤ-	v-e-rr
ToLieAsInABed	istɛ-deɤ-	e-s-t-ehn-d-ay-rr
ToLieAsInABed-lacere	ʒɐ-zek-	gzah-ahh-zz-ay-rr
ToSit	s-e--k-	s-ay-rr
ToSit-Sedentare	sɛ---tar-	s-ehn-t-ah-er
ToStand	iftar-	eee-shh-t-ah-er
ToStand-Levare	levaɤ-	l-ay-v-ah-rr
ToStand-Altiare	-aʎs-a--	ah-ssha-s-ah
ToTurnIntransitive	toɤnaɤ-	t-oh-rr-n-ah-rr
ToTurnIntransitive-Gyrare	ʒiraɤ-	gzah-e-er-ah-er
ToTurnIntransitive-AncestralClass3	virar-	v-e-er-ah-er

## Appendix 4 - Word Lists by Language

ToTurnIntransitive-Torquere	turser-	t-u-r-s-ay-r
ToFall	k-ɐ-ir-	k-ahh-e-er
ToFall-Tumbare	tõ-baɾ	t-on-b-ah-rr
ToHold	te---ɣ-	t-ay-rr
ToHold-Segurar	siguraɾ	s-eee-g-u-er-ah-rr
ToSqueeze	i-ʃprəm-ek-	e-shh-p-r-aah-m-ay-rr
ToSqueeze-Serrere	se-ka--	s-ay-rr-ah
ToSqueeze-Serare	si-kaɾ-	s-eee-rr-ah-er
ToSqueeze-Appetorare	ɐ-pi-r-tar-	ahh-p-eee-er-t-ah-er
ToSqueeze-Stringere	ɔʃtri-ziɾ-	aah-shh-t-r-een-gzah-e-r
ToRub-Exfricare	iʃfrigaɾ	eee-shh-f-er-eee-g-ah-er
ToWash	levar-	l-ahh-v-ah-er
ToWipe-Exsucare	ẽ-ʃ-ug-ar-	ehn-shh-u-g-ah-er
ToWipe-Limpidare	li-p--ar-	l-een-p-ah-er
ToPull	ʃiɾa--	ts-e-er-ah
ToPull-Pulsare	pu-ʃar-	p-u-shh-ah-er
ToPull-Trahere	traze--	t-er-ah-zz-ay
ToThrow	zejtar	gzah-ej_diphthong-t-ah-er
ToThrow-Lanceare	lẽ-s-a--	l-ahn-s-ah
ToTie-Aptare	ɐ-tar-	ahh-t-ah-er
ToSew	ku--z-er-	k-u-zz-ay-er
ToCount	kõ---tar-	k-on-t-ah-er
ToCount-Enumerare	enumerar-	ay-n-u-m-ay-er-ah-er
ToSay	diz-er	d-e-zz-ay-er
ToSing-AncestralClass	kẽ-tar-	k-ahn-t-ah-er
ToPlay-Jiocare	zo-gak-	gzah-oh-g-ah-rr
ToFloat	flu-tuaɾ-	f-l-u-t-u-ah-rr
ToFlow	flwiɾ-	f-l-w-e-rr
ToFlow-Colare	ko-aɾ-	k-oh-ah-rr
ToFlow-Excurrere	i-ʃko-ɐek-	e-shh-k-oh-rr-ay-rr
ToFlow-Currere	ko-ɐek-	k-oh-rr-ay-rr
ToFreeze	zilar-	gzah-eee-l-ah-er
ToBurn-Cremare	k-ɐjmare	k-diphthong_portuguese-m-ah-er-ay
ToBurn-Ardere	aɾdek-	ah-rr-d-ay-rr
ToBurn-Flagrare	flagkaɾ-	f-l-ah-j-rr-ah-rr
ToBurn-Incendere	ĩ-sendʒiar-	een-s-ay-n-VdPalatoAlveolarSibilant-NearCloseFrontUnrounded-ah-er
All-Totus	to-du-	t-oh-d-u
Many	mũj-tu	m-ooo-jn-t-u
Many-Tantus	tẽ-tu	t-ahn-t-u
Some	awgũ--	ah-w-g-ooo
Few	powku	p-oh-w-k-u
Other	owt-ru	oh-w-t-er-u
Other-Alius	aw---	ah-w
Big-Grandem	grẽ-dʒi-	g-er-ahn-VdPalatoAlveolarSibilant-e
Long-Longum	lõ-gu-	l-on-g-u
Long-Largum	laɾgu-	l-ah-rr-g-u
Wide	latu-	l-ah-t-u
Wide-Amplum	ẽ-ʃ-u-	ahn-shh-u
Heavy	gravi-	g-er-ah-v-e
Heavy-Lurdus	lerdo-	l-ay-er-d-oh
Heavy-Pesant	peza-du	p-ay-zz-ah-d-u
Small-Pittinus	pe-kenu-	p-ay-k-ay-n-u
Short	kugtu-	k-u-rr-t-u
Short-Brevis	'brevi-	b-er-eh-v-e
Narrow-Strictus	istr-ej--tu-	e-s-t-er-ej_diphthong-t-u
Thin	mi-u-du-	m-e-u-d-u

## Appendix 4 - Word Lists by Language

Thin-Delicatus	dew-gadu-	d-ay-w-g-ah-d-u
Thin-Subtilis	su-ŋw--	s-u-ts-e-w
Right-Dextrem	d-ε-stru-	d-eh-s-t-er-u
Right-Directum	dir-εj-tε-	d-e-er-diphthong_portuguese-t-ahh
Red-Russus	ko-ʃu-	rr-oh-shh-NearCloseBackRounded
Red-Vermiculus	veɾme--ʎu-	v-ay-rr-m-ay-yuh-u
Red-Rubeus	ru-beo-	r-u-b-ay-oh
Green	ver-di-	v-ay-er-d-eee
One	ũ---	ooo
Two-Duos	d-ojs	d-oj_diphthong-s
Two-Duas	duɐs	d-u-ahh-s
Three	tr-es	t-er-ay-s
Four	kwa-t--ru	k-w-ah-t-er-u
Five	'sĩ-k-u	s-een-k-u
Here	-a-k---i-	ah-k-e
There	--la-	l-ah
There-Adlbi	ai	ah-e
Who-Quem	k-ẽj--	k-nasal_diphthong_portuguese1
What	k-i-	k-e
When-Quando	kwẽ-du	k-w-ahn-d-u
How-Quomodo	komu--	k-oh-m-u
Not	nẽw	n-au_diphthong_nasal
Not-Nec	nẽj	n-nasal_diphthong_portuguese1
And-Et	i-	e

## Portuguese

Cognate	IPA	Sounds
I	-e-w	ay-w
We	noʃ	n-euh-shh
YouPlural	voʃ	v-oh-shh
YouSingular	tu	t-u
YouSingular-VostramMercedem	vɔs-e-	v-euh-s-ay
Woman	'fe-mj---ɐ	f-ay-m-jg-ahh
Woman-Mulier	muʎ-er--	m-u-yuh-ay-er
Woman-Domina	do--nɐ	d-oh-n-ahh
ManHumanBeing	ɔmẽj---	euh-m-nasal_diphthong_portuguese1
Child	ĩ-fe-ti-	een-f-ahn-t-eee
Child-Ninnus	nenẽj	n-ay-n-nasal_diphthong_portuguese1
Wife	ifpo-zɐ	eee-shh-p-oh-zz-ahh
Wife-Mulier	muʎ-er-	m-u-yuh-ay-er
Husband	mɛɾiðu-	m-ahh-er-e-dd-u
Husband-Sponsus	ifpo-zu-	eee-shh-p-oh-zz-u
Mother	mẽj----	m-nasal_diphthong_portuguese2
Father	paj---	p-aj_diphthong
Father-Tata	tata	t-ah-t-ah
Animal-Bestia	bi-f-ɐ	b-e-shh-ahh
Fish-Piskem	pɛʃf-i-	p-diphthong_portuguese-shh-eee
Bird-Avem	avi-	ah-v-eee
Bird-Passerem	pa-sɛru-	p-ah-s-ahh-er-u
Louse	p-i-o-ʎu-	p-e-oh-yuh-u
Fruit	fru--tɐ-	f-er-u-t-ahh
Flower	flor--	f-l-oh-er
Nose-Nares	nɛɾiʃ-	n-ahh-er-e-shh
Mouth	bo-kɐ	b-oh-k-ahh
Sun	sɔʎ--	s-euh-ssha



## Appendix 4 - Word Lists by Language

Moon	lu-ə	l-u-ahh
Star	ɪftre-lə	eee-shh-t-er-ay-l-ahh
Water	ˈa-gwə	ah-g-w-ahh
Rain	ʃ-u-v-ə	shh-u-v-ahh
Lake	layu-	l-ah-juh-u
Sea	mar-	m-ah-er
Salt	sal--	s-ah-l
Earth	ˈt-ɛ-ʁə	t-eh-rr-ahh
Fog	kəliʒɐj̃---	k-ahh-l-e-gzah-nasal_diphthong_portuguese2
Fog-Nebula	n-ɛ-vw-ə	n-eh-v-w-ahh
Fog-Tenebras	tr---ɛv-ɐʃ	t-er-eh-v-ahh-shh
Fog-Fumata	fumasə	f-u-m-ah-s-ahh
Sky	s-ɛw--	s-eh-w
Wind	ˈv-ẽ-tu-	v-ehn-t-u
Fire-Focus	f-oyu-	f-oh-juh-u
Year	ɐ-nu-	ahh-n-u
Name-Nomen	nomi-	n-oh-m-eee
Tongue	ˈlĩ-gwə	l-een-g-w-ahh
ToDrink	biʃ-er-	b-eee-bb-ay-er
ToEat	kum--er-	k-u-m-ay-er
ToEat-Manducare	mẽ-ʒ--ar-	m-ahn-gzah-ah-er
ToBite	m-urðer-	m-u-er-dd-ay-er
ToBite-Morsicare	mu-səgar-	m-u-s-aah-g-ah-r
ToSuck	sugar-	s-u-g-ah-er
ToSpit	ku-ʃpir	k-u-shh-p-e-er
ToKnow-Sapere	səb-er-	s-ahh-b-ay-er
ToKnow-Cognoscere	ku-ɲis-er-	k-u-VdPalatalNasal-eee-s-ay-er
ToThink	k-uʒitar-	k-u-gzah-e-t-ah-er
ToThink-Pensare	pẽ-sar-	p-ehn-s-ah-er
ToFear	timer-	t-eee-m-ay-er
ToFear-Tremere	trim-er-	t-er-eee-m-ay-er
ToSleep	d-urmir-	d-u-er-m-e-er
ToLive	viver-	v-e-v-ay-er
ToDie	muker-	m-u-rr-ay-er
ToKill-Mactare	mə-tar-	m-ahh-t-ah-er
ToFight-Battuere	bə-t-er-	b-ahh-t-ay-er
ToHunt-Captiare	kə-s-ar-	k-ahh-s-ah-er
ToHit	pu-ʃar-	p-u-shh-ah-er
ToCut	s-iyar-	s-eee-juh-ah-er
ToCut-Curtare	kurtar-	k-u-er-t-ah-er
ToCut-Taliare	tə-ʎ-ar-	t-ahh-yuh-ah-er
ToSplit	diviðir-	d-e-v-e-dd-e-er
ToSplit-Findere	fẽ-der-	f-ehn-d-ay-er
ToSplit-Partire	pərtir-	p-ahh-er-t-e-er
ToSplit-Separare	sipərar-	s-eee-p-ahh-er-ah-er
ToStab	p-ũ-zir-	p-ooo-gzah-e-er
ToScratch	ʁə-er-	rr-ahh-ay-er
ToScratch-Rasare	ʁəzar-	rr-ahh-zz-ah-er
ToScratch-Rasicare	ʁəʃkar	rr-ahh-shh-k-ah-er
ToScratch-Coctiare	kusar	k-u-s-ah-er
ToDig-Cavare	kevar	k-ahh-v-ah-er
ToDig-Excavare	i-ʃkevar-	e-shh-k-ahh-v-ah-er
ToSwim	n-əðar-	n-ahh-dd-ah-er
ToSwim-Navigare	nəviyar-	n-ahh-v-eee-juh-ah-er
ToFly	vw-ar-	v-w-ah-er
ToWalk	kəminar-	k-ahh-m-e-VdPalatalNasal-ah-er
ToWalk-Ambitare	ẽ-d--ar-	ahn-d-ah-er

