

Ancient Greek Pronunciation

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from the book
Greek Pronunciation & Accents

1. *Ancient* or ‘neutral’ *Classical Greek* (5-4th c. BC, used by Plato & Aristotle), had five vowels, both short and long (actually monotimbric diphthongs), with different qualities, as well as the thirteen phonemic diphthongs given in the second vocogram.

Their nature and quality result from comparisons between the different (often conflicting) opinions of present-day and past scholars, as also from loanwords in Greek (and from Greek), including those from central- and eastern-Asian languages.

Here, a transliteration is added. Some numbered notes follow, with explanations and some useful examples, although these phonopses are quite concise.

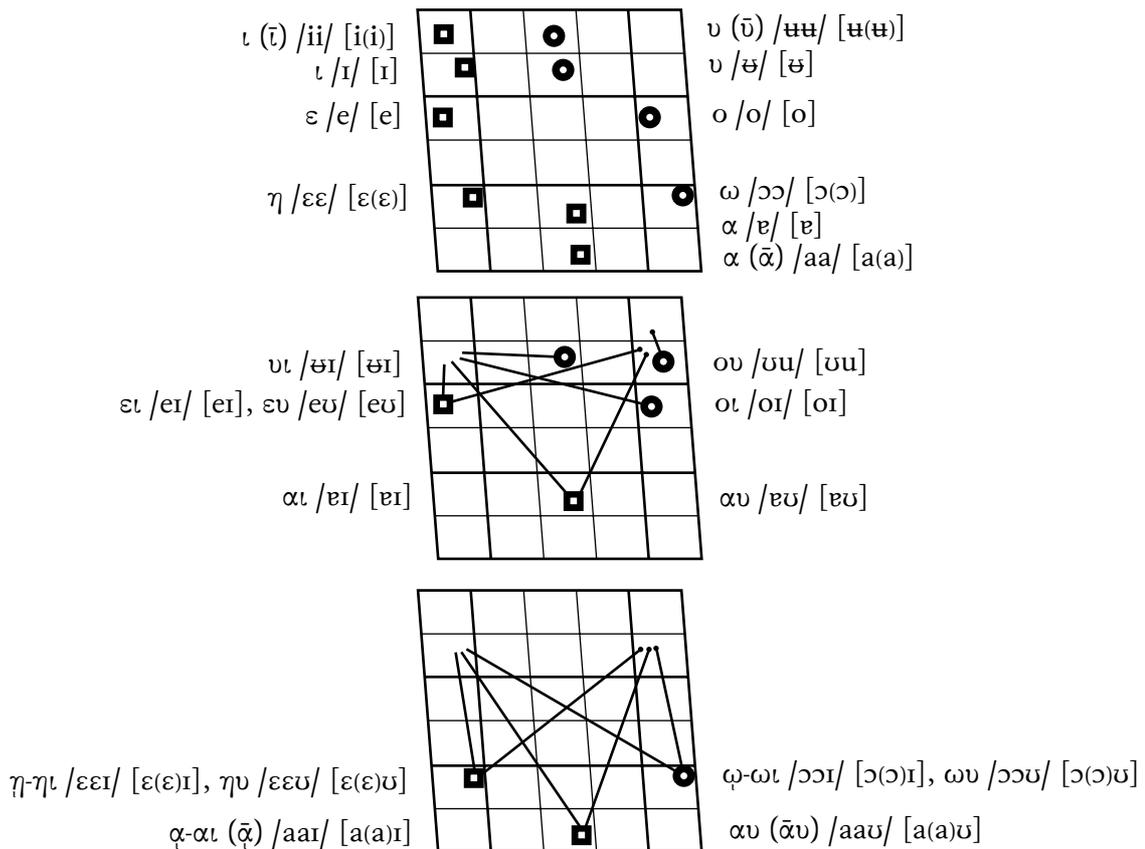
α	<i>a</i>	[e] /e/	ν	<i>n</i>	[n] /n/
	<i>a/ā</i>	[a(a)] ¹ /aa/	ξ	<i>ks</i>	[ks] /k+/s/
ε	<i>e</i>	[e] /e/	π	<i>p</i>	[p] /p/
η	<i>ē</i>	[ε(ε)] ¹ /εε/	ρ	<i>r</i>	[r] /r/
ι	<i>i</i>	[i] /i/	ῥ	<i>rh</i>	[r] /r/
	<i>i/ī</i>	[i(i)] ¹ /ii/	ῥῥ	<i>rrh</i>	[rr] /rr/
ο	<i>o</i>	[o] /o/	σ, -ς	<i>s</i>	[s] /s/ (word-finally, ς)
ω	<i>ō</i>	[ɔ(ɔ)] ¹ /ɔɔ/		<i>s</i>	[z] /s/ + β, γ, δ;
υ	<i>y</i>	[ɥ] /ɥ/ (←[u]) ²		<i>s</i>	[z] /s/ + λ, μ, ν, ρ
	<i>y/ȳ</i>	[ɥ(ɥ)] /ɥɥ/ (←[uu]) ²	τ	<i>t</i>	[t] /t/
β	<i>b</i>	[b] /b/	φ	<i>ph</i>	[ph] /p+/h/
γ	<i>g</i>	[g] /g/; <i>g</i> [ŋ] /n/ + μ, ν (but γν-, gn- [gn] /gn/);	χ	<i>kh</i>	[kh] /k+/h/
	<i>n</i>	[ŋ] /n/ + γ, κ, ξ, χ;	ψ	<i>ps</i>	[ps] /p+/s/
δ	<i>d</i>	[d] /d/	ϝ	<i>h</i>	[h, V [#] hV] /h/
ζ	<i>z</i>	[z, VzzV] /z, zz/ (←[dz]←[zd]) ²	Ϛ		[∅] / / ‘zero’
θ	<i>th</i>	[th] /t/ + /h/	ϛ		[ˈ] /ˈ/ (mid level tone)
κ	<i>k</i>	[k] /k/	Ϝ		[ˌ] /ˌ/ (low level tone)
λ	<i>l</i>	[l] /l/	ϝ		[ˋ] /ˋ/ (mid-to-low falling tone)
μ	<i>m</i>	[m] /m/	Ϟ		[ˊ] /ˊ/ (low level weak tone).
Vi Vi		[Vi] /Vi/: αi, ai [ɛi] /ai/; εi, ei [ei] /ei/; οi, oi [oi] /oi/; υi, yi [ɥi] /ɥi/			
Vu Vu		[Vu] /Vu/: αυ, au [ɛu] /ɛu/; ευ, eu [eu] /eu/; ᾱυ, āu [aaυ] /aaυ/; ηυ, ēu [εευ] /εευ/; ωυ, ōu [ɔɔυ] /ɔɔυ/; but ου, ou [ou] /ou/, which is the natural phonic way of showing what different scholars describe as corresponding to /oo, ou, ou, uu/, by optimizing their articulatory space in the vocogram ²			

Υ Vī [VV_I]³: for our kind of pronunciation, we show these long diphthongs as they really were: η-ηι, ēī [ε(ε)I] /εεI/; α-αι, āī [a(a)I] /aaI/; ω-ωι, ōī [ɔ(ɔ)I] /ɔɔI/ V_IV VīV [V_IjV] /V_I([#])V/, V_uV V_uV [V_uwV] /V_u([#])V/ (within or between words).

