Latin pronunciation
(from ancient to 'modern')
Luciano Canepari – © 2018³

1. Vowels & diphthongs *

i   (ĭ) /ɪ/ [ɪ], /CɪV/ [CɪV] CiV, /VjV/ [VɪjV] ViV, /ᵗjV/ [ᵗjV] ᵗiV ²
    (ī) /iː/ [ii(C/V), ̥i] ¹
e   (ĕ) /ɛ/ [ɛ, ̥ᴇ]
    (ē) /eː/ [ee(C/V), ̥e] ¹
a   (ă) /ɐ/ [ɐ]
    (ā) /aː/ [aa(C/V), ̥a] ¹
o   (ŏ) /ɔ/ [ɔ, ̥ɵ]
    (ō) /oː/ [oo(C/V), ̥o] ¹
u   (ŭ) /ʊ/ [ʊ], /CʊV/ [CʊV] CuV ³
    (ū) /uː/ [uu(C/V), ̥u] ¹

y   (ў) /ʏ/ [ʏ] ⁴
    (ȳ) /yː/ [yy(C/V), ̥y] ¹⋅ ⁴

ei /ɛɪ/ [ɛɪ, ̥ᴇɪ] ⁵
ei (eī) /ɛiː/ [ɛi, ̥ᴇi]
eu /ɛʊ/ [ɛʊ, ̥ᴇʊ] ⁵
ae (æ) /ɐe/ [ɐe] ⁵
au /ɐʊ/ [ɐʊ] ⁵
oe (œ) /oe/ [ɒe] ⁵
ou /ɔʊ/ [ɔʊ, ̥ɵʊ] ⁵
ui /ʊɪ/ [ʊɪ] ⁵

* Examples for the main Latin vocalic elements:
vīdĭt /ˈwiːdɪt/ [ˈwiidɪt] 'he/she saw' – *vĭdĕt* /ˈwɪdɛt/ [ˈwɪdᴇt] 'he/she sees'
vēnĭt /ˈweːnɪt/ [ˈweenɪt] 'he/she came' – *vĕnĭt* /ˈwɛnɪt/ [ˈwɛnɪt] 'he/she comes'
mālŭm /ˈmaːlʊm/ [ˈmaalʊ̃] 'apple' – *mălŭm* /ˈmalʊm/ [ˈmɛlʊ̃] 'bad'
pōpŭlŭm /ˈpoːpʊlʊm/ [ˈpoopʊlʊ̃] 'poplar' – *pŏpŭlŭm* /ˈpɔpʊlʊm/ [ˈpɔpʊlʊ̃] 'people'
fūrŏr /ˈfuːrɔr/ [ˈfuurɵr] 'I steal' – *fŭrŏr* /ˈfʊrɔr/ [ˈfʊrɵr] 'rage'.
Further useful examples:
lēgĕm /ˈleːgɛm/ [ˈleegɛ̃] 'law' – *lĕgĭt* /ˈlɛgɪt/ [ˈlɛgɪt] 'he/she reads'
vēlŭm /ˈweːlʊm/ [ˈweelʊ̃] 'veil' – *pĭlŭm* /ˈpɪlʊm/ [ˈpɪlʊ̃] 'hair' – *vīnŭm* /ˈwiːnʊm/
     [ˈwiinʊ̃] 'wine'
vĭttăm /ˈwɪttɐm/ [ˈwɪttɐ̃] 'peak' – *sĕctăm* /ˈsɛktɐm/ [ˈsɛktɐ̃] 'sect'

fig 1. Classical Latin vowels.

/iː/ [i(i)], /yː/ [y(y)]
/ɪ/ [ɪ], /ʏ/ [ʏ]
/eː/ [e(e)]
/ɛ/ [ɛ, ̞ɛ]
/ɐ/ [ɐ]

/uː/ [u(u)]
/ʊ/ [ʊ]
/oː/ [o(o)]
/ɔ/ [ɔ, ̞ɔ]
/aː/ [a(a)]

fig 2.1. Classical Latin diphthongs.

(/ɛiː/ [ɛi])
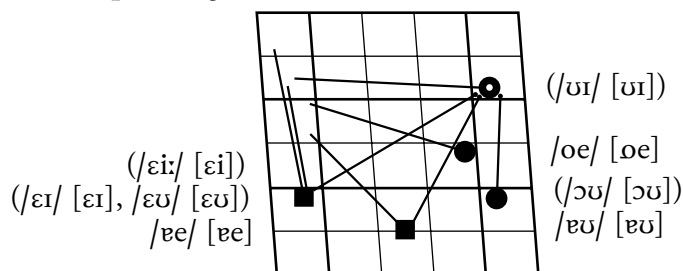(/ɛɪ/ [ɛɪ], /ɛʊ/ [ɛʊ])
/ɐe/ [ɐe]

(/ʊɪ/ [ʊɪ])
/oe/ [oe]
(/ɔʊ/ [ɔʊ])
/ɐʊ/ [ɐʊ]
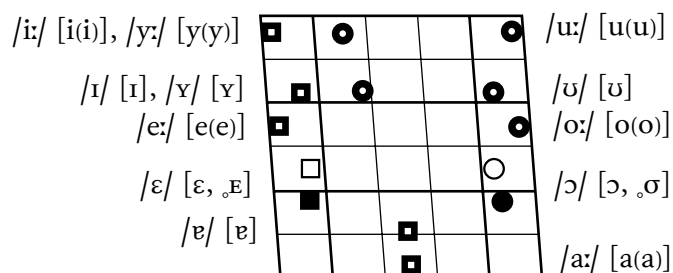
fig 2.2. Classical Latin diphthongs: colloquial variants.

/ɐe/ [ɑə]

/ɐʊ/ [ʌo]
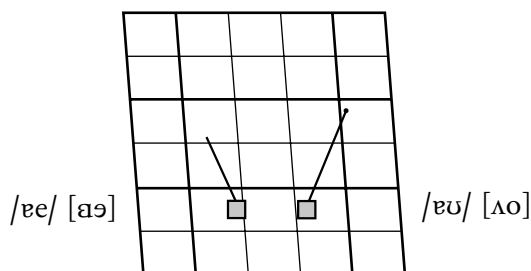
fig 2.3. Classical Latin diphthongs in unstressed syllables (including quicker speech variants).

(/ɛɪ/ [ˌɛɪ], /ɛʊ/ [ˌɛʊ])
/ɐe/ [ˌɜə]

/oe/ [ˌɵə] (/ɔʊ/ [ˌɵʊ])
/ɐʊ/ [ˌɜʊ]

In quicker speech.

(/ɛɪ/ [ˌəe], /ɛʊ/ [ˌəʊ])
/ɐe/ [ˌɜɐ]