## Appendix 4 - Word Lists by Language

ToCome	v--ir-	v-e-er
ToLieAsInABed	if̥t̥e-der-	e-shh-t-ehn-d-ay-er
ToLieAsInABed-lacere	ʒv̥-zer-	gzah-ahh-zz-ay-er
ToSit	s-e--r-	s-ay-er
ToSit-Sedentare	sē---tar-	s-ehn-t-ah-er
ToStand	if̥tar-	eee-shh-t-ah-er
ToStand-Levare	livar-	l-eee-v-ah-er
ToStand-Altiare	-aʎs-ar-	ah-ssha-s-ah-er
ToTurnIntransitive	turnar-	t-u-er-n-ah-er
ToTurnIntransitive-Gyrate	ʒirar-	gzah-e-er-ah-er
ToTurnIntransitive-AncestralClass3	ʒirar-	gzah-e-er-ah-er
ToTurnIntransitive-Torquere	turser-	t-u-r-s-ay-r
ToFall	k-v̥-ir-	k-ahh-e-er
ToFall-Tumbare	tō-bar	t-on-b-ah-er
ToHold	te---r-	t-ay-er
ToHold-Segurar	siyurar	s-eee-juh-u-er-ah-er
ToSqueeze	i-ʃpr̥m-er-	e-shh-p-r-aah-m-ay-r
ToSqueeze-Serrere	sə-rar-	s-aah-VIUVularTrill-ah-er
ToSqueeze-Serare	si-ʒar-	s-eee-rr-ah-er
ToSqueeze-Appetorare	v̥-pi-r-tar-	ahh-p-eee-er-t-ah-er
ToSqueeze-Stringere	ʒf̥r̥iʒir-	aah-shh-t-r-ehn-gzah-e-r
ToRub-Exfricare	if̥friyar	eee-shh-f-er-eee-juh-ah-er
ToWash	lavar-	l-ahh-v-ah-er
ToWipe-Exsucare	ē-ʃ-uʎ-ar-	ehn-shh-u-juh-ah-er
ToWipe-Limpidare	l̥i-p--ar-	l-ehn-p-ah-er
ToPull	tirar-	t-e-er-ah-er
ToPull-Pulsare	pu-ʃar-	p-u-shh-ah-er
ToPull-Trahere	tr̥ezer-	t-er-ahh-zz-ay-er
ToThrow	ʒejtar	gzah-ej_diphthong-t-ah-er
ToThrow-Lanceare	l̥e-s-ar-	l-ahn-s-ah-er
ToTie-Aptare	v̥-tar-	ahh-t-ah-er
ToSew	ku--z-er-	k-u-zz-ay-er
ToCount	kō---tar-	k-on-t-ah-er
ToCount-Enumerare	enumerar-	ay-n-u-m-ay-er-ah-er
ToSay	diz-er	d-e-zz-ay-er
ToSing-AncestralClass	kē-tar-	k-ahn-t-ah-er
ToPlay-Jiocare	ʒu-ʎar-	gzah-u-juh-ah-er
ToFloat	flu-tuar-	f-l-u-t-u-ah-er
ToFlow	flwir-	f-l-w-e-er
ToFlow-Colare	ku-ar-	k-u-ah-er
ToFlow-Excurrere	i-ʃku-rer-	e-shh-k-u-VIUVularTrill-ay-er
ToFlow-Currere	ku-ʒer-	k-u-rr-ay-er
ToFreeze	ʒilar-	gzah-eee-l-ah-er
ToBurn-Cremare	k-ejmaʒe	k-ej_diphthong-m-ah-rr-ay
ToBurn-Ardere	v̥rder-	ahh-er-d-ay-er
ToBurn-Flagrare	flagrar-	f-l-ah-g-er-ah-er
ToBurn-Incendere	ī-sē-djar-	een-s-ehn-d-jg-ah-er
All-Totus	to-ōu-	t-oh-dd-u
Many	mūj̃-tu	m-ooo-jn-t-u
Many-Tantus	tē-tu-	t-ahn-t-u
Some	aʎgū--	ah-ssha-g-ooo
Few	powku	p-oh-w-k-u
Other	owt-ru	oh-w-t-er-u
Other-Alius	aʎ---	ah-ssha
Big-Grandem	gr̥ē-di-	g-er-ahn-d-eee
Long-Longum	lō-gu-	l-on-g-u
Long-Largum	largo-	l-ah-er-g-u

## Appendix 4 - Word Lists by Language

Wide	latu-	l-ah-t-u
Wide-Amplum	ẽ-f-u-	ahn-shh-u
Heavy	gravi-	g-er-ah-v-eee
Heavy-Lurdus	lerdo-	l-ay-er-d-oh
Heavy-Pesant	piza-đu	p-eee-zz-ah-dd-u
Small-Pittinus	pi-kenu-	p-eee-k-ay-n-u
Short	kurtu-	k-u-er-t-u
Short-Brevis	'brevi-	b-er-eh-v-eee
Narrow-Strictus	ĩftr-ẽj--tu-	eee-shh-t-er-diphthong_portuguese-t-u
Thin	mi-u-đu-	m-e-u-dd-u
Thin-Delicatus	deł-yađu-	d-eh-ssha-juh-ah-dd-u
Thin-Subtilis	su-łjw--	s-u-ts-e-w
Right-Dextrem	d-ẽ-ftr-u-	d-eh-shh-t-er-u
Right-Directum	dir-ẽj-tẽ-	d-e-r-diphthong_portuguese-t-ahh
Red-Russus	ko-fu-	rr-oh-shh-u
Red-Vermiculus	virmeɟ--lu-	v-eee-er-m-diphthong_portuguese-yuh-u
Red-Rubeus	ru-beo-	r-u-b-ay-oh
Green	ver-di-	v-ay-er-d-eee
One	ũ---	ooo
Two-Duos	d-ojɟ	d-oj_diphthong-shh
Two-Duas	dueɟ	d-u-ahh-shh
Three	tr-eɟ	t-er-ay-shh
Four	kwa-t--ru	k-w-ah-t-er-u
Five	'sĩ-k-u	s-eeen-k-u
Here	-ẽ-k---i-	ahh-k-e
There	--la-	l-ah
There-Adlbi	ẽi	ahh-e
Who-Quem	k-ẽj--	k-nasal_diphthong_portuguese2
What	k-i-	k-eee
When-Quando	kwẽ-du	k-w-ahn-d-u
How-Quomodo	komu--	k-oh-m-u
Not	nẽw	n-au_diphthong_nasal
Not-Nec	nẽj	n-nasal_diphthong_portuguese2
And-Et	i-	e

## Catalan

Cognate	IPA	Sounds
I	ʒ--ɔ	gzah-euh
YouPlural	bu-s	b-u-s
YouSingular	tu	t-u
YouSingular-VostramMercedem	voste-	v-oh-s-t-ay
Woman	fe-m-br-a	f-ay-m-b-er-ah
Woman-Mulier	muł-e---	m-u-yuh-ay
Woman-Domina	dɔ--nə	d-euh-n-aah
ManHumanBeing	-ɔmə---	euh-m-aah
Child-Ninnus	nen-	n-ay-n
Wife	əspɔ-zə	aah-s-p-euh-zz-aah
Wife-Mulier	muł-e-	m-u-yuh-ay
Husband	marit--	m-ah-er-e-t
Husband-Sponsus	əspɔ-s--	aah-s-p-euh-s
Mother	ma-rə-	m-ah-er-aah
Father	pa-rə	p-ah-er-aah
Fish-Piskem	peɟ---	p-ay-shh
Bird-Avem	aw--	ah-w
Bird-Avicellum	--u--s-e-ł--	u-s-ay-yuh

## Appendix 4 - Word Lists by Language

Louse	p-o---ʎ--	p-oh-yuh
Fruit	fruj-t--	f-er-u-jg-t
Flower	flɔ---	f-l-euh
Nose	nas	n-ah-s
Nose-Nares	na:ri:s-	n-A-r-NearCloseFrontUnrounded-s
Mouth	bo-kə	b-oh-k-aah
Sun	sɔl--	s-euh-l
Moon	ʎunə	yuh-u-n-aah
Star	əst-ɛ-l-	aah-s-t-eh-l
Water	'aj-ɣwə	aj_diphthong-juh-w-aah
Rain	plu-ʒ-ə	p-l-u-gzah-aah
Lake	ʎak--	yuh-ah-k
Sea	mar-	m-ah-r
Salt	sal--	s-ah-l
Earth	't-ɛ-rə	t-eh-r-aah
Fog-Nebula	n-e--wɫə	n-ay-w-l-aah
Fog-Tenebras	t-ən-ɛbrəs	t-aah-n-ay-b-er-aah-s
Sky	s-ɛl--	s-eh-l
Wind	b-en---	b-ay-n
Fire-Focus	f-ək--	f-cuh-k
Year	a-ɲ--	ah-VdPalatalNasal
Name-Nomen	nəm--	n-euh-m
ToDrink	bɛw--rə	b-eh-w-er-aah
ToEat-Manducare	məɲʒ--a--	m-aah-VdPalatalNasal-gzah-ah
ToBite-Morsicare	mu-səɣa--	m-u-s-aah-juh-ah
ToSpit-Exconspuere	əsku-pi	aah-s-k-u-p-e
ToKnow-Sapere	səβ-ɛ--	s-aah-bb-eh
ToKnow-Cognoscere	ku-nɛʃ-ə--	k-u-n-eh-shh-aah
ToThink	k-u-jda--	k-u-jg-d-ah
ToThink-Pensare	pənsa--	p-aah-n-s-ah
ToFear	tɛmə--	t-ay-m-aah
ToSleep	d-urmi--	d-u-r-m-e
ToLive	biw-rə	b-e-w-er-aah
ToDie	muri--	m-u-er-e
ToKill	n-əga--	n-aah-g-ah
ToKill-Mactare	mə-ta--	m-aah-t-ah
ToKill-Occidere	uksi----	u-k-s-e
ToFight	pu-ɲa--	p-u-VdPalatalNasal-ah
ToFight-Battuere	ba-t--rə	b-ah-t-er-aah
ToHunt-Captiare	kə-s-a--	k-aah-s-ah
ToCut	s-əɣa--	s-aah-juh-ah
ToCut-Taliare	tə-ʎ-a--	t-aah-yuh-ah
ToSplit	dibidi--	d-e-b-e-d-e
ToSplit-Findere	fɛnd-rə	f-eh-n-d-er-aah
ToSplit-Partire	pərti--	p-aah-r-t-e
ToSplit-Separare	səpəra--	s-aah-p-aah-er-ah
ToStab	p-ɯɲ-i--	p-u-VdPalatalNasal-e
ToScratch	raw-rə	r-ah-w-er-aah
ToScratch-Rasare	rəza--	r-aah-zz-ah
ToScratch-Rasicare	rəska-	r-aah-s-k-ah
ToDig-Cavare	kəba	k-aah-b-ah
ToSwim	n-əda--	n-aah-d-ah
ToSwim-Navigare	nəbəga--	n-aah-b-aah-g-ah
ToFly	bula--	b-u-l-ah
ToWalk	kəmina--	k-aah-m-e-n-ah
ToCome	bəni--	b-aah-n-e
ToLieAsInABed	ə-stend-rə	aah-s-t-ay-n-d-er-aah