¹ Unstressed ‘long’ vowels become short monophthongs, keeping their normal timbres, [i, ε, a, ɔ, ɯ], which were different from true short vowels, [ɪ, e, ɐ, o, ʊ].

² At earlier times these vowel timbres and the articulation of ζ were as indicated after ‘←’. Between vowels, ζ was geminated, [zz] /zz/. The previous intermediate stage, [dz] /dz/ (not a stopstricative, [dʒ]), from a former [zd] /zd/, originated by metathesis and made up a consistent series with [ps] /ps/ and [ks] /ks/, in spite of its being ‘intrinsically’ voiced (structurally, a voiceless sequence, /ts/, would have been more plausible, much like ψ and ξ, but no reliable traces or records of it have been found).

³ On the other hand we get: ᾶι (for ᾱ-ᾶι; different from Αῖ, αῖ)... In fact, η-ηι, α-αι, ω-ωι, were still ‘long’ diphthongs, as shown: [a(a)I, ε(ε)I, ɔ(ɔ)I]; but, if followed by a vowel, ‘ι’ stood for ‘ι’ [j, ‘j], as in: ῥᾶων *hráion* [ˈraajɔn], κλέϊω *klēiō* [ˈkleɛjɔ], πατρῶος *patrōios* [ˌpɛ.tɾɔjɔs], τῶ ὄντι *tōi ónti* [ˌtɔˈjɔn.tɪ]. For [j, ʃ, w], see § 10. Also see § 15 for /aaI, εεI, ɔɔI/ and their succeeding developments.



m	[ɱ]	n	[ɲ]	[ŋ]
p(h) b	t(h) d		[k(h) g]	k(h) g
(φ)	(θ) s z		(x)	
	[l]	r r-l	[j] (j)	(ʃ) [ʃ]
				[w] (ω) h [h]

2. Besides, we had $V\grave{i}$ $V\grave{i}$ [$V\grave{i}$] and $V\ddot{u}$ $V\ddot{u}$ [$V\ddot{u}$] with independent ι , υ (also stressable, $\acute{\alpha}\iota\sigma\sigma\omega$ *aíssō* [$\epsilon^{\prime}i:s,\sigma\omega$]): $\iota\rho\eta\grave{\iota}\omicron\nu$ *hirēion* [$h\grave{i}r\epsilon\epsilon i:j\omicron\nu$], $\acute{\alpha}\upsilon\tau\mu\grave{\eta}$ *aytmē* [$\epsilon\upsilon\tau^{\prime}m\epsilon\epsilon$].

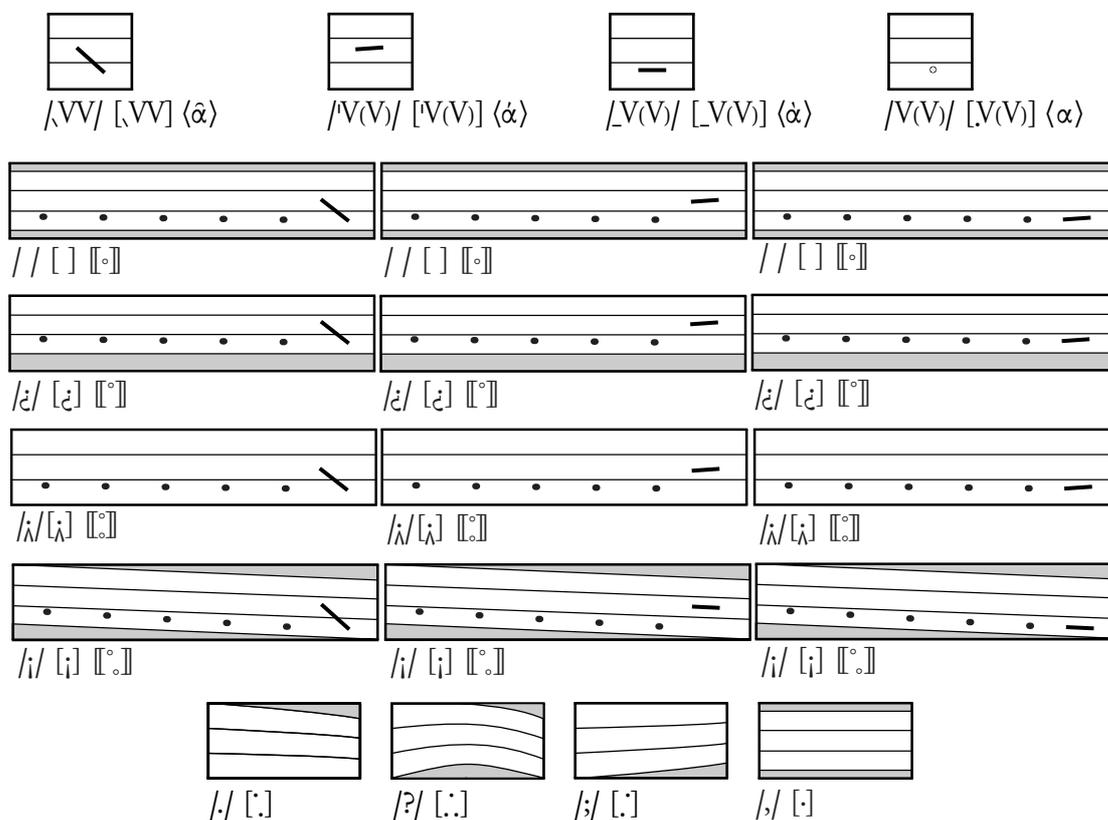
In addition, intervocalic /i, u/ (in /Vi, Vu/ + /V/ sequences, cf the second vocogram) were: [ij, uɰ], ie $V\iota V$ $V\iota V$ [$V\iota jV$]: [$\epsilon i jV$, $\epsilon i jV$, $\omicron i jV$, $\epsilon i jV$]: $\pi\lambda\epsilon\iota\omicron\varsigma$ *plēios* [$\pi\lambda e i:j\omicron s$]. Also: $V\upsilon V$ VuV [$Vu\omega V$]: [$\epsilon\upsilon\omega V$, $\epsilon\upsilon\omega V$, $\epsilon\epsilon\upsilon\omega V$, $\omicron\omega\upsilon\omega V$]; with $\omicron uV$ *ouV* [$\omicron u\omega V$]: $\beta\omicron\upsilon\lambda\epsilon\upsilon\omega$ *boulēuō* [$\beta\omicron u^{\prime}\lambda e\upsilon,\omega\omicron$].

In *diphthongs* the accent mark –much like the possible *breathing* (either ‘rough’, ‘h’ [h, $V^{\#}hV$] /h/, or ‘smooth’, ‘ ’ [∅] //)– is marked on the second element, even though it goes without saying that phono-tonetically (as also in its transliterated form) it is on the first one: $\acute{\alpha}\grave{\iota}\mu\alpha$ *hâima* [$\grave{h}\epsilon i:m\epsilon$]. As we know, usual spelling does not distinguish between short ([ϵ , ι , υ]) and long ([aa , ii , $\mu\mu$): α , ι , υ].