/oe/ [ˌɵə] (/ɔʊ/ [ˌɵo])
/ɐʊ/ [ˌɜʊ]
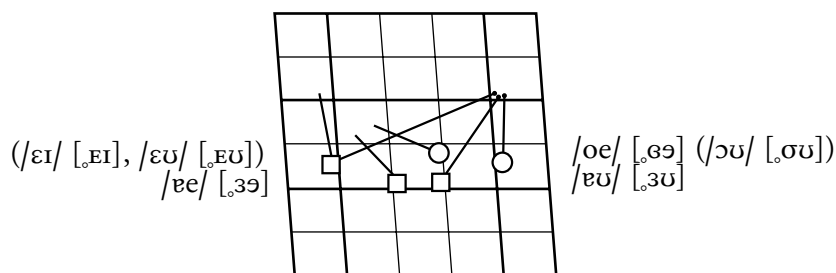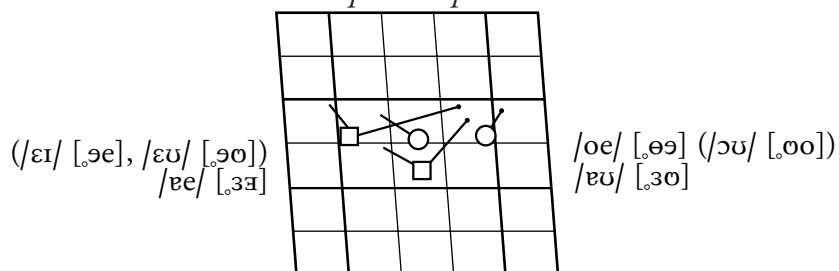
sōlĕm /ˈsoːlɛm/ [ˈsoolɛ̃] 'sun' – *nŭcĕm* /ˈnʊkɛm/ [ˈnʊk̃ɛ̃] 'nut' – *lūcĕm* /ˈluːkɛm/ [ˈluuk̃ɛ̃] '(a) light'

rŭptŭm /ˈrʊptʊm/ [ˈrʊptõ] 'broken' – *cŏctŭm* /ˈkɔktʊm/ [ˈkɔktõ] 'cooked'
cŭrsŭm /ˈkʊrsʊm/ [ˈkʊrsõ] 'course' – *cŏrsŭm* /ˈkɔrsʊm/ [ˈkɔrsõ] 'Corsican'

And: *praedăm/prædăm* /ˈprɐedɐm/ [ˈprɐedẽ] 'prey'
coenăm/cœnăm /ˈkɔenɐm/ [ˈkɔenẽ] 'supper'
aurŭm /ˈɐʊrʊm/ [ˈɐʊrõ] 'gold'.

fig 3. Classical Latin nasalized vowels.

/ɪN#/ [ĩ], /ɪNf, -s/ [(ĩ)ĩ]   /ʊN#/ [ũ], /ʊNf, -s/ [(ũ)ũ]

/εN#/ [ẽ], /εNf, -s/ [(ẽ)ẽ]   /ɔN#/ [õ], /ɔNf, -s/ [(õ)õ]

                                       /ɐN#/ [ã], /ɐNf, -s/ [(ã)ẽ]
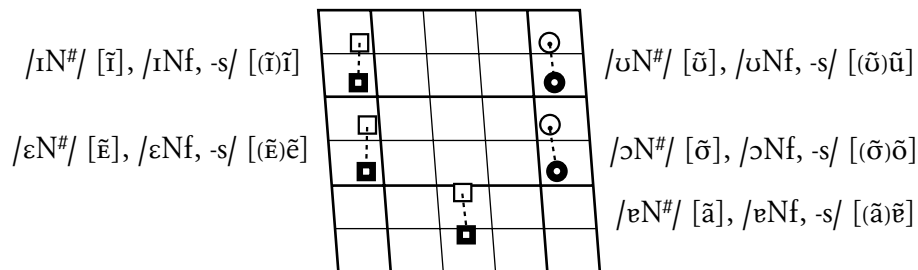
fig 4. Rural/popular Latin vowels & diphthongs (with no /yː, y/, but with /ɨ/ [ɨ]).

/iː/ [(ɪ)i]   /uː/ [(ʊ)u]
/ɪ/ [ɪ], /ɨ/ [ɨ]   /ʊ/ [ʊ]
/eː/ [e(ɪ)], /oe/ [ə(ɔ)]   /oː/ [o(ʊ)]
/ε/ [ε, ̥ɛ]   /ɔ/ [ɔ, ̥ɔ]
/ɐe/ [a(ɐ)], /ɐ/ [ɐ, ̥ɜ]   /ɐʊ/ [ə(ɒ)]
                      /aː/ [a(ɐ)]
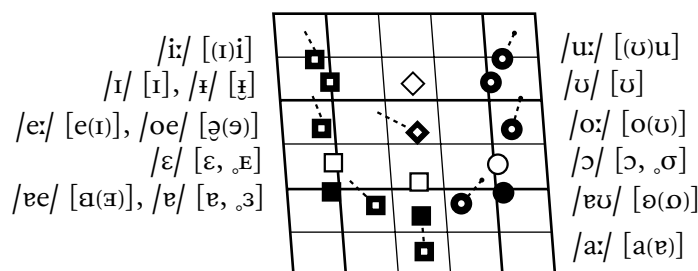
[1] There is a phonetic difference in length between stressed ([ˈ]) and unstressed long vowels ([ˌ]): *ārā* (abl.) /ˈaːraː/ [ˈaara], cf *āră* (nom.) /ˈaːrɐ/ [ˈaarɐ].

[2] *Audio, peius (pejus), etiam, iam (jam)* /ˈɐʊdioː, ˈpεɪjʊs, ˈεtɪɐm, ˈjɐm/ [ˈɐʊdɪo, ˈpεɪjʊs, ˈεtɪẽ, ˈjẽẽ]. For metrical reasons, certain dictionaries and grammars, unfortunately, mark as 'long' the *short vowels* that precede *iV*, which –in reality– are /ˈVɪjV/ [ˈVɪjV], eg '*pēĭŭs*'.

[3] *Puer, puella* /ˈpʊεr, pʊˈεllɐ/ [ˈpʊεr, pʊˈɛłłɐ]. But *quV, nguV* are /kw, ngw/ [k̟, ŋĝ, k̟, -ĝ] (*fig* 6).

[4] Rounded, generally used in Greek loans, and appear in the vocogram boxes just to the right of those of /iː, ɪ/ [ii, ɪ].

[5] There occur various vowel sequences, which are true phonetic diphthongs, even if phonemically we prefer to consider them simply as sequences, just like consonant sequences.

The two more frequent sequences (in lexemes) are: *au* /ɐʊ/ [ɐʊ] and *ae (æ)* /ɐe/ [ɐe] (which is derived from archaic *ai* /ae/ [ɐe]; quite frequent as desinential grammeme); *oe (œ)* /oe/ [ɔe] is rare; while *ei* /εɪ/ [εɪ], *eu* /εʊ/ [εʊ], *ui* /ʊɪ/ [ʊɪ] are decidedly rarer; even more so are *eī* /εiː/ [εi], *yi* /ʏɪ/ [ʏɪ], and *ou* /ɔʊ/ [ɔʊ], which only occurs lexically in the conjunction *prout*, although in phono-texts we also find *-o V-*, /oː#V, ɔ#V/. We can even find triphthongs formed by *-ae + V- /ɐe#V/*, provided there are neither interruptions, nor stress increases on the initial vowels.

In cases like *aes, aeris* we have /ˈɐes, ˈɐerɪs/ [ˈɐes, ˈɐerɪs] (*æs, æris*, short diphthongs), while *aer, aeris* (often indicated as *aër, aëris*), are, instead, /ˈaːeːr, ˈaːɛrɪs/ [ˈaaer, ˈaaɛrɪs] (long diphthongs), from Greek ἀήρ. Also: *poena* /ˈpoenɐ/ [ˈpɔenɐ] (short diphthongs), but *poema, poematis* (or *poëma, poëmatis*) /pɔˈeːmɐ, pɔˈeːmɐtɪs/ [pɔˈeːmɐ, pɔˈeːmɐtɪs] (hiatuses) from Greek ποίημα. We also have cases like *aunculus* /ɐˈʊnkʊlʊs/ [ɐˈʊŋkʊlʊs] (from *avunculus* /ɐˈwʊnkʊlʊs/ [ɐˈwʊŋkʊlʊs]).

fig 4 includes the possible alternative /ɨ/ phoneme, which could occur, before /m, p, b, f/ or after /w/, in words like *optimus, manipulus, libet, pontifex, virtus.*