## Appendix 4 - Word Lists by Language

ToLieAsInABed-lacere	ʒaw--rə	gzah-ah-w-er-aah
ToStand	əsta--	aah-s-t-ah
ToStand-Levare	ʎəba--	yuh-aah-b-ah
ToStand-Altiare	-əls-a--	aah-l-s-ah
ToTurnIntransitive	turna-	t-u-r-n-ah
ToTurnIntransitive-Gyrate	ʒira--	gzah-e-er-ah
ToTurnIntransitive-AncestralClass3	bira--	b-e-er-ah
ToTurnIntransitive-Torquere	tərsə--	t-euh-r-s-aah
ToFall	k-aw-rə	k-ah-w-r-aah
ToFall-Tumbare	tumba-	t-u-m-b-ah
ToHold	tən-i--	t-aah-n-e
ToSqueeze	ə-sprem-ə--	aah-s-p-er-ay-m-aah
ToSqueeze-Serrere	sə-ra--	s-aah-r-ah
ToSqueeze-Stringere	əstrɛŋə	aah-s-t-er-ch-VdPalatalNasal-aah
ToRub	frəga--	f-er-aah-g-ah
ToRub-Frictiare	frəsa-	f-er-aah-s-ah
ToWash	ʎəba--	yuh-aah-b-ah
ToWipe-Extergere	ə-stərʒi--	aah-s-t-aah-r-gzah-e
ToWipe-Exsucare	ə-ʃ-uga--	aah-shh-u-g-ah
ToPull	tira--	t-e-er-ah
ToPull-Trahere	trɛw-rə	t-er-eh-w-er-aah
ToPush	əmpɛŋ-ə--	aah-m-p-eh-VdPalatalNasal-aah
ToThrow	xita	xha-e-t-ah
ToThrow-Lanceare	ʎəns-a--	yuh-aah-n-s-ah
ToTie	ʎiya--	yuh-e-juh-ah
ToSew	ku--z-i--	k-u-zz-e
ToCount	kum--ta--	k-u-m-t-ah
ToCount-Enumerare	enumera--	ay-n-u-m-ay-er-ah
ToSay	di	d-e
ToSing-AncestralClass	kənta--	k-aah-n-t-ah
ToPlay-Jiocare	ʒu-ga--	gzah-u-g-ah
ToFloat	fluktua--	f-l-u-k-t-u-ah
ToFlow	flui--	f-l-u-e
ToFlow-Colare	kula--	k-u-ssha-ah
ToFlow-Excurrere	ə-sko-rə--	aah-s-k-oh-r-aah
ToFlow-Currere	ko-rə--	k-oh-r-aah
ToFreeze	ʒəla--	gzah-aah-l-ah
ToFreeze-Glaciare	glə-s-a--	g-l-aah-s-ah
ToBurn-Cremare	krəma--	k-r-aah-m-ah
ToBurn-Flammare	flama--	f-ssha-ah-m-ah
ToBurn-Incendere	ənsend--rə	aah-n-s-ay-n-d-er-aah
All-Totus	to-t--	t-oh-t
Many	mol---	m-oh-l
Many-Tantus	tant--	t-ah-n-t
Some	əlgʊ--	aah-l-g-u
Few	pək--	p-euh-k
Other	alt-rə	ah-l-t-er-aah
Big-Grandem	gran---	j-r-ah-n
Long-Longum	ʎo-ŋ---	yuh-oh-nya
Long-Largum	ʎark--	yuh-ah-er-k
Wide-Amplum	amplə-	ah-m-p-l-aah
Heavy	grew--	g-er-ay-w
Heavy-Pesant	pəza-t-	p-aah-zz-ah-t
Small	pətit--	p-aah-t-e-t
Short	kurt--	k-u-er-t
Short-Brevis	brew--	b-er-ay-w
Narrow-Strictus	əstr-ɛ--t--	aah-s-t-er-eh-t

## Appendix 4 - Word Lists by Language

Thin	mənu-t--	m-aah-n-u-t
Thin-Delicatus	dəlikat--	d-aah-l-e-k-ah-t
Thin-Subtilis	suptil--	s-u-p-t-e-l
Right-Dextrem	d-e-strə-	d-ay-s-t-er-aah
Right-Directum	d-ræt	d-er-eh-t
Red-Russus	ro-s--	r-oh-s
Red-Vermiculus	bərmə--ʌ--	b-aah-r-m-eh-yuh
Red-Rubeus	ru-dʒe--	r-u-VdPalatoAlveolarSibilant-ay
Green	vēr-t--	v-eh-er-t
One	'un--	u-n
Two-Duos	d-os	d-oh-s
Three	'tr-əs	t-r-eh-s
Four	kwa-t--rə	k-w-ah-t-er-aah
Five	'sɪŋk--	s-e-nya-k
Here	-a-k---i-	ah-k-e
There	ə-ʌa-	aah-yuh-ah
Who-Qui	k-i-	k-e
What	k-ε-	k-eh
When-Quando	kwan	k-w-ah-n
How-Quomodo	kɔm---	k-euh-m
Not	no-	n-oh
Not-Nec	ni-	n-e
And-Et	i-	e

## Walloon

Cognate	IPA	Sounds
I	dʒi--	VdPalatoAlveolarSibilant-NearCloseFrontUnrounded
We	no--	n-oh
YouPlural	vo-s	v-oh-s
YouSingular	ty	t-eeh
Woman	fœ-m-----	f-OpenMidNearFrontRounded-m
Woman-Domina	dœm---	d-OpenMidNearFrontRounded-m
ManHumanBeing	-ɔm----	euh-m
Child	ε-fũ----	eh-f-NasalA
Mother	me-r--	m-ay-VIUvularTrill
Father	pɛ:-r-	p-Eh-r
Fish-Pescion	p-εhð	p-eh-h-on
Bird-Avicellum	--u:-h-ε:----	U-h-Eh
Louse	pju-----	p-jg-u
Fruit	fry-----	f-VIUvularTrill-eeh
Flower	flø:ʁ--	f-l-o-rr
Nose	ne---	n-ay
Mouth	bøk--	b-euh-k
Sun	solo-	s-euh-l-euh
Moon	løn-	l-uu-n
Star	-st-ø:-l-	s-t-o-l
Water	ε:-w-	Eh-w
Rain	plu:-ʁ--	p-l-U-rr
Lake	lak--	l-ah-k
Sea	meʁ-	m-ay-rr
Salt	se---	s-ay
Earth	t-ε:-ʁ-	t-Eh-rr
Sky	s-i:ʁ--	s-E-rr
Wind	v-ê-----	v-ehn
Fire-Focus	f-ø:---	f-o

## Appendix 4 - Word Lists by Language

Year	ã----	NasalA
Name-Nomen	nõ---	n-on
Tongue	lëu----	l-eu_nasalized_diphthong
ToDrink	b---ø:ʁ-	b-o-rr
ToEat-Manducare	maɲ---i:--	m-ah-VdPalatalNasal-E
ToSuck	sysi:--	s-eeh-s-E
ToKnow-Sapere	sav-ø:ʁ-	s-ah-v-o-VIUvularTrill
ToKnow-Cognoscere	ki-nəh----	k-e-n-euh-h
ToThink-Pensare	pẽ-se--	p-ehnn-s-ay
ToSleep	dwaʁmi--	d-w-ah-rr-m-e
ToDie	mɔri--	m-euh-VIUvularTrill-e
ToKill-Tutari	tuw-e--	t-u-w-ay
ToFight-Battuere	bat-e--	b-ah-t-ay
ToHunt-Captiare	ʃfɛ-s-i:--	ts-eh-s-E
ToCut-Taliare	tɛ--ji:--	t-eh-jg-E
ToSplit-Findere	fɛ-t--	f-ehnn-t
ToSplit-Partire	pɔ:rti--	p-LongOpenMidBackRounded-VIUvularTrill-t-e
ToDig-Cavare	çɑ:v-le	sh-aay-v-l-ay
ToSwim-Navigare	nɛ--dʒi:--	n-eh-VdPalatoAlveolarSibilant-E
ToFly	vole--	v-euh-l-ay
ToWalk	ʃimine--	ts-e-m-e-n-ay
ToWalk-Marcher	ma:ʁʃi:	m-A-VIUvularTrill-ts-E
ToCome	vini--	v-e-n-e
ToLieAsInABed-lacere	dʒe--re	VdPalatoAlveolarSibilant-ay-r-ay
ToStand	ɛs----	eh-s
ToStand-Levare	lɔve--	l-aah-v-ay
ToStand-Altiare	hɔ:-s-i:	h-LongOpenMidBackRounded-s-E
ToTurnIntransitive	tu:rne-	t-U-r-n-ay
ToTurnIntransitive-AncestralClass3	vixe--	v-e-rr-ay
ToFall	ʃf-ɛ:--R-	ts-Eh-VIUvularTrill
ToFall-Tumbare	tum-e-	t-u-m-ay
ToHold	tin-i--	t-e-n-e
ToSqueeze-Serare	sɛ-re--	s-eh-VIUvularTrill-ay
ToSqueeze-Stringere	stringe	s-t-r-e-n-j-ay
ToRub	froj----	f-r-øj_diphthong
ToRub-Frictare	fʁote--	f-rr-oh-t-ay
ToWash	lave--	l-ah-v-ay
ToWipe-Exsucare	--s-u-we--	s-u-w-ay
ToPull	tire--	t-e-r-ay
ToPull-Pulsare	pu:si:--	p-U-s-E
ToThrow	dʒete	VdPalatoAlveolarSibilant-eh-t-ay
ToThrow-Lanceare	lanc-i:-	l-ah-n-tya-E
ToTie	lɔji:--	l-euh-jg-E
ToSew	kø:--z----	k-o-zz
ToCount	kõ---te--	k-on-t-ay
ToSay	di:--ʁ	d-E-rr
ToSing-AncestralClass	ʃã-te--	ts-NasalA-t-ay
ToPlay-Jiocare	dʒuw-e--	VdPalatoAlveolarSibilant-u-w-ay
ToFlow-Colare	kɔle--	k-euh-l-ay
ToFreeze	dʒale--	VdPalatoAlveolarSibilant-ah-l-ay
ToBurn-Brojan	bʁu:le--	b-rr-U-l-ay
All-Totus	tɔ----	t-euh
Few	põ---	p-on
Other	õ-t---	on-t
Big-Grandem	gʁã---	j-rr-NasalA
Long-Longum	lõ-----	l-on
Heavy	grav--	j-r-ah-v