To end with, θ , ϕ , χ are voiceless ‘aspirated’ stops; when in sequence, both can be ‘aspirated’, mostly in careful speech: $\delta\iota\phi\theta\omicron\gamma\omicron\varsigma$ *diphthongos* [$d\iota p(h).tho\eta.g\omicron s$] (colloquially, also [ϕ , θ , χ] are possible [$d\iota\phi\theta\eta.g\omicron s$]). Notice also that, except for $\gamma\gamma$ *ng* [$\eta\eta g$], doubled consonants are truly geminated (as ζ also was [zz], between vowels): $\beta\acute{\alpha}\lambda\lambda\omega$ *bállō* [$\beta\acute{e}l.l\omicron$], $\iota\pi\pi\omicron\varsigma$ *híppos* [$h\acute{i}p.p\omicron s$], $\pi\epsilon\rho\iota\zeta\omega\mu\alpha$ *perízōma* [$p\epsilon^{\prime}r i:z\omicron.m\epsilon$].

3. The tonetic illustrations which follow explain the nature of the Greek *accent*. It combined stress (ie intensity) and pitch (ie tonality). Words with a circumflex written accent have a falling movement from a mid pitch to a low one, as shown. Those with an acute written accent have a mid pitch, very slightly ascending. The words with a grave written accent have a low pitch.

See § 4 & § 18 for examples (& § 19 for sayings).



Since this highly debated matter is still partially unsettled, and not to complicate things, it is probably better to consider the three stressed tonemic patterns, as shown in the figure.

All these tonetic movements were superimposed on the dotted lines shown in the (larger) tonograms, giving the unmarked four protunes, with theoretically all unaccented syllables.

Of course, they modified those overall structures, by partially raising the pitch on their last syllable.

The first four tonograms show this change with the circumflex accent, [] / / ^, while the middle four ones show it with the acute accent, [] / / ' ; the last four ones show it with the grave accent, [] / / `.

The four tonograms at the bottom of the tonetic illustration show the realizations of the four tunes, with their clear movements, which further modify the tonetic structures just seen.

4. Here is a transcription of the Aesopian fable, which is generally used as an example for all languages dealt with phonetically. Let us carefully consider the nature of our narrow diphthongs (in the vocograms): ει [ei], ου [uu], η-ηι [εει], α-αι [aa], ω-ωι [ωω] (rather than [ee, uu] and [εε, aa, ωω], or [e:, u:] and [ει, αι, ωι]).

They are similar to those of many modern languages, like, English, Dutch, Swedish, Turkish, Hindi, still described too often as if they were really 'long vowels', [V:], instead of real narrow diphthongs, [VV]. We simply show that English '[i:, u:]' are actually /ii, uu/ [ii] and [uu, mu], respectively. Nobody can deny this obvious fact.

Βορέας καὶ Ἡλῖος περὶ δυνάμεως ἤριζον· ἔδοξε δὲ αὐτοῖς ἐκεῖνω τὴν νίκην ἀπονεῖμαι, ὃς ἂν αὐτῶν ἄνθρωπον ὀδοιπόρον ἐκδύσῃ. Καὶ ὁ Βορέας ἀρξάμενος σφοδρὸς ἦν· τοῦ δὲ ἀνθρώπου ἀντεχομένου τῆς ἐσθῆτος μᾶλλον ἐπέκειτο.

Ὁ δὲ ὑπὸ τοῦ ψύχους καταπονούμενος ἔτι μᾶλλον καὶ περιττοτέραν ἐσθῆτα προσελάμβανεν, ἕως ἀποκαμῶν ὁ Βορέας τῷ Ἡλίῳ μεταπαρέδωκε. Κάκεινος τὸ μὲν πρῶτον μετρίως προσέλαμψε· τοῦ δὲ ἀνθρώπου τὰ περισσὰ τῶν ἱματίων ἀποτιθεμένου σφοδρότερον τὸ καῦμα ἐπέτεινε, μέχρις οὗ πρὸς τὴν ἀλέαν ἀντέχειν μὴ δυνάμενος ἀποδυσάμενος ποταμοῦ παραρρέοντος ἐπὶ λουτρὸν ἀπήει.

Ἄρ' ἔαδέ σοι ὁ μῦθος; Ἡ βουλόμεθα αὐτὸν πάλιν λέγειν;

[.bo'reas .kɛi'ɦeɛ.lios .pe.ɾi.dθ'nɛ.meɔ 'seɛ.ɾiz.zon·| 'e.dok.se .deɛu.toi.se'kei.noɪ .ten'ni.ʃke .nɛ.po.nei.mei· ɦo.sɛ.nɛu.to 'nɛn.θɾɔ.pon ɦo.doɪ.po.ro nek'dɛu.sei·| .kɛi-ɦo.bo'rea .sɛɾk'sɛ.me.nos .pho.dro.sɛn· .tuu.deɛn'θɾɔ.puuɛn .te.kho'mɛ.nuu .te.sɛs.θɛɛ.toz .maallo .nɛ'pe.kei.to·|

ɦo.de.ɦɔ.po.tuɪp'sɛu.kɦus .kɛ.tɛ.po'nuu.me.nos·| .e.ti.maalloŋ .kɛi.pe.ɾit.to'te.rɛ .nɛs.θɛɛ.tɛ .pro.se'lɛm.bɛ.nɛn·| 'ɦeɔ.sɛ .po.kɛ.mɔɔn ɦo.bo'reas .toɪ.ɦe'liɔɪ .me.tɛ.pɛ're.dɔ.ke·| .ka.kei.nos .to.mem.pɾɔ.tom .me'tɾiɔs .pro.se.lɛmp.se·| .tuu.deɛn'θɾɔ.puu .te.pe.ɾis.sɛ .tɔn.ɦi.mɛ'tiɔ .nɛ.po.ti.θɛ'mɛ.nuu·| spho'dro.te.roŋ .to.kɛu.mɛɛ 'pɛ.tei.nɛ· 'me.kɦɾis .ɦu.pɾos .te.nɛ'leɔ .nɛn'te.kɦeim .mɛ.dθ'nɛ.me.nos·| .ɛ.po.dɛ'sɛ.me.nos .po.tɛ.muu .pɛ.rɛɾ'reon.to .se.pi.luɪ.tro .nɛ'pɛɛ.jɛi·|

ɛ.ɛɪ.ɦeɛ'de.soi .ɦo.mɛu.θos·| ɛ.ɛ.buu'lo.me.θɛ· .ɛu.tom'pɛ.lɪn 'le.gein·].

Some considerations about spelling, pitch, music, verse, other literary dialects, and numerals (simply from a 'modern' non-traditional and non-specialistic point of view).

5. Since we live and do phonetics in the third millennium, what will follow is thought to be necessary, in order to solve and resolve scientifically the problem of spelling and pronunciation.

Of course, some classicists, or classical philologists, 'classically' tied to centuries-old traditions (if not even thousand-year-old ones), might surely turn up their learned noses at our beliefs. Too often, 'specialists' keep on trying to describe traditionally 'inherited things', without resorting to newer and –allow us to say– more scientific methods, as Natural Phonotactics. Unfortunately, traditions are hard to die, or even be simply modified following more recent and scientific criteria.

But it must be completely clear that we refer to the, now, highly consolidated spelling usage, *after* the classical period, even if –obviously– related to that very epoch. Nobody sane of mind would assume that Plato or Aristotle actually used such way of writing. Of course, (ancient) tablets were a bit different from (graphic) tablets, but we must not confuse them. It is useless to remain bound to clearly outdated past 'things'.