2. Consonants (here shown in alphabetical order, but see *fig* 5)

b   /b/ [b] [6]

c, k /k/ [k] [7]

ch   /kh/ [kh] [7]

d   /d/ [d] [6]

f   /f/ [f]

g   /g/ [g, g̟], /gN/ [ŋN, ŋ̟N] *gn, gm* [8], and *ngu+V* /ngw/ [ŋĝ, ŋĝ] [13]

h   /h/ [h/ɦ] [9]

l   /l/ [l], /lV/ [lV] *lV*, /l#/ [ɫ#] *l#*, /lC/ [ɫC] *lC*, /ll/ [ɫl] *ll* [10]

m   /m/ [m], /Vm#/ [ṼṼ, ̥Ṽ] -*Vm* (#, *V-*), /N(#)C/ [N≡C] *m(#)C* [11]

n   /n/ [n], /VnC/ [VN≡C] *VnC*, but /Vnf, -s/ [ṼṼf, ̥Ṽf, -s] *Vnf, Vns* [12]

p   /p/ [p] [7]

ph   /ph/ [ph] [7]

qu   /kw/ [k̟, k̠], and *ngu+V* /gw/ [ŋĝ, ŋĝ] [13]

r   /ɾ/ [ɾ], *rh* /ɾ(h)~(h)ɾ/ [14]

s   /s/ [s], [z] + /b, d, g/; *b, d, g*, but not before /m, n; ɾ; l/ *m, n, r, l* [15, 16]

t   /t/ [t], *tiV* /tiV/ [tɾV] [7]

th   /th/ [th] [7]

v   /w/ [w]

x   /ks/ [ks] [17]

z   /z/ [z] [18, 19]

fig 5. Classical Latin consonants, with taxophones, & popular/rural variants between ( ).

	bilabial	labiodental	dental	dentovelar	alveolar	alveovelar	prepalatal	palatal	postpalatal	prevelar	velar	prevelolabial	velolabial	laryngael
Nasal	m [ɱ]		[n̪]		n		[ɲ]	[ɲ] (ɲ̟)	[ŋ̟]	[ŋ]				
Stop	p b		t d					(c ɟ)	[k̟ g̟]	k g	[k̠ ĝ] [k̠ ĝ]			[ʔ]
Constrictive	(φ ß)	f	s [z]-(ð)					(ʝ)	(x̟)	(x)				
Approximant					(z)			j					w	h [ɦ]
Tap					ɾ									
Lateral			[l]	[ɫ-ɫ]	l	[ɫ]-(ɭ)	[ʎ]							

[6] /b, d/ become /p, t/ [p, t] when followed by voiceless consonants: *urbs, obtu-*

sus, adpatruus /ˈʊrps, ɔpˈtuːsʊs, ɐtˈpɐtrʊʊs/ [ˈʊrps, ɔpˈtuːsʊs, ɐtˈpɐtrʊʊs], except for insistence. Of course, we have x /ks/ [ks], *ie 'cs'*, as in *rex* /ˈrɛks/ [ˈrɛks]. In senten-ces, *ab, sub, ad* assimilate to following consonants, according to usual word forma-tion rules (nowadays, crystalized in the current spelling of Latin texts).

This produces geminates, in fluente speech, with the possibility to keep their place of articulation before other stops or nasals. However, voicing is lost before voiceless consonants: *ad portas* /ɐpˈpɔrtaːs, ɐtˈp-/ [ɐpˈpɔrtas], *ad quem* /ɐkˈkwɛm, ɐt-ˈkwɛm/ [ɐkˈk̠ɛ̃ẽ], *sub monte* /sʊmˈmɔntɛ, sʊbˈm-/ [sʊmˈmɔntɛ], *sub die* /sʊdˈdɪeː, sʊb-ˈd-/ [sʊdˈdɪe], *sub fine morbi* /sʊfˈfiːnɛ ˈmɔrbiː/ [sʊfˈfiinɛ ˈmɔrbi].

[7] 'Aspirated' voiceless stop, actually the sequence /kh/ [kh], mainly in Greek loans, as a phonostyleme (for φ, ϑ, χ). Of two adjoining 'aspirated' stops, the first one loses its 'aspiration': *phthisis* /phˈthisis/ [pˈthɪsɪs].

[8] In clear and precise pronunciation, /gN/ (*ie* /g/ + nasal) can be [gN]. The high-ly controversial matter about [ŋn] and [gn], for *gn*, is simply a tiny realization difference for /gn/. In fact, even in word-initial position in a phrase, we have [ŋn]: *tibi gnarigabo* /tɪbɪgnaːrɪˈgaːboː, tɪbiː-/ [ˌtɪbɪŋnarɪˈgaabo, ˌtɪbi-]. In addition, any form with *gn-* are mainly archaic: *nosco* /ˈnoːskoː/ [ˈnoosko] (← *gnosco*) –including the name *Gnaeus* /ˈɡˈnɐɛʊs/ [ɡˈnɐeʊs]– or, in any case, with variants in *n-*: *(g)naritas* /(ɡ)ˈnaːrɪtaːs/ [(ɡ)ˈnaarɪtas], thus also [ˌtɪbɪnarɪˈgaabo, ˌtɪbi-]. We equally have *teg-men* /ˈtɛgmɛn/ [ˈtɛŋmɛn], or [ˈtɛgmɛn] for insistence (more systematically so in ru-ral and popular speech). For *ngu* see *g* and *qu*.

[9] Rather weak, even in preclassical age, and not rarely voiced; between vowels, by then = /∅/: *nihil* /ˈniːl/ [ˈniiɫ, ˈnɪɦɪɫ], *mihi* /ˈmɪiː, ˈmiː/ [ˈmɪi, ˈmii].

[10] Thus, velarized alveolar lateral, /l/ [ɫ], before a pause or a consonant. But /ll/ [ɫl] and /liː, lɪ, lj/ [ɭi(i), ɭɪ, ɭj]: *famulus* /ˈfɐmʊlʊs/ [ˈfɐmʊlʊs], *simulare* /sɪmʊˈlaːrɛ/ [ˌsɪ-mʊˈlaarɛ] (*vs familia* /fɐˈmɪlɪɐ/ [fɐˈmɪɭɪɐ], *similis* /ˈsɪmɪlɪs/ [ˈsɪmɪɭɪs]) where, by assim-ilation, the vowels which preceded [ɫ] had become back ones. Up to the end of the preclassical age, [ɫ] also occurred before non-front vowels (including /ɐ, aː/).

[11] *Word-finally*, either before a pause or a vowel beginning a following word, *m* simply nasalizes the vowels, [ɪ̃, ɛ̃, ẽ, ɔ̃, ũ], by lengthening them into narrow closing diphthongs if stressed, [ˈɪ̃ĩ, ˈɛ̃ẽ, ˈẽẽ, ˈɔ̃õ, ˈũũ]. Let observe: *pulchrum est* [ˈpʊɫkhrũst], *pulchra es* [ˈpʊɫkhrɐs].

When final before a consonant, *m* behaves as /n(#)C/: [m] + /p, b, m/; [n] + /t, d, n/; [ŋ] + /k, g; kw, gw/ ([k̠, ɡ̠; k̠, ɡ̠]). But, *m* is dropped, while nasalizing a pre-ceding vowel, when followed by /j, w, h/ (even [ʔ] by emphasis). When followed by /f, s/, before /r, l/, it is either dropped nasalizing the vowel, or completely as-similated. Let us just consider a couple of exaples: *cum grano salis, cum libro* /kʊnˈgraːnoː ˈsɐlɪs; kʊlˈlɪbroː, kʊmˈlɪbroː/ [kʊŋˈgraano ˈsɐlɪs; kʊɫˈlɪbro, kũˈlɪbro].