## Appendix 4 - Word Lists by Language

Small	pi-ti---	p-e-t-e
Short	ku:ʁ---	k-U-rr
Short-Brevis	bʁef--	b-rr-ay-f
Narrow-Strictus	-stʁ-ø:-----	s-t-rr-o
Thin	minu----	m-e-n-u
Thin-Subtilis	su:-ti---	s-U-t-e
Right-Directum	drø:t	d-r-o-t
Red-Rubeus	rɔ-ʃf---	r-euh-ts
Green	vɛʁ----	v-eh-rr
One	ō---	on
Two-Duos	d-ø:-	d-o
Three	tr-ø:-	t-r-o
Four	kwa-t----	k-w-ah-t
Five	sĕ-k--	s-ehn-k
There	--la-	l-ah
Who-Qui	k-i:-	k-E
What	kwe:-	k-w-Eh
When-Quando	kwand	k-w-ah-n-d
How-Quomodo	kōmĕ--	k-euh-m-ehnn
Not-Nec	nĕ-	n-ehn
And-Et	ε-	eh

## Friulian

Cognate	IPA	Sounds
I	j--o	jg-oh
We	no:--	n-O
YouPlural	vo:--	v-O
YouSingular	tu	t-u
Woman	fɛ-mi-n-ɛ	f-eh-m-e-n-eh
Woman-Mulier	mu--i:r--	m-u-E-r
Woman-Domina	dɔ--ne	d-euh-n-ay
ManHumanBeing	-ɔm----	euh-m
Wife-Mulier	mu-i:r-	m-u-E-r
Husband	mari:t--	m-ah-r-E-t
Husband-Sponsus	-spo:-s--	s-p-O-s
Mother	ma-ri-	m-ah-r-e
Father	pa-ri	p-ah-r-e
Animal	nema:l--	n-ay-m-A-l
Animal-Bestia	bis---	b-e-s
Fish-Piskem	pɛs---	p-eh-s
Bird-Avicellum	--u--ʃʃjɛ-l--	u-ts-jg-eh-l
Louse	p-edo-li-	p-ay-d-oh-l-e
Fruit	fru--t--	f-r-u-t
Flower	flo:r--	f-l-O-r
Nose	na:s--	n-A-s
Mouth	bɔ-cɛ	b-euh-tya-eh
Sun-Soliculus	sore--li-	s-oh-r-ay-l-e
Moon	lune	l-u-n-ay
Star	-st-ɛ-le	s-t-eh-l-ay
Water	a-g-e	ah-j-ay
Rain	plo--je	p-l-oh-jg-ay
Lake	la:t--	l-A-t
Sea	ma:r-	m-A-r
Salt	sa:l--	s-A-l
Earth	tʃɛ-re	t-jg-eh-r-ay



## Appendix 4 - Word Lists by Language

Fog-Fumata	fumate	f-u-m-ah-t-ay
Sky	ʃ-i:l--	ts-E-l
Wind	'v-int--	v-e-n-t
Fire-Focus	f-u:k--	f-U-k
Year	a-ŋ--	ah-nya
Name-Nomen	noŋ--	n-euh-nya
Tongue	'leng-e	l-eh-n-j-eh
ToDrink	bevi--	b-ay-v-e
ToEat-Manducare	maŋj--a:--	m-ah-nya-VdPalatalStop-A
ToBite	mwardi--	m-w-ah-r-d-e
ToSuck	cuca:--	tya-u-tya-A
ToSpit-Sputare	spuda:--	s-p-u-d-A
ToKnow-Sapere	sav-e:--	s-ah-v-ai
ToKnow-Cognoscere	ko-ŋos-i--	k-oh-VdPalatalNasal-oh-s-e
ToThink-Pensare	penŋsa:--	p-ay-nya-s-A
ToFear	temi--	t-ay-m-e
ToFear-Tremere	trim-a:--	t-r-e-m-A
ToSleep	d-urmi:--	d-u-r-m-E
ToLive	vivi--	v-e-v-e
ToDie	muri:--	m-u-r-E
ToKill-Mactare	maʃf-a:--	m-ah-ts-A
ToFight-Battuere	bat-i--	b-ah-t-e
ToHunt-Captiare	ca-ʃf-a:--	tya-ah-ts-A
ToHit	pulsa:-	p-u-l-s-A
ToCut	s-e-a:--	s-ay-A
ToCut-Excurtare	--skurta:--	s-k-u-r-t-A
ToCut-Taliare	ta--ja:--	t-ah-jg-A
ToSplit	dividi--	d-e-v-e-d-e
ToSplit-Partire	parti:--	p-ah-r-t-E
ToSplit-Separare	separa:--	s-ay-p-ah-r-A
ToScratch	rada:--	r-ah-d-A
ToScratch-Rasare	rasa:--	r-ah-s-A
ToDig-Cavare	java:	VdPalatalStop-ah-v-A
ToDig-Excavare	--zjava:--	zz-VdPalatalStop-ah-v-A
ToSwim	n-ada:--	n-ah-d-A
ToSwim-Navigare	naviga:--	n-ah-v-e-j-A
ToFly-Exvolare	zvola:--	zz-v-oh-l-A
ToWalk	camina:--	tya-ah-m-e-n-A
ToCome	vipi:-	v-e-VdPalatalNasal-E
ToLieAsInABed-lacere	je-si--	jg-ay-s-e
ToSit-Sedentare	se--nta:--	s-ay-n-t-A
ToStand	-sta:--	s-t-A
ToStand-Levare	leva:--	l-ay-v-A
ToStand-Altiare	-altʃ-a:	ah-l-t-shh-A
ToTurnIntransitive	torna:--	t-oh-r-n-A
ToTurnIntransitive-Gyrare	dʒira:--	VdPalatoAlveolarSibilant-e-r-A
ToTurnIntransitive-AncestralClass3	dʒira:--	VdPalatoAlveolarSibilant-e-r-A
ToFall	ʃjade--	ts-jg-ah-d-ay
ToHold	tinji--	t-e-n-jg-e
ToSqueeze	e-sprim-i--	ay-s-p-r-e-m-e
ToSqueeze-Stringere	strengi:--	s-t-r-ch-n-j-E
ToRub	fre-a--	f-r-ay-ah
ToWash	lava:--	l-ah-v-A
ToWipe-Exsucare	--s-u-ja:--	s-u-jg-A
ToPull	tira:--	t-e-r-A
ToPull-Pulsare	pulsa:--	p-u-l-s-A
ToPull-Trahere	traj---	t-r-aj_diphthong

## Appendix 4 - Word Lists by Language

ToThrow-Lanceare	lanʃa:--	l-ah-n-ts-A
ToTie	le-a:--	l-ay-A
ToSew	ku--zi---	k-u-zz-e
ToCount	kon--ta:--	k-oh-n-t-A
ToSay	di:	d-E
ToSing-AncestralClass	canta:--	tya-ah-n-t-A
ToPlay-Jiocare	dʒuj-a:--	VdPalatoAlveolarSibilant-u-jg-A
ToFlow-Excurrere	--sko-ri:--	s-k-oh-r-E
ToFlow-Currere	ko-ri--	k-oh-r-e
ToFreeze-Glaciare	gla-ʃa:--	j-l-ah-ts-A
ToBurn-Brojan	bruza:--	b-r-u-zz-A
All-Totus	du-t--	d-u-t
Many	molc--	m-oh-l-tya
Many-Tantus	tanc--	t-ah-n-tya
Few	po:k-	p-O-k
Other	alt-ri	ah-l-t-r-e
Big-Grandem	grant--	j-r-ah-n-t
Long-Longum	lunk--	l-u-n-k
Long-Largum	lark--	l-ah-r-k
Heavy	grevi-	j-r-eh-v-e
Heavy-Pesant	pezant-	p-ay-zz-ah-n-t
Small-Pitulus	pi-ʃul--	p-e-ts-u-l
Short	kurt--	k-u-r-t
Narrow-Strictus	-str-ε--t--	s-t-r-eh-t
Thin	minu:--t--	m-e-n-U-t
Thin-Subtilis	su-ti:l--	s-u-t-E-l
Right-Directum	'dret	d-r-eh-t
Red-Russus	rɔ-s--	r-euh-s
Green	ver-t--	v-eh-r-t
One	uŋ--	u-nya
Two-Duos	d-oj-	d-oj_diphthong
Three	'tr-e:--	t-r-ai
Four	kwa-t--ri	k-w-ah-t-r-e
Five	'ʃɪŋk--	ts-e-nya-k
Here	-a-k---i-	ah-k-e
Who-Qui	kwi-	k-w-e
What	ʃ-e-	ts-ay
When-Quando	kwant	k-w-ah-n-t
How-Quomodo	ʃemu:t-	ts-ay-m-U-t
Not	no-	n-oh
And-Et	e-	ay

## Romanian

Cognate	IPA	Sounds
I	je-w	jg-ay-w
We	noj-	n-oj_diphthong
YouPlural	voj-	v-oj_diphthong
YouSingular	tu	t-u
Woman	fe-me--je	f-ay-m-ay-jg-ay
Woman-Mulier	mu-jere-	m-u-jg-ay-r-ay
Woman-Domina	doam-nə	d-midback_diphthong_romanian-m-n-aah
ManHumanBeing	-om----	oh-m
Wife-Mulier	mu-jere	m-u-jg-ay-r-ay
Husband	mərit--	m-aah-r-e-t
Husband-Socius	sots---	s-oh-VIAAlveolarSibilantAffricate