6. As we have already said in § 4, too often even 'modern phoneticians' describe obviously unquestionable diphthongs as if they were 'long vowels'. Thus, it is not at all hard to imagine how phonetic realities could be treated in ancient times (and still believed to be like that, nowadays)!

Unfortunately, the Middle Ages are famous both for their serious studies and absurd rigmoroles, with incredible officialdom and many useless productions.

Sadly enough, in Greece nothing happened similar to what *Pāṇini* did, in ancient India, in earlier times, for rather scientific phonetics. The Greeks did know some kind of an ancient 'letter', derived by cutting H, which was quite suitable for an adequate representation of their phoneme /h/: Ϝ, ϝ. In fact, ϝ had also been used to represent drachma, as a silver coin. In Argolis, ϝ (or its variant Ϝ) was used for λ, too. In the late Hellenistic period and later on, when diacritics were systematically introduced in writing, this sign became the rough breathing, ϝ̣, while the other part, Ϝ, ϝ, became the smooth breathing, ϝ̣̄.

But it seems that some post-classical scholiasts and grammarians were not sufficiently smart as to follow the example found even in certain Greek colonies, where that 'letter' was conveniently used as a full-fledged consonantal grapheme. Instead, they 'preferred' not to indicate their phoneme, which –it is true– was rather marginal, almost a second-hand consonant. On the other hand, communications was certainly not as easy as it is today: they did not have ἰντερνετ (nor ἴντερνετ).

When pre-vocalic /h/ eventually disappeared from Koiné Greek, and its spelling was fixed by people who no longer had it in their own spoken language, nor had a clear idea of what it actually could be, it was again considered as something less important than a real consonant, either phonically or graphically. Even when /h/ was really present, it must have been considered as something belonging more to the re-

alization of vowels in certain initial positions, rather than actually being a real consonantal segment.

7. As a matter of fact, in verse, neither $\acute{}$ /h/, nor the /h/ element in φ , ϑ , χ , were perceived as independent phonemic segments, while, on the contrary, they certainly were: [h], [ph; th; kh, kh]! So, absurdly, initial /h/ was not considered to be a true consonant (both phonically and graphically), but some kind of unfortunate feature belonging to the vowels, calling it *rough breathing*.

As in Italian, what is not clearly shown graphically, like the real (phonemic) timbres of the vowels written *e* and *o*, /e, ε; o, o/, is currently undervalued, and even not perceived, not only by common people, but also by ‘learned’ people, too, like too many university teachers.

8. Thus, instead of using a convenient and economical consonant (like F , f , or any other, possibly better), a highly inconvenient diacritic was put over lower-case vowels: $\acute{}$ (for all seven vowels). Of course, it was also to be combined with the three kinds of accent, giving $\acute{\circ}$, $\acute{\alpha}$, $\acute{\epsilon}$ – again, for all vowels, including the three ones with the *iota subscript*: $\acute{\iota}$.

As already hinted at above, although φ , ϑ , χ were certainly [ph, th, kh], however, in verse, they were degraded to something like simple [p, t, k], and written with simple letters, instead of: πf , τf , χf (more scientifically, indeed).

And what is more, as if not enough damage had already been done, they also ‘invented’ the extremely useless *smooth breathing*, meant to indicate the absence of the *rough* one. But, in case, to indicate a phonic ‘zero’, [∅] (or simply [], certainly not [ʔ], which might have required a true consonantal phonic –and perhaps also graphic– segment), they should have used I , i , which they already had in previous times.

So the number of combinations of vowels and diacritics was doubled, quite unnecessarily. Luckily, upper-case vowels were not ‘sentenced’ the same way. In any case, there are 112 useless combinations of vowels and inconvenient diacritics! Of course, it is true that the adoption and insertion of the diacritics, over (or under) letters, was somehow imposed by the unlucky *scriptio continua* (with no spaces between words) and in capital letters.

Obviously their introduction was certainly not a perfidious invention. And even the smooth breathing had a justification; in fact, it helped in identifying words beginning with a vowel, as the rough breathing also did. But such ‘clever expedients’ were due to the technical limits of those times.

9. However, the unfortunate and unhappy story of the Greek spelling is not ended. In fact, although phonic diphthongs are quite clearly stressed on their first vowel element, like [ai] (ie *ái*), they are ‘ingenuously’ written like *ai*, as if they were actually [a’i]!

In modern Greek, although now only the acute accent is written, the current spelling still uses such an inconvenient way of showing the stress. Let us consider a simple example, in modern Greek, where a word like [kaθa’re’vusa] is still amazingly written $\kappa\alpha\theta\alpha\rho\acute{\epsilon}\upsilon\omicron\upsilon\sigma\alpha$ (with an accent over what is now a consonant).

10. The medieval bureaucratic obsession also brought scholars to put a grave accent on any unaccented syllable, thus, producing full sequences of such grave accents. Later on, however, the grave accent was only put on the final syllable in given known cases.

Of course, in accurate phonotonic transcriptions, any unstressed syllable must be indicated by means of a low dot, because they are uttered on a low pitch. This tonetic structure is somehow similar to that of Japanese, where (in addition to protune and tune modifications, as in Greek, too) two essential pitches are used: *low* and ‘non-low’, which is *mid*, not ‘high’ as it is still called and described.

So, a tone mark like [˘] is certainly excessively too high, while [˙] (ie [˘-]), not to be confused with ‘-’, ie a normal hyphen) is the one to be used.

When the Greek acute accent is described as the movement from a low pitch to a ‘high’ one, it has to be interpreted as a movement from low to *mid*, but not on the same syllable, even if long, so certainly neither [˙] nor [˘].

Instead, it means that from a low-pitched unstressed syllable [˘] the voice raises to the mid-pitched stressed syllable [˙] (ie [˘-]), again) for the acute accent, [˙˙] (ie [˘-]). On the other hand, for the circumflex accent the movement is from the mid pitch falling to the low one, within the same syllable, [˘˘].

Arguably, it would be extremely ridiculous to pass to a true high pitch even in Japanese, which has very similar tone patterns. So, even in Greek, the real pattern must be within the unmarked low pitch band to the marked mid one (as shown in our tonograms), either steady, [˙] (ie [˘-]), or falling [˘˘].

11. As a matter of fact, those ‘experts’ who made Greek recordings using high pitches, believing to be actually reproducing what it was, in reality, made fools of themselves.

It is sufficient to quickly listen to some of the cartoon-like recordings made by Stephen G. Daitz, who passed for a renowned celebrated model to be followed.

In Greek, as in Japanese, the high pitch band is exclusively used for *intonation*, which is superimposed to pitch accents, for the interrogative and suspensive tunes, or for some paraphonic reasons.

Arguably, as Greek verse was generally accompanied by *music*, certainly with wider tonal movements than in real spoken language (otherwise it would be almost useless), we may consider ‘normal’ to deform and distort utterances in order to follow the musical pattern.

It is the same even in modern contemporary songs, with (even considerable) segmental lengthenings, to say nothing about opera, where some phonemes may be completely ignored, as the distinction between Italian /e, ε/ and /o, o/.

But, to insist in believing that real ancient Greek had to be practically ‘sung’ is something which nobody can actually trust.