Word-internal *m* is kept, becoming homorganic to a following consonant: *quamquam* /ˈkwɐnkwɛm/ [ˈk̠ɛŋk̠ẽ], *omnis* /ˈɔnnɪs/ [ˈɔnnɪs]. In our phonemic tran-scriptions, we simplify a bit, using /Vm/ for nasal(ized) vowels, [Ṽ]. The same is done for /kw, gw/ [k̠, k̠; ɡ̠, ɡ̠].

[12] Alveolar before a vowel, but homorganic to a following consonant, except for *nf* and *ns*, where nasalization (as in the preceding case) and lengthening occur,

in stressed syllables: *confero, constans, constantis, mens, mentis* /ˈkɔnfɛroː, ˈkɔnstɐns, kɔnsˈtɐntɪs, ˈmɛns, ˈmɛntɪs/ [ˈkõ̃õfɛro, ˈkõ̃õstɐ̃s, kõsˈtɐntɪs, ˈmɛ̃ɛ̃s, ˈmɛntɪs].

(Traditionally, for metrical reasons –by forcing things, given the very limited written possibilities– this fact is shown as 'ʹ/Vː/', but also keeping *n*: **cōnfĕrō, *cōn-stāns, *cōnstăntĭs, *mēns, mĕntĭs*. This lets people think we may have *[ˈkoomɟfɛroː, ˈkoonstaans, koonsˈtɐntɪs, ˈmeenɪs, ˈmɛntɪs], where excessively long vowels, in un-stressed syllables, are clearly surprising, at least in everyday language.

In word-final position, in phrases with *in, non*, we find that *n* /n/ assimilates not only to stops and nasals, but also to /j, w/ [ɲj, ŋw] (including /ni(ː), nɪ, nj/ [ɲi(i), ɲɪ, ɲj], word-internally, in popular and rural speech). However, it does not assimilate before /ɾ, l/, as –on the contrary– it does in word-internal position. Anyway, in pop-ular and rural speech, such assimilations were frequent, if not normal, even before word-internal /ɾ, l/.

Before a vowel, *n* remains /n/ [n], although it is not resyllabified with it, when stress is present: *in agrum* /ɪnˈɐgɾʊm/ [ɪnˈɐgɾʊ̃] (not *[ɪ̃ˈnɐgɾʊ̃]).

[13] Labio-(pre)velar stops (cf 6): voiceless, *qui* /ˈkwiː/ [ˈḵiː], or voiced, *languor* /ˈlɐn-gwɔr/ [ˈlɐŋĝɔr]; /gw/ [ĝ] occurs only between /n/ and vowels different from /u/. However, in rural and popular speech, /kw, gw/ [ḵ, ḳ; g, ĝ] were practically re-placed by /k, g/ [k, g] (including [ḳ, g], and even [c, ɟ], before front vowels, in ad-dition to /gm/ [gm, ɢm]).

fig 6. Velolabial & prevelolabial stops [ḵ, ĝ; ḳ, ĝ] /kw, gw/.
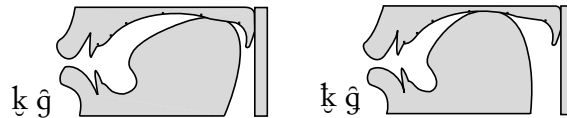
[14] Generally, alveolar tap, [ɾ], both in stressed and unstressed syllables, with the possibility of either 'aspiration' [ɾh], or 'preaspiration' [hɾ], for *rh, ῥ*, in Greek loans, as a phonostyleme.

[15] *Disgregatio, Lesbos* /dɪsgrɛˈgaːtɪoː, ˈlɛsbɔs/ [ˌdɪzgrɛˈgaatɪo, ˈlɛzbɔs]; but *disiungo (disju-), asma* /dɪsˈjʊngoː, ˈaːsmɐ/ [dɪsˈjʊŋgo, ˈaasmɐ].

[16] Obviously, *sc* is always /sk/ [sk, sḵ]: *scio* /ˈskɪoː/ [ˈsḵɪo]. In rural speech, /s/ be-fore any /C/ tended to become [ʂ, ʂ; ʐ, ʐ].

[17] The change from /ks/ to /gz/ for *exV-* /ɛksV-/ [ɛksV-] decidedly belongs to pe-riods after the classical age, while the change of (initial) *x-* /ks → s/ happened even later than in classical age, thus, it is equally a non-neutral peculiarity.

[18] It generally occurs in Greek loans, as a phonostyleme (for *ζ*). Since, in addi-tion to [z], it also had further possible variants, [zz] and [dz] (not [dʑ], stopstrictive), it is hardly surprising that in verse it could 'lengthen syllables'.

[18] In addition to what already indicated above, in *popular* and *rural* speech, any voiceless simple consonants, between any voiced phones (either vocoids, or con-toids), tended to become lenis, [C̬], or half-voiced, [C̦]. Furthermore, again popu-lar and rural speech, between vowels, often had the continuous contoids shown between ( ) in the table of consonants, includig [z] for /ɾ/ and [ɫ̝] for /l/ [ɫ].

Let us observe that /ph, th, kh/ [ph, th, kh, ꝁh] are phono-stylemes for Greek loans with original φ, ϑ, χ /ph, th, kh/ [ph, th, kh, ꝁh/. In popular or rural speech they were replaced by plain /p, t, k/ [p, t, k, ꝁ, ꞔ].

Furthermore, [ʔ] could freely occur before vowels in word-initial position, after pause or in stressed syllable, especially for emphasis. Let us add that words like *suavis*, *suesco* and *Suetonius* were generally treated differently in current language and in verse. In fact, /#swV-/ [swV-] were often changed into [sʊV-] for metrical reasons.

3. Length & stress

Length is phonemic both for the vowels, as already seen, and for the consonants, also combined together, especially for the vowels with different timbres: *venit* /ˈwɛnɪt/ [ˈwɛnɪt] 'he/she/it comes' *vs venit* /ˈweːnɪt/ [ˈweenɪt] 'he/she/it came', *populum* /ˈpɔpʊlʊm/ [ˈpɔpʊlũ] 'people' *vs populum* /ˈpoːpʊlʊm/ [ˈpoːpʊlũ] 'poplar', *malum* /ˈmɐlʊm/ [ˈmɐlũ] 'bad' *vs malum* /ˈmaːlʊm/ [ˈmaːlũ] 'apple'; *male* /ˈmɐlɛ/ [ˈmɐlɛ] 'badly' *vs malle* /ˈmɐllɛ/ [ˈmɐɫlɛ] 'to prefer', *sumus* /ˈsʊmʊs/ [ˈsʊmʊs] 'we are' *vs summus* /ˈsʊmmʊs/ [ˈsʊmmʊs] 'supreme'.

The short vowels, either stressed or not, are as shown in the vocogram (let us notice a tiny timbre change for [ˈɛ, ˈɔ] → [ˌᴇ, ˌᴏ]). In stressed syllables, either free or checked, the long vowels are phonetically narrow monotimbric diphthongs, /ˈVː/ [ˈVV] [ˈVVC]: *stella* /ˈsteːlla/ [ˈsteeɫlɐ] (even if directly followed by vowels: *aer* /ˈaːeːr/ [ˈaaer]).

However, in everyday spoken language, unstressed /ˌVː/ (either in free or checked syllables) are realized as short vocoids, [ˌV]: *stella* /ˈsteːllaː/ [sˈteeɫla]. But, let us notice very carefully that they keep their original timbres, [i, e, a, o, u; y].

In classical Latin, *stress* depends on the length of the *penultimate syllable* of a word, according the length of its vowel. If the vowel is *short and either in a free syllable, or followed by another vowel*, stress is shifted to the preceding vowel, *ie* the antepenultimate (or third last, or last but two): *cupido* 'wishful' (dat./abl.) /ˈkʊpɪdoː/ [ˈkʊpɪdo] and *cupido* 'desire' (nom.) /kʊˈpiːdoː/ [kʊˈpiido]; *democratia* (nom.) 'democracy' (δη-μοκρατία) /deːmɔˈkrɐtɪɐ/ [ˌdemɔˈkrɐtɪɐ], and *viginti* '20' /wiːˈgɪntiː/ [wiˈgɪnti].