## Appendix 4 - Word Lists by Language

Father-Tata	tata	t-ah-t-aah
Animal	-nəma-je	n-aah-m-ah-jg-ay
Fish-Piskem	pejte	p-ay-shh-t-ay
Bird-Passerem	pa-səre-	p-ah-s-aah-er-ay
Louse	p-əduk-je-	p-aah-d-u-k-jg-ay
Fruit	fru-kt--	f-r-u-k-t
Flower	floare-	f-l-midback_diphthong_romanian-er-ay
Nose	nas--	n-ah-s
Mouth	bu-kə	b-u-k-aah
Mouth-Gula	'gura	j-u-er-aah
Sun	soare-	s-midback_diphthong_romanian-er-ay
Moon	lunə	l-u-n-aah
Star	-st-ea---	s-t-midfront_diphthong_romanian
Water	a-p-ə	ah-p-aah
Rain	ploa--je	p-l-midback_diphthong_romanian-jg-ay
Lake	lak--	l-ah-k
Sea	mare	m-ah-r-ay
Salt	sare-	s-ah-r-ay
Earth	ts-a-rə	VAlveolarSibilantAffricate-ah-r-aah
Fog-Nebula	negura	n-ay-g-u-r-aah
Fog-Caecia	ʃeaf-ə	ts-midfront_diphthong_romanian-ts-aah
Sky	ʃ-er--	ts-ay-er
Wind	v-int--	v-eee-n-t
Fire-Focus	f-ok--	f-oh-k
Year	an---	ah-n
Name-Nomen	nume-	n-u-m-ay
Tongue	'limb-ə	l-e-m-b-aah
ToDrink	b---ea--	b-midfront_diphthong_romanian
ToEat-Manducare	min--ka--	m-eee-n-k-ah
ToBite-Morsicare	murseka--	m-u-r-s-ay-k-ah
ToSuck	sudze--	s-u-VdPalatoAlveolarSibilant-ay
ToSpit-Exconspuere	-skujpa	s-k-u-jg-p-ah
ToKnow	ʃti--	shh-t-e
ToKnow-Cognoscere	ku-noafte--	k-u-n-midback_diphthong_romanian-shh-t-ay
ToThink	k-udgeta--	k-u-VdPalatoAlveolarSibilant-ay-t-ah
ToThink-Pensare	pə-sa--	p-aah-s-ah
ToFear	teme--	t-ay-m-ay
ToSleep	d-ormi--	d-oh-r-m-e
ToLive	vi-a--	v-e-ah
ToDie	muri--	m-u-r-e
ToKill	n-eka--	n-ay-k-ah
ToKill-Occidere	u-ʃide--	u-ts-e-d-ay
ToFight-Battuere	bat-e--	b-ah-t-ay
ToHit	pulsa--	p-u-l-s-ah
ToCut-Excurtare	--skurta--	s-k-u-r-t-ah
ToCut-Taliare	tə--ja--	t-aah-jg-ah
ToSplit	divide--	d-e-v-e-d-ay
ToSplit-Separare	separa--	s-ay-p-ah-r-ah
ToStab	pundze--	p-u-n-VdPalatoAlveolarSibilant-ay
ToScratch	rade--	r-ah-d-ay
ToSwim-Navigare	naviga--	n-ah-v-e-g-ah
ToFly-Exvolare	zbura--	zz-b-u-er-ah
ToWalk-Mergere	merdze--	m-ay-r-VdPalatoAlveolarSibilant-ay
ToCome	veni--	v-ay-n-e
ToLieAsInABed	ekstinde--	ay-k-s-t-e-n-d-ay
ToLieAsInABed-lacere	zə-ʃeaf--	zz-aah-ts-midfront_diphthong_romanian
ToSit	ʃ-eceaf--	shh-ay-d-midfront_diphthong_romanian

## Appendix 4 - Word Lists by Language

ToStand	-sta--	s-t-ah
ToStand-Levare	l-ua--	l-u-ah
ToTurnIntransitive	turna--	t-u-r-n-ah
ToTurnIntransitive-Torquere	toartʃe--	t-midback_diphthong_romanian-r-ts-ay
ToFall	kəɖeə--	k-aah-d-midfront_diphthong_romanian
ToHold	tsin-e--	VlAlveolarSibilantAffricate-e-n-ay
ToSqueeze	-sk-reme--	s-k-r-ay-m-ay
ToSqueeze-Stringere	strindʒe--	s-t-r-eee-n-VdPalatoAlveolarSibilant-ay
ToRub	freka--	f-r-ay-k-ah
ToWash	la---	l-ah
ToWipe-Extergere	--ʃterdʒe--	shh-t-ay-r-VdPalatoAlveolarSibilant-ay
ToWipe-Exsucare	u-s--k-a--	u-s-k-ah
ToPull-Pulsare	pulsa--	p-u-l-s-ah
ToPull-Trahere	tradʒe--	t-r-ah-VdPalatoAlveolarSibilant-ay
ToPush	impindʒe--	eee-m-p-e-n-VdPalatoAlveolarSibilant-ay
ToThrow-Eruncare	a-runʃka	ah-er-u-nya-k-ah
ToTie	lega--	l-ay-j-ah
ToSew	coɣa--s-e--	tya-midback_diphthong_romanian-s-ay
ToCount-Enumerare	-numara--	n-u-m-ah-r-ah
ToSay	ziʃe	zz-e-ts-ay
ToSay-Exponere	--spune	s-p-u-n-ay
ToSing-AncestralClass	kinta--	k-eee-n-t-ah
ToPlay-Jiocare	zu-ka--	gzah-u-k-ah
ToFloat	fluctua--	f-l-u-tya-t-u-ah
ToFlow-Excurrere	--skurdʒe--	s-k-u-er-VdPalatoAlveolarSibilant-ay
ToFlow-Currere	kurdʒe--	k-u-er-VdPalatoAlveolarSibilant-ay
ToFreeze-Inglaciare	ing-ets-a--	eee-n-j-ay-VlAlveolarSibilantAffricate-ah
ToBurn-Ardere	arde--	ah-er-d-ay
ToBurn-Incendere	intʃindʒe--	eee-n-ts-e-n-d-gzah-ay
ToBurn-AncestralClass8	ustura--	u-s-t-u-r-ah
All-Totus	to-t--	t-oh-t
Many	mult--	m-u-l-t
Other	alt---	ah-l-t
Big-Majjorem	ma---re	m-ah-er-ay
Long-Longum	lung--	l-u-n-j
Long-Largum	larg--	l-ah-r-j
Wide	lat--	l-ah-t
Heavy	grew--	j-er-ay-w
Small-Pittinus	pu-tsin--	p-u-VlAlveolarSibilantAffricate-e-n
Narrow	ingust--	eee-nya-j-u-s-t
Narrow-Strictus	-str-im-t--	s-t-r-eee-m-t
Thin	mərunt--	m-aah-r-u-n-t
Thin-Subtilis	subtsire-	s-u-b-VlAlveolarSibilantAffricate-e-r-ay
Right-Directum	drept	d-er-ay-p-t
Red-Russus	ro-ʃu-	er-oh-shh-u
Red-Rubeus	roj-b---	r-oj_diphthong-b
Green	ver-de-	v-ay-er-d-ay
One	unu-	u-n-u
Two-Duos	d-oj-	d-oj_diphthong
Two-Duae	dowə	d-oh-w-aah
Three	tr-ej-	t-r-ej_diphthong
Four	p-a-t--ru	p-ah-t-r-u
Five	ʃinf--	ts-e-n-ts
There	--la-	l-ah
Who-Quem	ʃf-ine	ts-e-n-ay
What	ʃf-e-	ts-ay
When-Quando	k-ind	k-eee-n-d

## Appendix 4 - Word Lists by Language

How-Quomodo	kum---	k-u-m
Not	nu-	n-u
And-Et	e-	ay
And-Si	ji-	shh-e

## Appendix 5 - Segment Groups

### Pulmonic Consonants

Manner	Bilabial	Labial-Velar	Labio-Dental	Linguo-Labial	Dental	Alveolar	Post-Alveolar	Retroflex	Palatal	Velar	Uvular	Pharyngeal Epiglottal	Glottal
Nasal	m					n			ɲ	ŋ			
Stop	p b	k <sup>w</sup> g <sup>w</sup>				t d			c ɟ	k g			
Sibilant, Fricative						s z	ʃ ʒ						
Fricative	β		f v		θ ð				ç ʝ	x ɣ	ʁ		h
Approximant								ɻ	j				
Tap/Flap						ɾ							
Trill						r					R		
Lateral, Fricative													
Lateral, Approximant						l			ʎ				
Lateral, Tap/Flap													

Shaded areas denote articulations judged to be impossible. Where symbols appear in pairs, the one to the right represents a modally voiced consonant.

### Non-Pulmonic Consonants

Manner	Bilabial	Labio-Dental	Velar	Uvular	Pharyngeal Epiglottal
Ejective, Stop					
Ejective, Fricative					
Ejective, Lateral, Fricative					
Tenuis, Click					
Nasal, Click					
Tenuis, Lateral, Click					
Implosive					

Shaded areas denote articulations judged to be impossible. Where symbols appear in pairs, the one to the right represents a modally voiced consonant.

## Appendix 5 - Segment Groups

### Vowels

	Front	Near-Front	Central	Near-Back	Back
Close	i • y		ɨ		u
Near-close		ɪ		ʊ	
Close-mid	e • ø		ə		o
Mid					
Open-mid		œ • ɛ			ɔ
Near-open			ɐ		
Open		a			ɑ

Where symbols appear in pairs, the one to the right represents a rounded vowel.

### Long Vowels

	Front	Near-Front	Central	Near-Back	Back
Close	iː				uː
Mid	eː				oː
Open-mid		ɛː			ɔː
Open	øː		aː		ɑː

### Pulmonic Affricates

Manner	Bilabial	Labio-Dental	Alveolar	Palato-Alveolar	Velar	Uvular	Pharyngeal Epiglottal	Glottal
Sibilant			ts	tʃ				
Non-Sibilant								
Lateral								

Shaded areas denote articulations judged to be impossible.

### Ejective Affricates

Manner	Bilabial	Labio-Dental	Pharyngeal Epiglottal	Glottal
Central				
Lateral				

Shaded areas denote articulations judged to be impossible.