12. Passing to some requirements (very queer, indeed) that *verse* demand, in order to ‘satisfy’ metrical patterns (although completely unfamiliar in comparison with actual true language), let us consider, now, some of the forced deviations from normality.

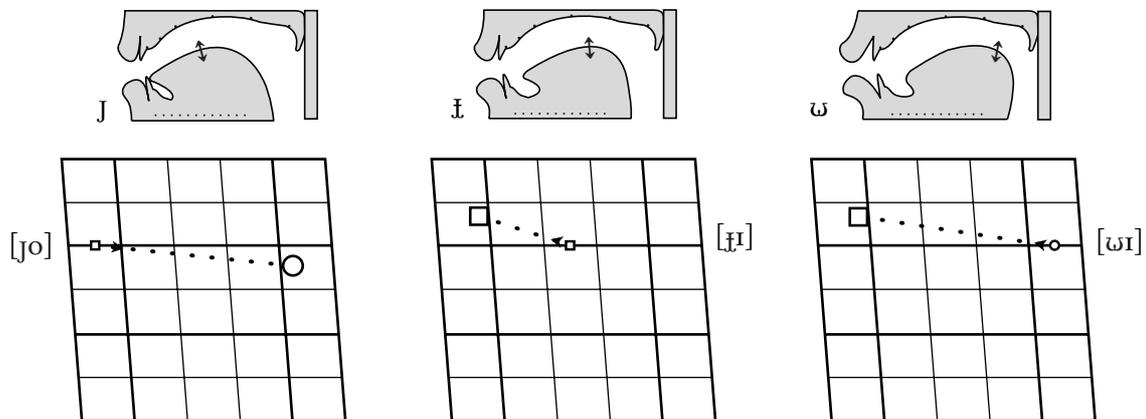
Of course, they were accurately classified and named, otherwise –certainly– they

could not be imposed, as if they were actually necessary.

So, when true language did not match with *metrical structures* (real superstructures, indeed), *dieresis* was introduced, as when normal $\pi\alpha\iota\varsigma$ [ˈpɛis], had to be deformed into $\pi\acute{\alpha}\iota\varsigma$ (which could be passed off as a legitimate disyllabic word, something like [ˈpɛ#ɪs], by doing violence to actual language).

On the contrary, when there were too many 'syllables', while just one could be accepted, *synizesis* had to be invented, as when $\mu\eta\ \omicron\upsilon$ [ˈmɛɛɔ], had to be made to 'seem' to be monosyllabic (as if it was not already such, in spite of its length).

Let us end with *syneresis*, when words like $\theta\epsilon\acute{\omicron}\iota$ [ˈtʰe'oi] or $\pi\acute{\omicron}\lambda\epsilon\omega\varsigma$ [ˈpoˌleɔs] had to be passed off as monosyllabic or bisyllabic, respectively, having to introduce new consonantal semiapproximant taxophones, as in [ˈtʰjoɪ, ˈpoˌɫɔs] (and [ɣ, ω] for 'consonantalized' [a, o], α, ο: [ɣɪ, ωɪ]).



13. Of course, in Natural Phonetics, $\pi\acute{\omicron}\lambda\epsilon\omega\varsigma$ [ˈpoˌleɔs] is already bisyllabic. In the case of $\theta\epsilon\acute{\omicron}\iota$ [ˈtʰe'oi] (as a monosyllabified word, seen above), the *-oi* and *-ai* endings were sometimes forced to 'become short' (or, rather, to be considered as 'short'). For instance, the *-ai* of the imperative and infinitive forms, $\tau\acute{\iota}\mu\eta\sigma\alpha\iota$ and $\tau\acute{\iota}\mu\eta\sigma\alpha\iota$, had to be considered as ending with something 'monomoraic' like [ɣɪ], just seen, ie [ˈtɪ.mɛ.sɣɪ] and [ˈtɪ.mɛ.ɛ.sɣɪ]; while the optative form, $\tau\acute{\iota}\mu\eta\sigma\alpha\iota$, 'remained normal', ie with a 'bimoraic' ending, [ˈtɪ.mɛ.ɛ.sɛɪ]. Similarly, for $\acute{\alpha}\nu\theta\rho\omega\pi\omicron\iota$, ie [ˈɛnˌtʰrɔˌpɔɪ], as against $\acute{\alpha}\nu\theta\rho\omega\pi\omicron\upsilon$, ie [ɛnˌtʰrɔˌpɔɯ].

Frankly, it must be said that, if those endings were really different, in the long history of grammatical Greek treatises, a way to show that fact would certainly have been devised (however crazy, as so many others).

14. However, it is true that, in singing verse with music, as a form of art in the ancient world, long vowels were certainly pronounced as bi-phonic diphthongs even when unstressed, [ii, ɛɛ, aa, ɔɔ, ɰɰ], not as [i, ɛ, a, ɔ, ɰ] (as in real spoken language, where they still remained different from their short counterparts, [ɪ, e, ɐ, o, ʊ], thanks to their timbres).

We must add that a language like ancient Greek certainly *syllabified* its words in a more natural way than the verse 'rules' would make us believe, including in word formation. Thus: $\pi\acute{\omicron}\nu\omicron\varsigma$ [ˈpoˌnos], $\tau\acute{\iota}\mu\acute{\alpha}\omega$ [ˈtɪˌmɛɔ], $\acute{\alpha}\pi' \acute{\epsilon}\mu\omicron\upsilon$ [ˌɛ.pɛˌmɔɯ], $\acute{\alpha}\gamma\gamma\acute{\epsilon}\lambda$