Thus, when the penultimate vowel is long 'by nature', as in *cupido* [kʊˈpiːdo], or 'by position' (*ie* 'by convention'!), as in *viginti* [wiˈgɪnti], it carries (intensive) stress (not a pitch one any longer, as it possibly was in archaic Latin).

Of course, the artistic metrical reading, accompanied by string music, is quite another thing in comparison with *true* language. In fact, it is artificially done in its rather unnatural way, which has its 'deserving' counterpart in the unnaturalness of singing, especially opera singing.

Let us notice well that *iV-* (as already seen above) has a consonantic function, /j/ [j]. Thus, we have *iugum* (or, better, *jugum*) [ˈjʊgũ] /ˈjʊgʊm/ (certainly not *ˈꞮʊ-gʊm/). Come to think of it, as the use of *u* /ʊ/ [ʊ] and *v* /w/ [w] have already been commonly distinguished, it would be better to also systematically use *j*, instead of *i*, in *iV-* and *ViV* /jV, VjV/ [jV, VɪjV] (the famous letters of Petrus Ramus, Pierre de La Ramée, 1515-1572). The provided examples should be carefully considered.

Here are some special cases of seeming 'irregular' stress patterns. So we have the *dropping of a final vowel*: *educ(e)* /eːˈduːk/ [eˈduuk], *illic(e)* /ɪlˈliːk/ [ɪɫˈliik], *addic(e)* /ɐdˈdiːk/ [ɐdˈdiik], *adhuc(e)* /ɐdˈhuːk/ [ɐdˈhuuk, ɐdˈɦ-].

We can also find the *contraction* of some phonemes into just one: *Mercuri(i)* /mɛrˈkʊriː/ [mɛrˈkʊri] (different from the vocative *Mercuri* /ˈmɛrkʊriː/ [ˈmɛrkʊri]), *Valeri(i)* /vɐˈlɛriː/ [vɐˈlɛri] (voc. *Valeri* /ˈvɐlɛriː/ [ˈvɐlɛri]), *consili(i)* /kɔnˈsɪliː/ [kõˈsɪli], *imperi(i)* /ɪmˈpɛriː/ [ɪmˈpɛri], *irritat* (from *irrita(v)it*) /ɪrriːˈtaːt/ [ˌɪrriˈtaat], different from *irritat* (present) /ɪrˈriːtɐt/ [ɪrˈriitɐt], *disturbat* (from *disturba(v)it*) /dɪstʊrˈbaːt/ [ˌdɪstʊrˈbaat], different from *disturbat* (present) /dɪsˈtʊrbɐt/ [dɪsˈtʊrbɐt], *munit* (from *muni(v)it*]) /muːˈniːt/ [muˈniit], different from *munit* (present) /ˈmuːnɪt/ [ˈmuunɪt].

We also find cases of *oscillation*, depending on whether composition or dropping are more or less evident (including the very origin of certain names) as in: *satin* /sɐˈtɪn ~ ˈsɐtɪn/ [sɐˈtɪn ~ ˈsɐtɪn] (from *satisne* /sɐˈtɪsnɛ/ [sɐˈtɪsnɛ]), *sicin* /siːˈkɪn ~ ˈsiːkɪn/ [siˈkɪn ~ ˈsiikɪn] (from *sicine* /siːˈkɪnɛ ~ ˈsiːkɪnɛ/ [siˈkɪnɛ ~ ˈsiikɪnɛ]), *viden* /wɪˈdɛn, -eːn ~ ˈwɪdɛn, -eːn/ [wɪˈdɛn, -een ~ ˈwɪdɛn, -en] (from *videsne* /wɪˈdɛsnɛ, -eːs-/ [wɪˈdɛsnɛ, -ees-]), *tanton* (from *tantone* /tɐnˈtoːnɛ/ [tɐnˈtoonɛ]) /tɐnˈtoːn ~ ˈtɐntoːn/ [tɐnˈtoon ~ ˈtɐnton], *nostra(ti)s* /nɔsˈtraːs ~ ˈnɔstraːs/ [nɔsˈtraas ~ ˈnɔstras], *deinde* /ˈdɛɪndɛ ~ dɛˈɪndɛ/ [ˈdɛɪndɛ ~ dɛˈɪndɛ].

Names: *Camillus* /kɐˈmɪllʊs ~ ˈkɐmɪllʊs/ [kɐˈmɪɫlʊs ~ ˈkɐmɪɫlʊs], *Cethegus* /kɛˈtheːgʊs ~ ˈkɛtheːgʊs/ [kɛˈtheegʊs ~ ˈkɛthegʊs], *Maecenas* (from *Maecena(ti)s*] /mɐeˈkeːnaːs, mɐekeːˈnaːs/ [mɐɜˈkeenas, ˌmɐeke ˈnaas], &c.

Also Greek words and names oscillate, if they maintain thier original forms: *satrapen* /ˈsɐtrɐpeːn, sɐˈtrɐpeːn/ [ˈsɐtrɐpen, sɐˈtrɐpen], *Acarnan* /ɐˈkɐrnaːn, ɐkɐrˈnaːn/ [ɐˈkɐrnan, ˌɐkɐrˈnaan], *Cleopatra* /klɛˈɔpɐtrɐ, klɛɔˈpɐtrɐ/ [klɛˈɔpɐtrɐ, klɛɔˈpɐtrɐ]. Notice that the 'normal' syllabication for clusters of a consonant followed by /r, l/, is /ᵗ͜CC/, while with /m, n/, we have /Cᵗ͜C/. However, for metrical reasons, things could be forced to also produce /Cᵗ͜r, Cᵗ͜l/.

Furthermore, we have to consider the effect of the enclitics *-ce, -ne, -ve, -que, -dem, -met, -nam, -te, -cum,* and *quidem,* which attract stress to the preceding syllable (with possible oscillations): *musaque* /ˈmuːsɐkwɛ, muːˈsɐkwɛ/ [ˈmuusɐɡ̊ɛ, muˈsɐɡ̊ɛ], which is not at all confused with *musaque* (abl.) /muːˈsaːkwɛ/ [muˈsaaɡ̊ɛ] not even when stress coincides.

In addition, *utraque* /ˈuːtrɐkwɛ, uːˈtrɐkwɛ/ [ˈuutrɐɡ̊ɛ, uˈtrɐɡ̊ɛ], equally different from *utraque* /uːˈtraːkwɛ/ [uˈtraaɡ̊ɛ], *illene* /ˈɪllɛnɛ, ɪlˈlɛnɛ/ [ˈɪɫlɛnɛ, ɪɫˈlɛnɛ], *loquive tacereve* /ˈlɔkwiwɛ tɐˈkeːrɛwɛ, lɔˈkwiːwɛ tɐkeːˈrɛwɛ/ [ˈlɔɡ̊iˌwɛ tɐˈkeerɛwɛ, lɔˈɡ̊iwɛ ˌtɐkɛˈrɛwɛ], *egomet* /ˈɛgɔmɛt, ɛˈgɔmɛt/ [ˈɛgɔmɛt, ɛˈgɔmɛt], *tu quidem* /ˈtuː ˈkwɪdɛm, ˈtuːkwɪdɛm/ [ˈtuː ˈɡ̊ɪdɛ̃, ˈtuːˌɡ̊ɪdɛ̃].

The following words are felt to be unitary words (thus, with /ˈ$$$/): *alicubi, sicubi, necubi, equidem, identidem, utinam, utiquem, undique, itaque* 'therefore'.