## Appendix 5 - Segment Groups

### Other Segments

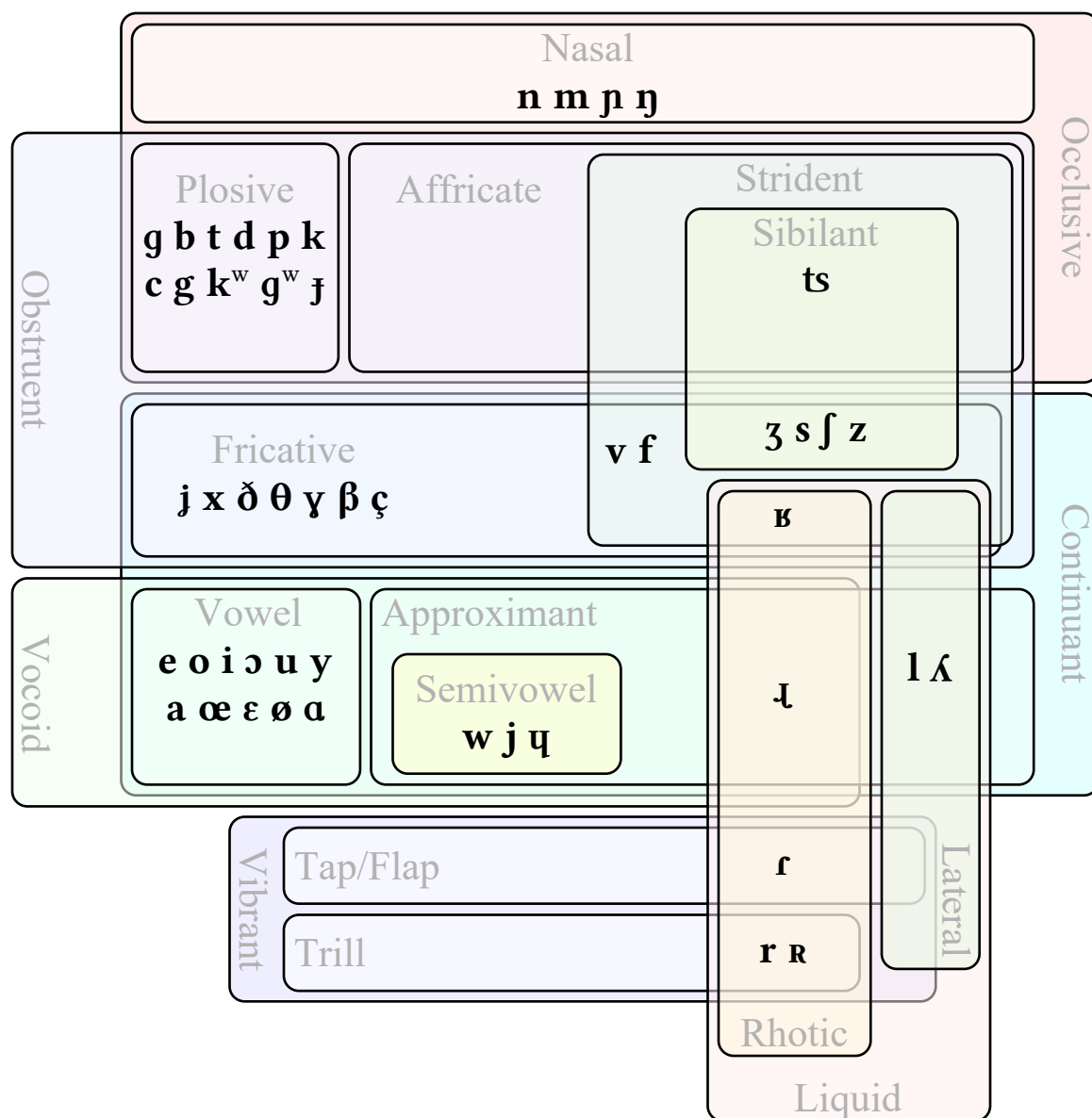
<b>e</b> Close-mid Front Vocoid Vowel Continuant	<b>g</b> Velar Voiced Pulmonic Stop Occlusive
<b>oː</b> Mid Back Rounded Vocoid Long Vowel Continuant	<b>ʒ</b> Post-Alveolar Voiced Pulmonic Sibilant Fricative Strident Obstruent Continuant
<b>ə</b> Close-mid Central Vowel	<b>j</b> Palatal Voiced Pulmonic Fricative Obstruent Continuant
<b>o</b> Close-mid Back Rounded Vocoid Vowel Continuant	<b>i</b> Close Front Vocoid Vowel Continuant
<b>w</b> Labial-Velar Vocoid Semivowel Voiced Approximant Continuant	<b>ɔ</b> Open-mid Back Rounded Vocoid Vowel Continuant
<b>dʒ</b> Palato-Alveolar Voiced Sibilant Affricate	<b>ɪ</b> Near-close Near-Front Vowel
<b>j</b> Palatal Vocoid Semivowel Voiced Pulmonic Approximant Continuant	<b>n</b> Alveolar Voiced Pulmonic Nasal Occlusive
<b>s</b> Alveolar Pulmonic Sibilant Fricative Strident Obstruent Continuant	<b>u</b> Close Back Rounded Vocoid Vowel Continuant
<b>ʃ</b> Post-Alveolar Pulmonic Sibilant Fricative Strident Obstruent Continuant	<b>oj</b> Mid Front Vowel Diphthong
<b>v</b> Labio-Dental Voiced Pulmonic Fricative Strident Obstruent Continuant	<b>b</b> Bilabial Voiced Pulmonic Stop Occlusive
<b>t</b> Alveolar Pulmonic Stop Occlusive	<b>uː</b> Close Back Rounded Long Vowel
<b>y</b> Close Front Rounded Vocoid Vowel Continuant	<b>d</b> Alveolar Voiced Pulmonic Stop Occlusive
<b>f</b> Labio-Dental Pulmonic Fricative Strident Obstruent Continuant	<b>eː</b> Mid Front Vocoid Long Vowel Continuant
<b>m</b> Bilabial Voiced Pulmonic Nasal Occlusive	<b>a</b> Open Near-Front Vocoid Vowel Continuant
<b>ɾ</b> Alveolar Voiced Pulmonic Tap/Flap Rhotic Vibrant Liquid	<b>ɐ</b> Near-open Central Rounded Vowel
<b>œ</b> Open-mid Near-Front Rounded Vocoid Vowel Continuant	<b>ɛ</b> Open-mid Near-Front Vocoid Vowel Continuant
<b>l</b> Alveolar Vocoid Voiced Pulmonic Lateral Approximant Rhotic Liquid	<b>r</b> Alveolar Voiced Pulmonic Trill Rhotic Vibrant Liquid
<b>x</b> Velar Pulmonic Fricative Obstruent Continuant	<b>ʎ</b> Palatal Vocoid Voiced Pulmonic Lateral Approximant Rhotic Liquid
<b>ʁ</b> Uvular Voiced Pulmonic Fricative Rhotic Strident Obstruent Continuant Liquid	<b>iː</b> Close Front Vocoid Long Vowel Continuant
<b>ɲ</b> Palatal Voiced Pulmonic Nasal Occlusive	<b>o</b> Mid Front Vowel Diphthong
<b>h</b> Glottal Pulmonic Fricative	<b>ẽj</b> Mid Front Nasal Vowel Diphthong
<b>ɔ̃</b> Open-mid Back Rounded Nasal Vowel	<b>ã</b> Near-close Back Nasal Vowel
<b>ĩ</b> Close Front Nasal Vowel	<b>ẽ</b> Near-open Central Rounded Nasal Vowel
<b>ʈʃ</b> Palato-Alveolar Pulmonic Sibilant Affricate	<b>ɨ</b> Close Central Vowel



## Appendix 5 - Segment Groups

<b>p</b> Bilabial Pulmonic Stop Occlusive	<b>z</b> Alveolar Voiced Pulmonic Sibilant Fricative Strident Obstruent Continuant
<b>ð</b> Dental Voiced Pulmonic Fricative Obstruent Continuant	<b>k</b> Velar Pulmonic Stop Occlusive
<b>ts</b> Alveolar Pulmonic Sibilant Affricate Occlusive Strident	<b>aː</b> Open Central Vowel Long Vowel Continuant
<b>ẽj</b> Mid Front Nasal Vowel Diphthong	<b>ʀ</b> Uvular Pulmonic Trill Rhotic Vibrant Liquid
<b>aj</b> Mid Front Vowel Diphthong	<b>ɛː</b> Open-mid Near-Front Vowel Long Vowel Continuant
<b>θ</b> Dental Pulmonic Fricative Obstruent Continuant	<b>ej</b> Mid Front Vowel Diphthong
<b>ej</b> Mid Front Vowel Diphthong	<b>õ</b> Close-mid Back Rounded Nasal Vowel
<b>ɥ</b> Labial-Palatal Vowel Semivowel Voiced Approximant Continuant	<b>øː</b> Open Front Rounded Vowel Long Vowel
<b>c</b> Palatal Pulmonic Stop Occlusive	<b>g</b> Velar Voiced Pulmonic Stop Occlusive
<b>ɭ</b> Alveolar Voiced Velarized Pulmonic Lateral Approximant	<b>ɛj</b> Mid Front Vowel Diphthong
<b>ø</b> Close-mid Front Rounded Vowel Vowel Continuant	<b>e</b> <sup>˘</sup> Mid Front Vowel Diphthong
<b>k</b> Labial-Velar Pulmonic Stop Occlusive	<b>ɣ</b> Velar Voiced Pulmonic Fricative Obstruent Continuant
<b>ẽ</b> Close Back Nasal Vowel	<b>ŋ</b> Velar Voiced Pulmonic Nasal Occlusive
<b>g</b> Labial-Velar Voiced Pulmonic Stop Occlusive	<b>ẽ</b> Mid Front Nasal Vowel Diphthong
<b>ɑ</b> Open Back Vowel Vowel Continuant	<b>β</b> Bilabial Voiced Pulmonic Fricative Obstruent Continuant
<b>ʃ</b> Palatal Voiced Pulmonic Stop Occlusive	<b>ẽ</b> Open-mid Near-Front Nasal Vowel
<b>ɔː</b> Open-mid Back Rounded Vowel Long Vowel Continuant	<b>ũ</b> Open Back Nasal Vowel
<b>ɭ</b> Retroflex Vowel Voiced Pulmonic Approximant Rhotic Liquid	<b>ç</b> Palatal Pulmonic Fricative Obstruent Continuant
<b>ɑː</b> Open Back Long Vowel	<b>ĩ</b> Palatal Nasal Approximant
<b>œ</b> Open-mid Near-Front Rounded Nasal Vowel Diphthong	<b>a</b> Mid Front Vowel Diphthong
<b>ʊ</b> Near-close Near-Back Rounded Vowel	<b>ẽ</b> Mid Front Nasal Vowel Diphthong

## Appendix 6 - Euler Feature Diagram



## Appendix 7 - International Phonetic Alphabet

### IPA Segments

ẽ	θ	β	ʈʃ
1EBD Close Back Nasal Vowel	03B8 Dental Pulmonic Fricative Obstruent Continuant	03B2 Bilabial Voiced Pulmonic Fricative Obstruent Continuant	02A7 Palato-Alveolar Pulmonic Sibilant Affricate
ʈʂ	ɖʒ	ɟ	ʒ
02A6 Alveolar Pulmonic Sibilant Affricate Occlusive Strident	02A4 Palato-Alveolar Voiced Sibilant Affricate	029D Palatal Voiced Pulmonic Fricative Obstruent Continuant	0292 Post-Alveolar Voiced Pulmonic Sibilant Fricative Strident Obstruent Continuant
ʎ	ʊ	ɶ	ʁ
028E Palatal Vocoid Voiced Pulmonic Lateral Approximant Rhotic Liquid	028A Near-close Near-Back Rounded Vowel	0283 Post-Alveolar Pulmonic Sibilant Fricative Strident Obstruent Continuant	0281 Uvular Voiced Pulmonic Fricative Rhotic Strident Obstruent Continuant Liquid
ʀ	ɽ	ɻ	ɲ
0280 Uvular Pulmonic Trill Rhotic Vibrant Liquid	027E Alveolar Voiced Pulmonic Tap/Flap Rhotic Vibrant Liquid	027B Retroflex Vocoid Voiced Pulmonic Approximant Rhotic Liquid	0272 Palatal Voiced Pulmonic Nasal Occlusive
ɭ	ɪ	ɨ	ɥ
026B Alveolar Voiced Velarized Pulmonic Lateral Approximant	026A Near-close Near-Front Vowel	0268 Close Central Vowel	0265 Labial-Palatal Vocoid Semivowel Voiced Approximant Continuant
ʁ	ɣ	ʝ	ɛ
0263 Velar Voiced Pulmonic Fricative Obstruent Continuant	0261 Velar Voiced Pulmonic Stop Occlusive	025F Palatal Voiced Pulmonic Stop Occlusive	025B Open-mid Near-Front Vocoid Vowel Continuant
ə	ɔ	ɑ	ɐ
0259 Close-mid Central Vowel	0254 Open-mid Back Rounded Vocoid Vowel Continuant	0251 Open Back Vocoid Vowel Continuant	0250 Near-open Central Rounded Vowel