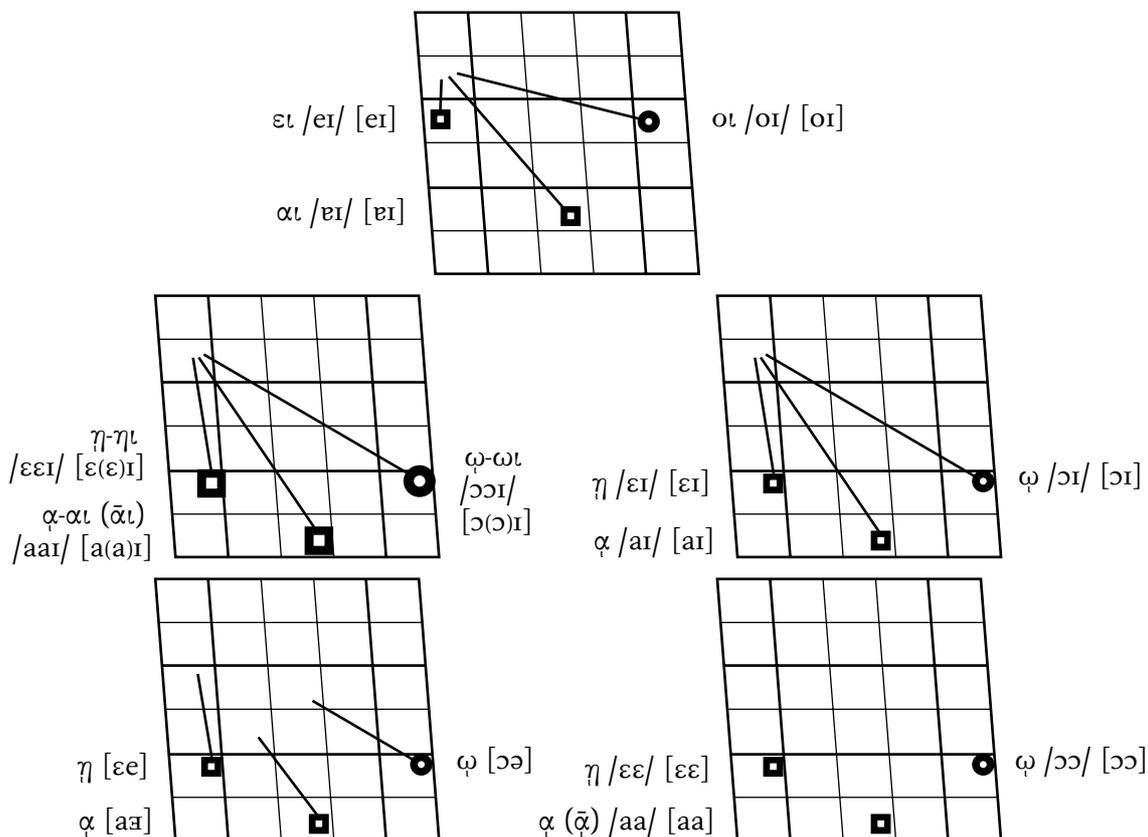
λω [ɛŋ'gɛl.lɔ], πένθος [ˈpɛn.tɰos], πότης [ˈpɔt.mos], ἀκτίς [ˈɛk.tis], πέφασμαι [ˈpɛ.pɛz.mɛi], βλάπτω [ˈblɛp.tɔ], δάκνω [ˈdɛk.nɔ], μιμνέσκω [ˌmimˈnɛs.kɔ], ἄρκτος [ˈɛrk.tos], Βάκχος [ˈbɛk.kɰos], Σαπφώ [sɛpˈpɰɔ], συνέρχομαι [sɛˈnɛi.kɰo.mɛi], ἐξετάζω [ˌɛk.sɛˈtɛz.zɔ], ἐπράχθη [eˈprɛk.thɛ, eˈprɛx.thɛ], ἐθρέψασθε [ɛthˈrɛp.sɛs.thɛ], γέγραφε [gɛˈgrɛp.thɛ, ˈgɛ.gɛɾɸ.thɛ], τεθνέξω [ˌtɛθˈnɛk.sɔ], ἐσθλός [ɛsˈθlɔs].

15. Interestingly, there is a fascinating hypothesis (more likely than not, indeed), which leads us to consider the Hellenistic-Byzantine introduction of *iota subscript* (η, α, ω) as a kind of *diagraphemic* way to hint at a possible *sociophonetic diaphonemic* reality dealing with the change from /εεΙ, ααι, ωωΙ/ [εεΙ, ααι, ωωΙ] ηι, αι, ωι (second vocogram) to their succeeding actual reality, during the Classical period: /εε, αα, ωω/ [εε, αα, ωω] (fifth vocogram), which coincide with the previous long phonemes.

In fact, different people in different periods (within the 5-4th c.) might certainly have anticipated that change, through stages like those illustrated here.

The first vocogram helps to show the difference between the existing ‘short’ diphthongs /ει, ει, οι/ [ει, ει, οι] εΙ, αι, οι and the intermediate stage of the ‘long’ (shortened) diphthongs, /ει, αι, οι/ [ει, αι, οι] (third vocogram), with clearly *different* first elements, as the third vocogram shows.

The second vocogram gives the real ‘long’ diphthongs, /εεΙ, ααι, ωωΙ/ [εεΙ, ααι, ωωΙ]. Let us pay particular attention to the symbols around the figures, which should be the only elements that differentiate the second and third vocograms. However, contrary to our usual practice, in this case we adopt a newer way of also showing greater length, by means of larger markers, as can be seen, so that the second and third



vocograms appear to be different as far as segmental length is concerned.

The fourth vocogram shows the very likely sociophonic stage of narrow (shortened 'long') diphthongs, [εε, αα, οο], with their second elements pointing to /ɪ/ [ɪ].

16. The *Greek literary dialects* had always been a kind of artificial languages. In fact, the 'dialects' used by all authors did not depend on their ethnic origin, but on the literary genres they chose.

Therefore, the *Attic dialect* was used for *prose, philosophy, oratory, historiography, and theatrical dialog*. The *Ionic dialect* in *elegy, epigram*, and (together with the *Aeolic dialect*) in *monodic lyric*. The *Doric dialect* in *choral lyric* and lyrical parts of *tragedy* and *comedy*. Here are some of the most peculiar phonic differences between these literary dialects.

While *Attic* changed former /uu, υ/ into /uu̯, υ̯/ (where /uu, υ/ derived both from /ou/ and contracted or compensatory lengthened /oo/, but were still different from /ɔɔ/), other dialects kept /uu, υ/. In addition, Attic maintained /h/, while, for former /VssV/ it had three possibilities: /VssV, VsV, VttV/.

Generally, *Ionic* changed /uu, υ/ into /uu̯, υ̯/, /o/ into /ou/, but /ei/ into /e/ (although apparently irregular); it often lost /h/, while, for former /VssV/ it had two possibilities: /VssV, VttV/, and geminated /m, n, l, p, t, s/ for metrical reasons.

Aeolic changed /ei/ into /εε/ (sometimes into /ii/); contracted /ee/ and /oo/ became /εε, οο/, while original /εε/ was generally replaced by /aa/ and /ou/ by /uu/. It completely lost /h/, while keeping former word-internal [zd].

Doric changed original /ei, ou/ into /ee, oo/; it often had /aa/ instead of /εε/, and sometimes [jv̥, jo] instead of /ea, eo/ for metrical reasons. Besides, it kept [zd, ss].

17. Now, a short note about the way of representing *numerals* in ancient Greece is thought to be necessary. Philosophy, astronomy, and all possible arts (except cinema and music recording, of course) were certainly treated deeply, even mathematics and geometry. Thus we find numbers like: α', β', γ', δ', ε', ς', ζ', η', θ', ι' (ie 1-10), ια', ιβ', ιγ', ιδ', ιε', ις', ιζ', ιη', ιθ' (ie 11-19), κ', λ', μ', ν', ξ', ο', π', ϑ' (ie tens from 20 to 90), ρ', σ', τ', υ', φ', χ', ψ', ω', ϝ' (ie hundreds from 100 to 900), α, β, γ (ie thousands from 1000 to 3000), ι, κ (ie tens of thousands from 10.000 to 20.000), ρ (100.000). Let us see some examples: ιβ' (ie 12), ϝξη' (ie 968), γχπγ' (ie 3683).

Certainly, 'creations' like θ, ι (ι), ι (ι), ε, φ (φ), ς (ς), β, γ (ς), δ (δ), ς (ie 0, 1, 2, 3, 4, 5, 6, 7, 8, 9) would be much better, and with 'normal' combinations of these simple *ten* elements, without ignoring the fundamental *zero*, in fact, only nothing is flawless, instead of introducing cerebral pseudo-numerical values, detrimentally based on less motivated *letters*. Before Archimedes, scientific precision seemed to be less important than philosophy or the fine arts. In fact, πολύπους (*polypus* /'pɔlɔpəs/, 'many' & πούς 'foot') is certainly not as precise as οκτώπους (*octopus* /'ɔktɔpəs/, 'eight').