But we have: *itaque* 'and so' (*ie et ita*) /ɪˈtɐkwɛ, ˈɪtɐkwɛ/ [ɪˈtɐɡ̊ɛ, ˈɪtɐɡ̊ɛ], and *pone* 'behind' /ˈpoːnɛ, poːˈnɛ/ [ˈpoonɛ, poˈnɛ] (but *pone!* —imperative— /ˈpoːnɛ/ [ˈpoonɛ]).

Compound verbs with *-do, -fit* have two stress possibilities (although the 'regular' one is less favored): *circumdo* /kɪrkʊmˈdoː, -ˈdɔ; kɪrˈkʊmd-/ [ˌkɪrkʊnˈdoo, -ˈdɔ; kɪrˈkʊndo, -ɔ], *satisdo* /sɐtɪsˈdoː, -ˈdɔ; sɐˈtɪsd-/ [ˌsɐtɪzˈdoo, -ˈdɔ; sɐˈtɪzdo, -ɔ] (also *satis do*),

pessumdo /ˌpɛssʊmˈdoː, -ˈdɔ; pɛssʊmd-/ [ˌpɛssʊɲˈdoo, -ɔ; pɛsˈsʊɳdo, -σ] (also *pessun-do, pessum do*), *arefit* /aːrɛˈfɪt, ˈaːrɛfɪt/ [ˌarɐˈfɪt, ˈaarɐfɪt], *madefit* /mɐdɛˈfɪt; ˈmɐdɛfɪt/ [ˌmɐdɐˈfɪt, ˈmɐdɛfɪt].

Concerning verbs with-*facit*, we only have *arefacit* /ɐrɛˈfɐkɪt/ [ɐrɐˈfɐkɪt], *madefacit* /mɐdɛˈfɐkɪt/ [ˌmɐdɛˈfɐkɪt]. In fact, their 'normalized' forms would have been: **areficit* /aːˈrɛfɪkɪt/ [aˈrɛfɪkɪt], **madeficit* /mɐˈdɛfɪkɪt/ [mɐˈdɛfɪkɪt].

There are further possible oscillations, in sentences, in cases like: *apud me* /ˈɐpʊd ˈmeː, ɐˈpʊdmeː/ [ˈɐpʊd ˈmee, ɐˈpʊdme, ˈɐpʊm ˈmee, ɐˈpʊmme], *pater mi* /ˈpɐtɛr ˈmiː, pɐˈtɛrmiː/ [ˈpɐtɛr ˈmii, pɐˈtɛrmi], *morem gerit* /ˈmoːrɛm ˈgɛrɪt, moːrɛmgɛrɪt/ [ˈmooˌrɛŋ ˈgɛrɪt, moˈrɛŋgɛrɪt], *operam dare* /ˈɔpɛrɐm ˈdɐrɛ, ɔpɛˈrɐmdɐrɛ/ [ˈɔpɛrɐn ˈdɐrɛ, ˌɔpɐˈrɐndɐrɛ].

Many of us, at school, will have carefully 'learned' *unicuique suum* as */uːnɪkʊˈɪkwɛ ˈsʊʊm/ 'may all get their due', while its true realization is /uːnɪˈkʊɪkwɛ ˈsʊʊm/ [unɪˈkʊɪk̰ɛ ˈsʊ̃ũ], with the diphthong *ui* /ˈʊɪ/ [ˈʊɪ]. Let us add an observation about *exiguitas*, which has to be pronounced /ɛksɪˈgʊɪtaːs/ [ˌɛksɪˈgʊɪtas], not */ɛkˈsɪgwɪtaːs/ [ɛkˈsɪĝɪtas]; in fact, /gw/ [ĝ] only occurs after /n/ [ŋ].

4. Intonation

The following intonation patterns are based on reliable deductions, going backwards, from Romance results to the original language, and favoring nearby territorial realities. Let us complete this concise outline of Classical Latin pronunciation, by also providing possible intonation patterns. They can safely be accepted as plausible and utilizable, with no real problems, nor strained interpretations.

fig 7. Classical Latin intonation patterns.

/ / [· · ˈ · · ˈ · · ˈ ·]   /./ [· ˈ ·.]   /?/ [· ˈ ·˙]   /;/ [· ‒ ··]   /,/ [· ˈ ·]
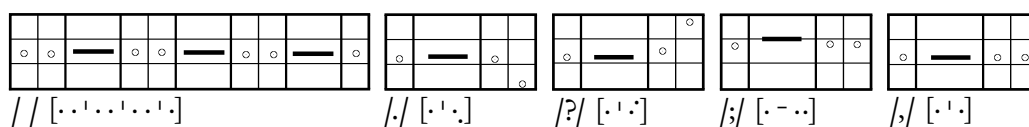
5. Text

Here is the Aesopian fable, in Latin. Let us pay particular attention to: *circumdabat* /kɪrˈkʊndɐbɐt/.

Olim inter se Aquilo et Sol uter fortior esset certabant, cum viatorem quendam paenula amictum procedentem conspexerunt; atque ipsorum fortiorem existimandum esse consenserunt, qui efficeret ut viator ille paenulam deponeret.

Aquilo autem vehementissime furere coepit; sed, quo fortiores flatus emittebat, eo artius viator se circumdabat paenula; tandem, viribus destitutus, propositum suum omisit. Tum Sol caelum clarissima luce illustravit; mox vero viator, calore victus, paenulam exuit. Itaque Aquilo, quamvis invite, confessus est solem esse fortiorem.

Tibi placuit fabula? Libetne eam repetere?

Academic Italian pronunciation

[ˈɔːlim· ˌˌinterˈsɛ·ˌ| ˈaːkwilo· ɛtˈsɔlː·| ˈuːtɛɾ· ˈfɔrːtsjor· ˌˈɛsːsetˌ| tʃerˈtaːbant·¦ ˌkumviaˈtɔ·ɾem ˈkwɛnːdam·| ˌˈpɛˑnula aˈmikːtum·ˌ ˌprotʃeˈdɛnːtem·¦ ˌkonspekˈsɛːɾunt·| ˈatːkwe·¦ ipˈsɔːɾum· forˈtsjɔːɾem·¦ egˌzistiˈmaːndum· ˌˈɛsːse·ˌ ˌkonsenˈsɛːɾunt·| ˈkwi· ˌ˄efˈfiːtʃerɛt·¦ ˌutviˈaːtor· ˌˈilːlɛ·¦ ˈpɛːnulam· deˈpɔːneret·‖

ˈaːkwilo· ˌˈaˑutem·¦ ˌveemenˈtisːsime· ˈfuːɾeɾe· ˌˈtʃɛːpit·ˌ| ˈsɛdˑ kwɔforˈtsjɔːres·ˌ ˈflaːtus·ˌ ˌemitˉtɛːbat··| ɛoˈarːtsjus·ˌ viˈaːtor· ˌsɛtʃirˈkumːdabat· ˈpɛːnula·| ˈtanːdem· ˌˈviˑɾibus ˌdestiˉtuːtus··ˌ proˈpɔːzitum· ˌˈsuˑum·ˌ oˈmiːzit·‖ ˌˈtumː·ˌ ˈsɔlː·¦ ˈtʃɛːlum· ˌklaˈrissima ˈluːtʃɛ·ˌ illusˈtraːvit·| ˈmɔkːs· ˌˈvɛːɾo·ˌ viˈaːtor· ˌkaˈlɔˑɾe ˉvikːtus··ˌ| ˌ˄ˈpɛːnulam·ˌ ˌ˄ˈegːzwit·‖ ˉiːtakwe·· ˈaːkwilo·¦ ˌˈkwamvis imˉviːtɛ··ˌ| komˈfɛsːsus· ˌˈɛsːt·ˌ¦ ˌ˄ˈsɔːlem· ˌɛsseforˈtsjɔːrem·‖|

ˌ˄ˈtiˑbi ˈplaːkwit·ˑ ˌ˄ˈfaːbula·| ˌ˄liˈbɛtne ˌɛamɾeˈpɛːtere·‖].