## Appendix 7 - International Phonetic Alphabet

ũ	œ	ŋ	ĩ
0169 Open Back Nasal Vowel	0153 Open-mid Near-Front Rounded Vowel Continuant	014B Velar Voiced Pulmonic Nasal Occlusive	0129 Close Front Nasal Vowel
ø	õ	ð	ç
00F8 Close-mid Front Rounded Vowel Continuant	00F5 Close-mid Back Rounded Nasal Vowel	00F0 Dental Voiced Pulmonic Fricative Obstruent Continuant	00E7 Palatal Pulmonic Fricative Obstruent Continuant
z	y	x	w
007A Alveolar Voiced Pulmonic Sibilant Fricative Strident Obstruent Continuant	0079 Close Front Rounded Vowel Continuant	0078 Velar Pulmonic Fricative Obstruent Continuant	0077 Labial-Velar Vowel Semivowel Voiced Approximant Continuant
v	u	t	s
0076 Labio-Dental Voiced Pulmonic Fricative Strident Obstruent Continuant	0075 Close Back Rounded Vowel Continuant	0074 Alveolar Pulmonic Stop Occlusive	0073 Alveolar Pulmonic Sibilant Fricative Strident Obstruent Continuant
r	p	o	n
0072 Alveolar Voiced Pulmonic Trill Rhotic Vibrant Liquid	0070 Bilabial Pulmonic Stop Occlusive	006F Close-mid Back Rounded Vowel Continuant	006E Alveolar Voiced Pulmonic Nasal Occlusive
m	l	k	j
006D Bilabial Voiced Pulmonic Nasal Occlusive	006C Alveolar Vowel Voiced Pulmonic Lateral Approximant Rhotic Liquid	006B Velar Pulmonic Stop Occlusive	006A Palatal Vowel Semivowel Voiced Pulmonic Approximant Continuant
i	h	g	f
0069 Close Front Vowel Vowel Continuant	0068 Glottal Pulmonic Fricative	0067 Velar Voiced Pulmonic Stop Occlusive	0066 Labio-Dental Pulmonic Fricative Strident Obstruent Continuant

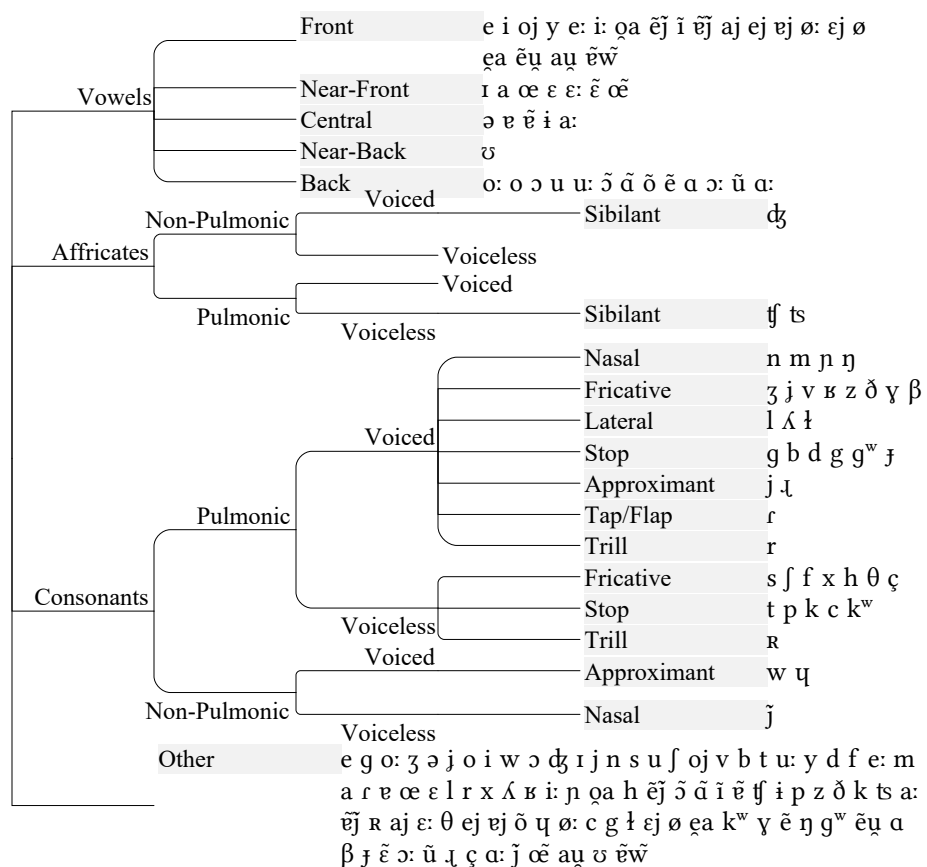
## Appendix 7 - International Phonetic Alphabet

<b>e</b>	<b>d</b>	<b>c</b>	<b>b</b>
0065 Close-mid Front Vocoid Vowel Continuant	0064 Alveolar Voiced Pulmonic Stop Occlusive	0063 Palatal Pulmonic Stop Occlusive	0062 Bilabial Voiced Pulmonic Stop Occlusive
<b>a</b>	<b>g<sup>w</sup></b>	<b>ẽ</b>	<b>ɛː</b>
0061 Open Near-Front Vocoid Vowel Continuant	0261, 02B7 Labial-Velar Voiced Pulmonic Stop Occlusive	025B, 0303 Open-mid Near-Front Nasal Vowel	025B, 02D0 Open-mid Near-Front Vocoid Long Vowel Continuant
<b>ɛj</b>	<b>õ</b>	<b>ɔː</b>	<b>ã</b>
025B, 006A Mid Front Vowel Diphthong	0254, 0303 Open-mid Back Rounded Nasal Vowel	0254, 02D0 Open-mid Back Rounded Vocoid Long Vowel Continuant	0251, 0303 Near-close Back Nasal Vowel
<b>ɑː</b>	<b>ẽ</b>	<b>ɐj</b>	<b>œ̃</b>
0251, 02D0 Open Back Long Vowel	0250, 0303 Near-open Central Rounded Nasal Vowel	0250, 006A Mid Front Vowel Diphthong	0153, 0303 Open-mid Near-Front Rounded Nasal Vowel Diphthong
<b>øː</b>	<b>uː</b>	<b>oː</b>	<b>oj</b>
00F8, 02D0 Open Front Rounded Vocoid Long Vowel	0075, 02D0 Close Back Rounded Long Vowel	006F, 02D0 Mid Back Rounded Vocoid Long Vowel Continuant	006F, 006A Mid Front Vowel Diphthong
<b>k<sup>w</sup></b>	<b>ĩ</b>	<b>iː</b>	<b>eː</b>
006B, 02B7 Labial-Velar Pulmonic Stop Occlusive	006A, 0303 Palatal Nasal Approximant	0069, 02D0 Close Front Vocoid Long Vowel Continuant	0065, 02D0 Mid Front Vocoid Long Vowel Continuant
<b>ej</b>	<b>aː</b>	<b>aj</b>	<b>ẽu</b>
0065, 006A Mid Front Vowel Diphthong	0061, 02D0 Open Central Vocoid Long Vowel Continuant	0061, 006A Mid Front Vowel Diphthong	1EBD, 0075, 032F Mid Front Nasal Vowel Diphthong

## Appendix 7 - International Phonetic Alphabet

ẽĩ	ɔa	ɛa	au
1EBD, 006A, 0303	006F, 032F, 0061	0065, 032F, 0061	0061, 0075, 032F
Mid Front Nasal Vowel Diphthong	Mid Front Vowel Diphthong	Mid Front Vowel Diphthong	Mid Front Vowel Diphthong
ẽwĩ	ẽĩ		
0250, 0303, 0077, 0303	0250, 0303, 006A, 0303		
Mid Front Nasal Vowel Diphthong	Mid Front Nasal Vowel Diphthong		

## Appendix 8 - Feature Tree



## Appendix 9 - Diacritics

### Diacritics

	Undefined escape character	~	Nasalized	..	Centralized
+	Advanced	-	Retracted	˘	RisingTone
◦	Voiceless		Implosive	˙	Syllabic
ˈ	Ejective	ʕ	Pharyngealized	ˆ	Falling tone
˘	Non-syllabic	˘	No audible release	ˆ	Rhotic hook
˘	Advanced tongue root	˘	Apical	˘	Extra low tone
˘	Low rising tone	˘	Less rounded	˘	Dental
˘	Velarized or Pharyngealized	˘	Global fall	˘	Velarized
˘	High tone	˘	High rising tone	˘	Aspirated
j	Palatalized	˘	Creaky voiced	˘	Low tone
l	Lateral release	˘	Mid tone	˘	Laminal
˘	Linguo-Labial	n	Nasal release	˘	More rounded
˘	Lowered	˘	Retracted tongue root	˘	Global rise
˘	Rising falling tone	˘	Raised	˘	Extra high tone
˘	Breathy voiced	˘	Voiced	w	Labialized
˘	Extra short	x	Mid-centralized	˘	Down-step
˘	Up-step	˘	Long	˘	Half-long
˘	Indeterminacy in french vowels	˘	Begin Non-segmental notation	˘	End non-segmental notation
˘	Voiced epiglottal fricative	!	Post-alveolar click	˘	Minor group
˘	Dental click		Major group		Alveolar lateral click
˘	Palatal click	◦	Voiceless descender	-	Combining macron
˘	Tie-bar below	˘	Tie-bar above	˘	Ready made combination
→	Becomes	˘	Separator		



## Appendix 10 - Languages

### Latin

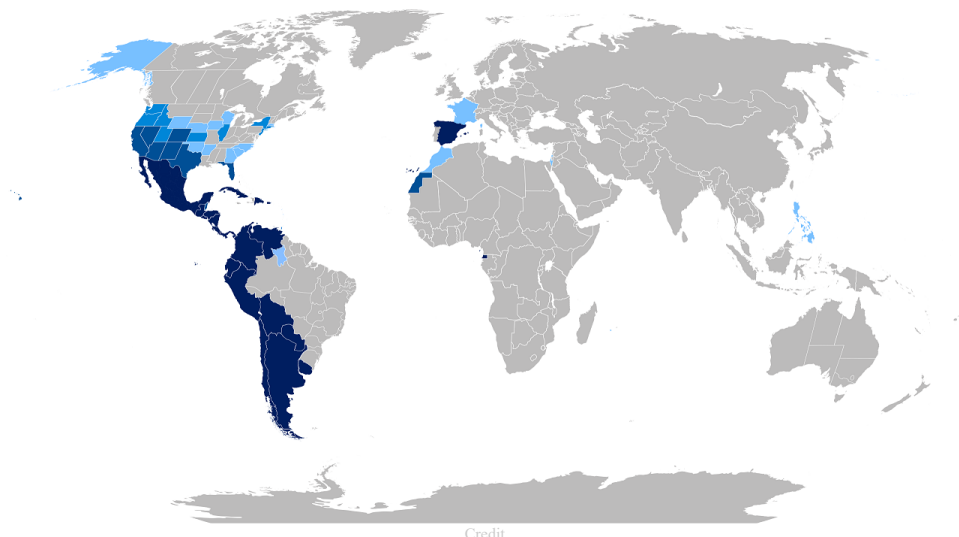


A classical language belonging to the Italic branch of the Indo-European languages. Latin was originally spoken in the area around Rome, known as Latium. Through the power of the Roman Republic, it became the dominant language in Italy, and subsequently throughout the western Roman Empire, before eventually becoming a dead language. Latin has contributed many words to the English language. In particular, Latin (and Ancient Greek) roots are used in English descriptions of theology, the sciences, medicine, and law.