So, let us state frankly that the way in which numbers were written is decidedly far from ideal. It is also undeniably true that, in the Roman world, numbers were shown in a possible even worse way, as we all know rather well. For instance, XL, or XL, means '40', certainly not 'extra-large'!

18. Here are some sentences illustrating the use of intonation in classical Greek, following our reconstruction, shown in § 3-4.

Βουλοίμην ἄν ἐλληνίζειν ἐπίστασθαι.
[ˌbuːˈloi.me.nan .hel.leˈnizzei .neˈpɪs.təs.thɛɪ.]
(I'd like to speak Greek well)

Ἴσμεν τί λέγειν βούλη.
[ɪz.meɪn .tiˈle.ɡeim ˈbuː.leɪ.]
(We know what you mean)

Χάριν σοι ὅτι πλεῖστον ἔχω.
[ˈkʰɛ.rɪɪ.soi ˈho.tɪ .pleɪs.to ˈne.kʰɔː.]
(Thank you very much)

Τί δοκεῖς περὶ τούτου;
[ɪ.tɪ .do.kɛɪs .pe.rɪˈtuː.tuː.]
(What do you think about it?)

Πῶς ἔχεις τήμερον;
[ɪ.pɔˈse.kʰɛɪs ˈtɛɛ.me.rɔnː.]
(How are you feeling today)

Ποῦ ἴμεν;
[ɪ.pɔɪˈɪ.meɪnː.]
(Where are we going?)

Ἄρ' ἐλληνίζεις;
[ɪ.aar .hel.leˈnizzeɪsː.]
(Can you speak Greek?)

Ὁ σὸς ἀδελφὸς καταλαμβάνει τούτο;
[ho..so.sɛ.del_phos .kɛ.tɛ.lɛmˈbɛ.neɪ.tuː.toː.]
(Does your brother understand it?)

Αὐτὸς ἰκνεῖται αὔριον;
[ɪ.eu_tos .hɪkˌneɪ.tɛɪ ˈɛu.rɪɔnː.]
(Is he coming tomorrow?)

Εἰ μὴ δύνασαι ἐκνεῖσθαι ἐν τῷ ὑστεραίῳ σαββάτῳ, πράγματα σχήσομεν.
[ei.meˈdʌ.ne.sɛɪ hekˌneɪs.thɛɪ .ɛɪ.tɔɪ.hʉs.te.rɛɪ.jɔɪ sɛbˈbɛ.tɔɪ.] ˈpraag.me.tɛs ˈkʰɛɛ.so.mɛnː.]
(If you can't come on Saturday, we'll be in trouble)

Ὅτε ἐφικόμην τὴν λιμὴν, ἡ ναὺς ἀνελελύκει.
[ˈho.te(e).pʰɪˈko.meɪn .ten.lɪˈmɛɛn.] .he_nɛu.sɛ.ne.leˈlʉ.keɪ.]
(When I came to the harbor, the ship had gone)

Πορεύσομαι δὲ ἐν ἄρματι, ἢ πεζῇ;
[ɪ.pɔˈreu.so.mɛɪ .de(e)ˈnɛɪ.mɛ.tɪː ɪ.ɛ.pɛzˈzɛɪ.]
(Shall we go by coach, or on foot?)

Εἰσί· ἓν, δύο, τρία, τέσσαρες, πέντε.
 [eɪ.sɪ.ː ˈhɛn ˈdʰo ˈtɾiə ˈtes.sɛ.res.ː ˈpɛn.teː]
 (There are:one, two, three, four, five)

Εἰ μὴ δύνασαι ἐκνεῖσθαι ἐν τῷ ὑστεραίῳ σαββάτῳ, οὐδὲν ἔσται πρᾶγμα.
 [eɪ.meˈdʰe.nɛ.sɛi .hɛk.neɪs.thɛɪ ˌɛn.tɔɪ.hɛs.te.rɛi.jɔɪ sɛbˈbɛ.tɔɪ | .su.de.nɛs.tɛɪˈpɾaɑɡ.mɛː]
 (If you can't come on Saturday, there's no problem)

Πορεύσομαι ἐν ἄρματι, ἢ ἐν νηϊ, ἢ πεζῇ;
 [ɔ.pɔˈreus.o.mɛi.jɛ ˈnɛɪ.mɛ.tɪː ɔ.ɛn.nɛ.ɪ.] ɔ.ɛ.pɛz.zɛɪː]
 (Are we going by coach, by ship, or on foot?)

Τόδε λεξικόν τῷ ὄντι ὠφέλιμόν ἐστι.
 [ˈto.de ˌlɛk.sɪˈkɔn .tɔˈjɔn .tɔˈpʰɛ.lɪ.mo.nɛs.tɪː]
 (This is a very useful dictionary)

Τόδε λεξικόν τῷ ὄντι ὠφέλιμόν ἐστι.
 [ˈto.de ˌlɛk.sɪˈkɔn .tɔˈjɔn .tɔˈpʰɛ.lɪ.mo.nɛs.tɪː]
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Τόδε λεξικόν τῷ ὄντι ὠφέλιμόν ἐστι.
 [ˈto.de ˌlɛk.sɪˈkɔn .tɔˈjɔn .tɔˈpʰɛ.lɪ.mo.nɛs.tɪː]
 (This is a very useful *dictionary*)

Τόδε λεξικόν τῷ ὄντι ὠφέλιμόν ἐστι.
 [ˈto.de ˌlɛk.sɪˈkɔn .tɔˈjɔn.tɔ ˈpʰɛ.lɪ.mo.nɛs.tɪː]
 (This is a *very* useful dictionary)

Τόδε λεξικόν τῷ ὄντι ὠφέλιμόν ἐστι.
 [ˈto.de ˌlɛk.sɪˈkɔn .tɔˈjɔn.tɪ ɔˈpʰɛ.lɪ.mo.nɛs.tɪː]
 (This is a very *useful* dictionary)

Οὐ δῆτα, εἶπε, οὐκ ἔπραξα τούτο.
 [ˌ.ɛu.dɛɛ.tɛː ɪ.ɛɪ.pɛː | .ɛuˈkɛ.pɾɛk.sɛɪ.tɔu.tɔː]
 (No, he said, I haven't done it)

Ναὶ δῆ, ὦ φιλότῃς.
 [ˌnɛɪˈdɛɛː ɪ.ɔ.pʰɪˈlɔ.tɛsː.ɪ]
 (Of course, my dear)

Ναὶ δῆ, ὦ φιλότῃς. Αὔριον δέξῃ ἐμὸν δῶρον.
 [ˌnɛɪˈdɛɛː ɪ.ɔ.pʰɪˈlɔ.tɛsː.ɪ | ˈɛu.ɾɪɔn ˈdɛk.sɛ.jɛ ˌmoɪˈdɔɔ.rɔnː]
 (Of course, my dear. Tomorrow you'll have a present)

Ναὶ δῆ, ὦ φιλότῃς, αὔριον δέξῃ ἐμὸν δῶρον.
 [ˌnɛɪˈdɛɛː ɪ.ɔ.pʰɪˈlɔ.tɛsː.ɪ ɛu.ɾɪɔn ˈdɛk.sɛ.jɛ ˌmoɪˈdɔɔ.rɔnː]
 (Of course, my dear, tomorrow you'll have a present)