Classical pronunciation

[ˈoolĩˑ ˌˌinteɾˈsee·ˌ| ˈek̲ilo· ɛtˈsooɫ·| ˈuter· ˈfɔrtɪɔr· ˌˈɛssɛt·ˌ| k̲ɛrˈtaabɐnt·¦ ˌkũwɪaˈtooɾɛŋ ˈk̲ɛndẽ·| ˌˈpɐenula ɐˈmikˈtʊm·ˌ ˌpɾokeˈdɛntẽ·¦ ˌkõspɛkˈseeɾʊnt·| ˈɛtk̲ɛ·¦ ɪpˈsooɾũˑ ˌfɔrtɪˈooɾẽ·¦ ɛkˌsistɪˈmɐndõ· ˌˈɛsse·ˌ ˌkõsẽˈseeɾʊnt·| ˈk̲ii· ˌ˄ɛfˈfɪkɛɾɛt·¦ ˌʊtwɪˈaator· ˌˈɪɫlɛ·¦ ˈpɐenʊlɐn· deˈpoonɛɾet·‖

ˈek̲ilo· ˌˈɐutẽ·¦ ˌwɛɛmɛnˈtissɪme· ˈfʊɾɛɾe· ˌˈkoepɪt·ˌ| ˈsɛt· k̲oˌfɔrtɪˈoores·ˌ ˈflaatus·ˌ ˌɛmɪtˉteebɐt··| ɛoˈɐrtɪʊs·ˌ wɪˈaator· ˌsɛkɪrˈkʊndɐbɛt· ˈpɐenula·| ˈtɐndẽ· ˌˈwiiɾɪbʊs ˌdestɪˉtuutʊs··ˌ proˈpɔːsɪtũ· ˌˈsʊ̃ˑ·ˌ ɔˈmiisɪt·‖ ˌˈtũ· ˈsooɫ·¦ ˈk̲ɛelʊŋ· ˌklaˈrɪssɪma ˈluuk̲ɛ·ˌ ˌɪɫlusˈtraawɪt·| ˈmɔkːs· ˌˈweeɾo·ˌ wɪˈaator· ˌkɐˈlooɾe ˉwɪk̲tʊs··ˌ| ˌ˄ˈpɐenʊlẽ·ˌ ˌ˄ˈɛksʊɪt·‖ ˉɪtɐk̲ɛ·· ˈɐk̲ilo·¦ ˌˈk̲ɐŋwis ɪŋˉwiite··ˌ| kõˈfɛssʊs· ˌˈɛst·ˌ¦ ˌ˄ˈsoolẽ· ˌɛssɛfɔrtɪˈooɾẽ·‖|

ˌ˄ˈtɪbɪˈplɐkʊɪt·ˑ ˌ˄ˈfaabʊlɐ·| ˌ˄lɪˈbɛtne ˌɛ̃ɾɛˈpɛtɛɾe·‖].
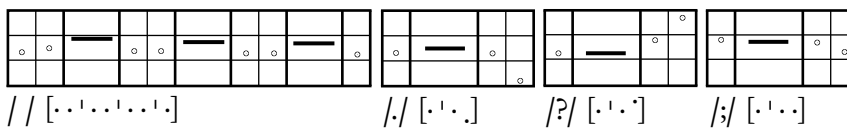
6. *Old Latin*, or *Archaic Latin* (Italic, ɪᴇ), had five vowels, both short and long, which were phonetically nasalized before /NC, N#|/, their timbres remaining unaffected and the nasal being preserved, even before constrictives, with [n≡C]. It also had six diphthongs and length opposition for the consonants.

There were no Greek phonostylemes yet, but there was *z* /VzV/ [VzV], which later became *r* /ɾ/ [ɾ, z], or *Vs#* /Vh/ [Vh], *eg flozis* [ˈɸɫoːzih] (later *floris*); also, *gn* /gn/ [gn]. The phoneme /l/ was [ɫ] before pauses, or consonants (including heterosyllabic /j/, /C#j/), or before back V (including /a, aː/), but [l] before tautosyllabic /j/, /#Cj/), or before front V; in addition, /kw, gw/ [ḵ, ĝ, ḳ, ĝ].
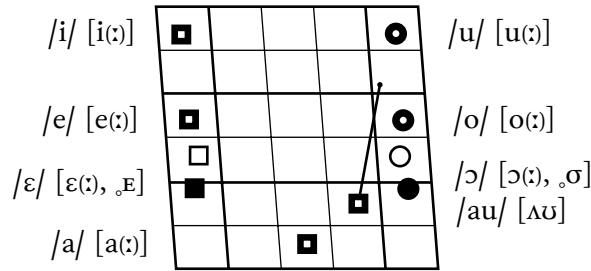
fig 8. Old/Archaic Latin.

7. *Vulgar Latin*, or *Empire Latin* (Italic, ɪᴇ), in its *neutral* form stemming from the central area of Italy, had seven short vowels and only one traditional diphthong, /au/ [ʌʊ]; all vowels were phonemically short, being phonetically lengthened in stressed free syllables. Consonant gemination was distinctive.
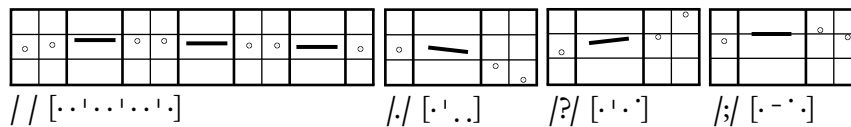
Many words had different stress-patterns from those they had in Classical Latin, *eg filiolum* /fɪˈlɪolʊm/ → /frɪˈljɔlʊm/ (and unstressed *e, u/o* followed by a vowel became /j, w/, as well), *integrum* /ˈɪntɛgrʊm/ → /ɪnˈtɛgrʊm/, *decadit* /ˈdeːkadɪt/ → /deːˈkadɪt/. It had /VnC/ [Ṽn≡C]), but /VN/ [Ṽ] + /f, s/, and /V#/ [V] (for vowel + final *-m*, where vowel timbres were unaffected); *h* had gone to 'zero' by this stage, even in *ch, th, rh* (while *ph* had become /f/).

Also notice: *f, v, z, gn* /f, v, z, gn/ [φ, ß, z, gn]. In central Italy, /n, t, d, s, ɾ, l, k, g/ + /j, i, e, ɛ/ developed to [ɲ, ţ, đ, ʂ, ɽ, c, ɟ] (without absorbing the [j]) by gradual adjustments, like [ţj, đj, cj, ɟj] → [tʂj, dʑj, kçj, gɟj] → [tʂ, dʑ, tʃ, dʒ].

fig 9. Vulgar/Emperial Latin.

8. *Italian Academic Latin* (Italic, ɪᴇ) came to have only five vowels in stressed position, /i, ɛ, a, ɔ, u/, *eg* even *habēre* or *Rōma* became /aˈbɛre, ˈrɔma/ [aˈbɛːre, ˈrɔːma] (in spite of Italian *avere* [aˈveːre], *Roma* [ˈroːma]). Similarly to Italian, in unstressed syllables only /e, o/ [e, o] occurred, with intermediate timbres, [ᴇ, σ], as a result of vowel adjustments of either half-opening (for final unstressed /e|, o|/) or half-closing (for de-stressed /ɛ, ɔ/), which is typical of neutral Italian pronunciation.