By the late Roman Republic (75 BC), Old Latin had been standardised into Classical Latin. Vulgar Latin was the colloquial form spoken at that time and attested in inscriptions and the works of comic playwrights like Plautus and Terence[3] and author Petronius. Late Latin is the written language from the 3rd century; its colloquial form Vulgar Latin developed in the 6th to 9th centuries into the Romance languages, such as Italian, Sardinian, Venetian, Neapolitan, Sicilian, Piedmontese, Lombard, French, Franco-Provençal, Occitan, Corsican, Ladin, Friulan, Romansh, Catalan/Valencian, Aragonese, Spanish, Asturian, Galician, and Portuguese. Medieval Latin was used as a literary language from the 9th century to the Renaissance which used Renaissance Latin. Later, Early Modern Latin and New Latin evolved. Latin was the language of international communication, scholarship and science until well into the 18th century, when vernaculars (including the Romance languages) supplanted it. Ecclesiastical Latin remains the official language of the Holy See and the Roman Rite of the Catholic Church. Latin is a highly inflected language, with three distinct genders, six or seven noun cases, five declensions, four verb conjugations, six tenses, three persons, three moods, two voices, two or three aspects, and two numbers. The Latin alphabet is derived from the Etruscan and Greek alphabets and ultimately from the Phoenician alphabet.

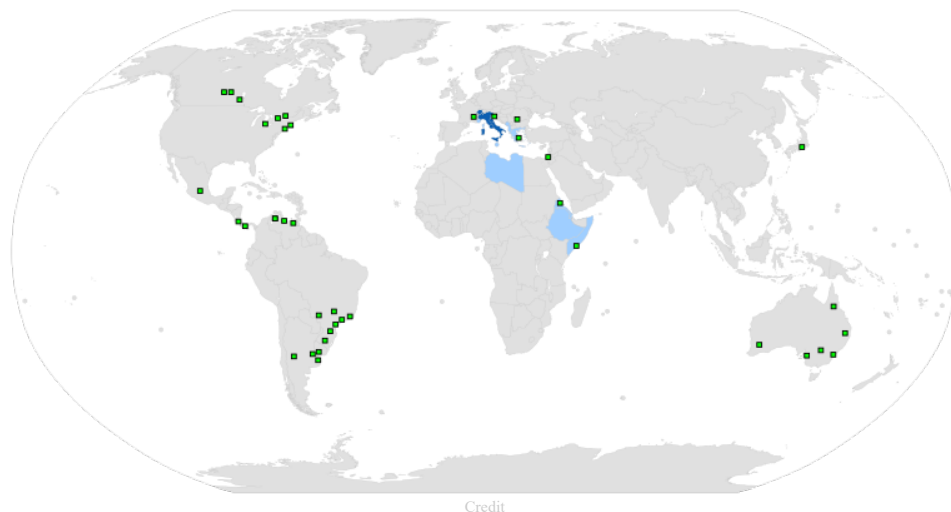


### Spanish



A Romance language that originated in the Iberian Peninsula of Europe. Today, it is a global language with nearly 500 million native speakers, mainly in Spain and the Americas. It is the world's second-most spoken native language after Mandarin Chinese, and the world's fourth-most spoken language overall after English, Mandarin Chinese, and Hindi.

### Italian



A Romance language of the Indo-European language family. Italian is the closest national language to Latin, from which it descends via vulgar Latin of the Roman Empire. Taking into account both national and regional languages, it is seen that Italian and Sardinian are together the least differentiated from Latin. Italian is an official language in Italy, Switzerland (Ticino and the Grisons), San Marino, and Vatican City. It has an official minority status in western Istria (Croatia and Slovenia).

It formerly had official status in Albania, Malta, Monaco, Montenegro (Kotor), Greece (Ionian Islands and Dodecanese), and is generally understood in Corsica by Corsican speakers (many linguists classify Corsican as an Italian dialect). It used to be an official language in the former colonial areas of Italian East Africa and Italian North Africa, where it still has a significant role in various sectors.

Italian is also spoken by large immigrant and expatriate communities in the Americas and Australia. Italian is included under the

## Appendix 10 - Languages

languages covered by the European Charter for Regional or Minority languages in Bosnia and Herzegovina and in Romania, although Italian is neither a co-official nor a protected language in these countries. Many speakers of Italian are native bilinguals of both Italian (either in its standard form or regional varieties) and another regional language of Italy.

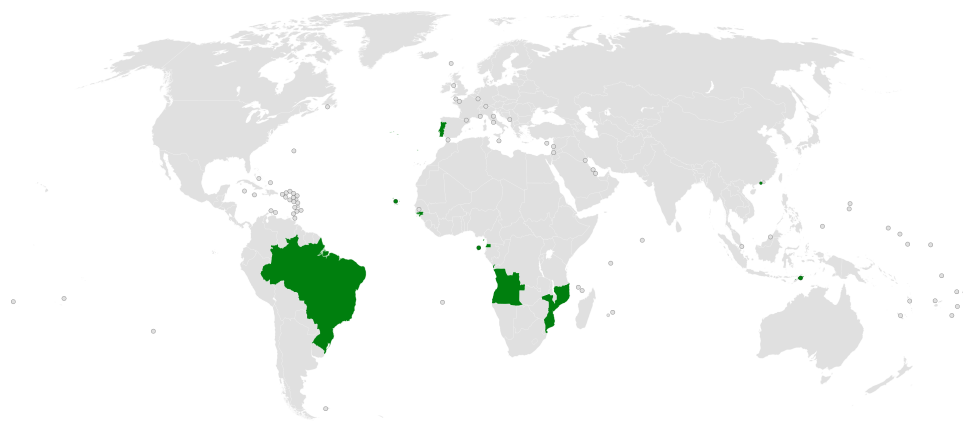
### Brazilian Portuguese



Credit

The set of dialects of the Portuguese language native to Brazil and the most influential form of Portuguese worldwide. It is spoken by almost all of the 200 million inhabitants of Brazil and spoken widely across the Brazilian diaspora, today consisting of about two million Brazilians who have emigrated to other countries. With a population of over 205 million, Brazil is by far the world's largest Portuguese-speaking nation and the only one in the Americas.

### Portuguese



Credit

A Romance language originating in the Iberian Peninsula of Europe. It is the sole official language of Portugal, Angola, Mozambique, Guinea-Bissau, Cape Verde, São Tomé and Príncipe, and Brazil, while having co-official language status in East Timor, Equatorial Guinea, and Macau. A Portuguese-speaking person or nation is referred to as "Lusophone" (lusófono). As the result of expansion during colonial times, a cultural presence of Portuguese and Portuguese creole speakers are also found around the world. Portuguese is part of the Ibero-Romance group that evolved from several dialects of Vulgar Latin in the medieval Kingdom of Galicia and the County of Portugal, and has kept some Celtic phonology and its lexicon.

## Appendix 10 - Languages

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### Catalan



Credit

Catalan (/ˈkætələn, -æn, ˌkætəˈlæn/; autonym: *català* or *llengua catalana*; Eastern Catalan: [kətəˈla]), known in the Valencian Community and Carche as Valencian, is a Western Romance language derived from Vulgar Latin. It is the official language of Andorra, and a co-official language of three autonomous communities in eastern Spain: Catalonia, the Valencian Community and the Balearic Islands. It also has semi-official status in the Italian comune of Alghero. It is also spoken in the Pyrénées-Orientales department of France and in two further areas in eastern Spain: the eastern strip of Aragon and the Carche area in the Region of Murcia. The Catalan-speaking territories are often called the *Països Catalans* or "Catalan Countries".

The language evolved from Vulgar Latin in the Middle Ages around the eastern Pyrenees. Nineteenth-century Spain saw a Catalan literary revival, culminating in the early 1900s.

### Walloon



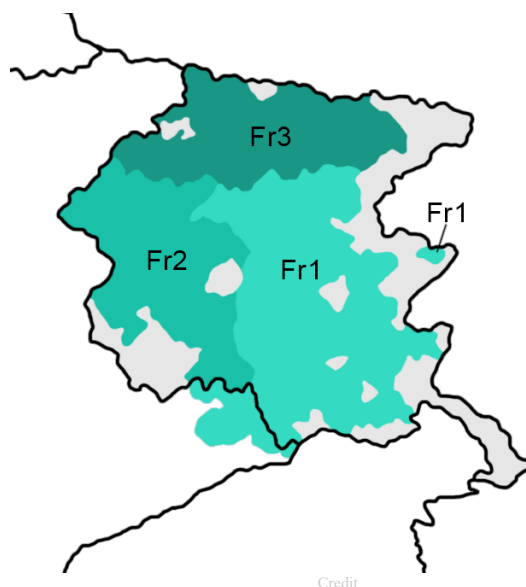
Credit

## Appendix 10 - Languages

A Romance language that is spoken in much of Wallonia and (to small extent) in Brussels, Belgium; some villages near Givet, northern France; a clutch of communities in northeastern Wisconsin, U.S.; and in some parts of Canada. It belongs to the langue d'oïl language family, the most prominent member of which is the French language. The historical background of its formation was the territorial extension since 980 of the Principality of Liège to the south and west.

Despite its rich literature, beginning anonymously in the 16th century and with well-known authors since 1756, the use of Walloon has decreased markedly since France's annexation of Wallonia in 1795. This period definitively established French as the language of social promotion, far more than it was before. After World War I, public schools provided French-speaking education to all children, inducing a denigration of Walloon, especially when accompanied by official orders in 1952 to punish its use in schools. Subsequently, since the middle of the 20th century, generational transmission of the language has decreased, resulting in Walloon almost becoming a dead language. Today it is scarcely spoken among younger people, with vast majority of its native speakers being the elderly (aged 65 and over). In 2007, the number of people with knowledge of the language was estimated at 600,000.

### Friulian



Friulian (/friˈuːliən/ free-OO-lee-ən) or Friulan (natively About this soundfurlan or marilenghe; Italian: friulano; German: Furlanisch; Slovene: furlanščina) is a Romance language belonging to the Rhaeto-Romance family, spoken in the Friuli region of northeastern Italy. Friulian has around 600,000 speakers, the vast majority of whom also speak Italian.

It is sometimes called Eastern Ladin since it shares the same roots as Ladin, but over the centuries, it has diverged under the influence of surrounding languages, including German, Italian, Venetian, and Slovene. Documents in Friulian are attested from the 11th century and poetry and literature date as far back as 1300. By the 20th century, there was a revival of interest in the language.

### Romanian



Romanian (obsolete spellings: Rumanian or Roumanian; autonym: *limba română* ['limba ro'minə] (About this soundlisten), or *românește*, lit. 'in Romanian') is a Balkan Romance language spoken by approximately 24–26 million people as a native language, primarily in Romania and Moldova, and by another 4 million people as a second language. According to another estimate, there are about 34 million people worldwide who can speak Romanian, of whom 30 million speak it as a native language. It is an official and national language of both Romania and Moldova and is one of the official languages of the European Union.

Romanian is a part of the Eastern Romance sub-branch of Romance languages, a linguistic group that evolved from several dialects of Vulgar Latin which separated from the Western Romance languages in the course of the period from the 5th to the 8th centuries. To distinguish it within the Eastern Romance languages, in comparative linguistics it is called Daco-Romanian as opposed to its closest relatives, Aromanian, Megleno-Romanian and Istro-Romanian. Romanian is also known as Moldovan in Moldova, although the Constitutional Court of Moldova ruled in 2013 that "the official language of the republic is Romanian".