Length and the various vowel sequences also correspond to those found in neutral Italian, although with *ae, oe* /ˈɛ, °ɛ, ₒe/. It preserves *CC*, [n≡C], but /mC/ [mC]; it rigorously has *VsV* /VzV/; *z* is /ʣ/, and *tiV* (with unstressed *i*) is /tsjV/, *eg ōtium* [ˈɔtsːtsjum₊] (the example shows both self-gemination, shared by /ʣ/, /ʃ/, *piscem* [ˈpiʃːʃɛm₊], and /ɲ/, *lignum* [ˈliɲːɲum₊], and audible release, even for /m#/, as can be seen). For *c, g*, before front vowels, we have /tʃ, ʤ/: *Cyrus* [ˈtʃiːrus], different from *Chiron* [ˈkiːrσn].

Let us observe that the transcription given in § 5, accurately and clearly follows what we have just said, in spite of cases like *habēre* and *Rōma* seen above. Unfortunately, however, Italian speakers, even university Latin teachers, too often, pronounce Latin not exactly as it should be, according to what we have just said. In fact, they mortify its pronunciation with regional habits, both for the phonemes and intonation (including, often, stress and intonation patterns).

On the other hand, instead of (or in addition to) regional 'deviations', too many Italian speakers also introduce, more or less frequently, even 'neutral Italian deviations', which are clearly contrary to the cryterion accurately established above. Of course, it might be surprising to actually say [aˈbɛːre, ˈrɔːma], but Italian Academic Latin *is* another language, clearly different from both Classical Latin (*cf* § 1-5) and its most direct 'offspring', *ie* the current Italian language.

fig 10. Italian Academic Latin.
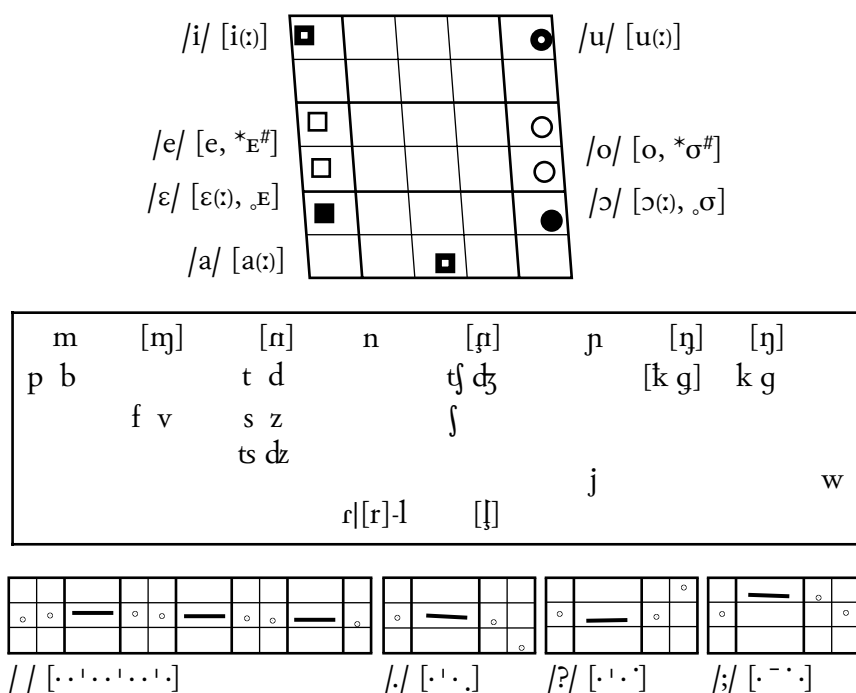
9. *Church Latin* or *International Latin* (Italic, ɪᴇ), is similar to Italian Academic Latin, and in fact it should be pronounced exactly like it. However, in Vatican City, it is used by both Italian and foreign clergy. So, it undergoes several different interferences, not only by regional Italian accents, but also by different languages and their several regional accents, also including many different habits in speaking more or less different Academic Latins for each foreign language. Thus, the ideally expected 'pure' pronunciation is very rarely heard, as for Italian Academic Latin, too, as just seen.

fig 11 shows a more 'international' version of the vowel situation, especially as far as the *e, o* vowels are concerned, with less different timbres. Of course, the consonants should be realized as shown, for Italian Academic Latin, given in *fig* 10, but, in reality, more or less systematically, the following (and other) 'deviations' certainly occur, unfortunately.

As for the *vowels*, of course, the exact timbres for *i, e* (including *ae, oe*), *a, o, u*, correspond to those used in the different languages, with more or less different results. Thus, Romance and Slavic languages usually have (excepting greater and even worse differences): /i/ [i, ɪ], /ɛ/ [ᴇ, ɛ, e], /a/ [a, ɐ, ʌ], /ɔ/ [ɔ, ɔ, o], /u/ [u, ʊ]. G(erm.) generally has /i/ [i(ː), ɪ], /ɛ/ [ᴇ(ː), ɛ(ː), e(ː)], /a/ [a(ː), ᴀ(ː), ɑ(ː)] (even ɒ(ː)]), /ɔ/ [ɔ(ː), ɔ(ː), o(ː)], /u/ [u(ː), ʊ] (adding *oe* [øː, œ] G.).

Not surprisingly, English can have the strangest possible realizations: /i/ [ii, ɪi, ɪ; aə, ɑə, ɐə], /ɛ/ [ᴇ, ɛ, e, ᴇɪ; ii, ɪi], /a/ [a(ː), ɑ(ː), ɐ, ʌ; æ, ᴇɪ], /ɔ/ [ɔ(ː), ɔ(ː), o(ː), ɒ; ɑ, σω, ɜω], /u/ [uu, ʊu, ʊ; ɐ, ʌ, juu, jµu].

As for the *consonants*, let start with *c* before front vowels (including *ae, oe*): [tʃ, tʃ] I., R(oum.), [s, ʂ] F., P., C(atal.), also [θ] S(pan)., [ts] G. & Sl., [s] E.; *ch*: [k], including E., but [x] G. & Slav; *g*: before front vowels (including *ae, oe*): [ʤ, ʤ] I., R. (& E.), [ʒ, ʒ, ʐ, ʤ, ʤ] F., P., C., [x, χ, h] S., [g, g] G., Slav; *gn*: [ɲ(ɲ)] I., [ɲ] C., [gn, ɲ] P., F., [gn] R., E., [ɣn] S., [gn] Slav, [gn, ŋn] G.; *h*: [Ø] 'zero' I., R., S., P., F., C., [x, ɦ] Slav, [h] G., [h, Ø] E.; *j/i*: [j] I., R., Slav, G., [ʒ, ʒ, ʐ] F., P., [ʤ] E., [j, ʝ] Slav, G., [x, χ] S.; *qu*: [kw] I., E., [kw, k] P., S., [k] C., [kw, kv] R., [k, kw, ᵗɥ] F., [kv] Slav, G.; *sc* before front vowels (including *ae, oe*): [ʃ(ʃ)] I., [stʃ] R., [s, ʃ] P., [s] F., E., [s, ʂ, sθ] S., [sts] Slav, G.; *ti* + unstressed vowel: [tsj] I., [tsj, sj] R., [sj] P., F., C., [sj, θj] S., [tsi] G., [ʃi] E.; *v*: [v] I., R., P., F., [β, b] S., C., Slav, G., [v, w] E.; *x*: [kstʃ, kstʃ] I., R., [ks] C., E., [ksts] Slav, G., [gz, ks] F., [s, sθ] S., [s, ʃ, ʃ] P.

Of course, also intonation patterns vary a lot, as even stress patterns, although trying to follow 'known' instructions.

fig 11.Church/International Latin.

/i/ [i(ː)]   /u/ [u(ː)]

/ᴇ/ [ᴇ(ː), °ᴇ, ₒe]   /ɔ/ [ɔ(ː), °ɔ, ₒo]

/a/ [a(ː)]