Ἐπ' ἀληθείας, εἶπε, ἀπορίας τινᾶς ἔχω.
 [ˌɛ.pɛ.lɛˈtʰɛ.jɛs ɪ.ɛɪ.pɛː | ˌɛ.pɔˈɾɪɛs .tɪ.nɛˈsɛkʰɔː]
 (As a matter of fact, he said, I'm not at all sure)

ᾠ φιλότης, ἄρ' οὐ ἀναμιμνήσκη, ὅτι ἐβλέψαμεν ἐκείνον πίνακα ἐν τῇ παρελθόντι ἐβδομάδι ἐβλέψαμεν;

[l.ɔ.phi'lɔ.tes· ʔaa.rusɐ .ne.mi.mim'neis.kei· ɔ.ho.ti.e'blep.sɐ.me· ɔ.ne'kei.nom 'pi.ne.ke·
l.e.ni.tei.pe.rel'tho.ni.ti .heb.do'mɛ.dʝr· ɔ.e'blep.sɐ.men.]

(My dear, don't you remember we saw that picture last week?)

Ἴνα τί εἴρηκας «μοι μέλει μηδέν», παρ' ἔματόυ αἰτῶ, τούναντίου ἀληθεύοντος;

[ɔ'hi.ne .tri.ei.re.kɛs· 'mo'i.me.lei .mɛ'den· ʔi.pe.re.me.tsu .ei.tɔɔ· ɔ.tsu.ne.ni.tsu.we .le.the·
.wo.n.tos.]

(Why did you say 'I don't mind', I wonder, when the opposite is true?).

19. Here is a list of about a hundred famous sayings in classical Greek, although a few do not belong to that period (5-4th c). They are often used when speaking English. They are given in our classical pronunciation, followed by the (modern) international one, for a possible 'newer' usage in colloquial language.

We do not translate (nor explain or annotate) them, since it is so easy to find them in the Net, in several languages.

Ἄγεωμέτρητος μηδεὶς εἰσίστω [ɔ.geɔ'me.tre.tos· .mɛ'dei .sei'si.tɔ.] ([ajɛs'mɛtritos· mi'di sisitɔ.])

Ἄετοῦ γῆρας, κορυδοῦ νεότης [ɐ.tsu .gɛ.e.rɛs· .ko.rʊ.du .ne'o.tɛs.] ([ɛ'tu 'gɛ'ras·
kɔri'du ne'ostis.])

Ἄει ὁ θεὸς γεωμετρῆι [ɐ.ei· ho.the.os· .geɔ.me.trei.] ([a'i· sθɛ'os· gɛs'mɛ'tri.])

Ἄει κολοῖός παρὰ κολοῖῳ ἰζάνει [ɐ.ei· .ko.loi.jos· .pe.re.ko.loi.jɔɔ· .hi'zɛ.nei.] ([a'i·
ko-ljos· pa.rakɔ'ljɔi· i'zani.])

Ἄει Λιβύη φέρει τι καινόν [ɐ.ei· li'bɛ· 'phe.rei .ti.kei'non.] ([a'i· li'vi· 'fe'i ti'ce'non.])

Αἰὲν ἀριστεύειν [ɐi.jɛ.ne .ristɛu.wein.] ([ɛ'ɛna ristɛ'vin.])

Ἄνάγκη δ' οὐδὲ θεοὶ μάχονται [ɐ'neŋ.kai· .du.de .the.oi· 'mɛ.kho.ni.tei.] ([a-nan̄ka·
ðu'dɛ θɛ'si· 'ma'xɔpte.])

Ἄνδρῶν γὰρ ἐπιφανῶν πᾶσα γῆ τάφος [ɐ.n.dɔɔŋ· .gɛ.re.pi.phɛ.noɔn· .pa.sɐ .gɛɛ·
'te.phos.] ([an'dɔŋ· ga'ɛpi'fa-noɔn· 'pasa 'ji· .ta'fos.])

Ἄνερριφθὺς κύβος [ɐ.ne'rifi.thɔ .kɛ.bos.] ([anɛ'rifiθɔ 'ci'nos.])

Ἄνθρωπος μέτρον [ɐ.n.thɔ.pos· 'me.tron.] ([anθɔpos· 'mɛ'tron.])

Ἄπαξ λεγόμενον [ɐ.paks· .le'go.men.on.] ([apaks· le'gɔsmɛnon.])

Ἄπο μηχανῆς θεός [ɐ.po.me.khe.nees .the'os.] ([apɔmɛxani's θε'os.])

Ἄπο τοῦ ἡλίου μετᾶστηθι [ɐ.po.tsu.hɛ'liu· .mɛ'tɛstɛ.thi.] ([apɔtu'iliu· mɛ'tastiθi.])

Ἄριστον μὲν ὕδωρ [ɐ.ris.tɔm .mɛn· 'hɛ.dɔr.] ([aristɔm -mɛn· 'i'dɔr.])

Αὐτὸς ἔφα [ɐu.to'sɛ.phɛ.] ([aftɔ'sɛ'fa.])

Βασιλεία τῶν οὐρανῶν [bɛ.s'i.lei.jɛ .tɔ.nu.rɛ.noɔn.] ([vasi'lia· tɔnu'ra'non.])

Βρῶμα θεῶν [brɔɔ.me .the.ɔɔn.] (['vɔsma θε'ɔn.])

Γηράσκω δ' αἰεὶ πολλὰ διδασκόμενος [gɛ'rɛs.kɔ· .dɛi.jɛi .pol.lɛ .di.dɛs'ko.me.nos.] ([ji·
'raskɔ· ðɛ'i pɔ'la di'daskɔsmɛnos.])

Γλαυκ' Ἀθήναζε [glɛu .kɛ'thɛɛ.naazɛ.] ([glaf kaθi'nazɛ.])

Γνώθι σεαυτόν [g.noθi .sɛɛu'ton.] ([g'noθi sɛaftɔn.])

Γόρδιος δεσμός [goɔr.dioz .dez'mos.] ([gɔr'djɔz ðɛz'mos.])

Δεῖμος καὶ Φόβος [ˌdeɪ.mos ˌkɛɪˈfo.bosː] ([ðeimos ɕeˈfɔnosː])

Δέσποτα, μέμνεο τῶν Ἀθηναίων [ˌdes.po.ta ˈmem.neo ˌto.nɛ.thɛˈnɛi.jɔnː] ([ðɛspota-
ˈmɛmnɛso ˌtsɔnaθiˈnɛsoː])

Διαίρει καὶ βασίλευε [ˌdiˈɛi.rɛiː ˌkɛi.bɛˈsi.lɛu.wɛː] ([_ðjɛˈɾiː ˌɕɛvaˈsiˈlɛvɛː])

Διπλοῦν ὀρώσιν οἱ μαθόντες γράμματα [ˌdiˌpɫuːn ɔˈroːsin ˌhoi.mɛˈθɔntɛz ˈɡrɛm-
ˌmɛ.tɛː] ([ðiˈpɫu nɔˈɾɔːsin ˌimaˈθɔntɛz ˈɣraˈmataː])

Δῶς μοι πᾶ στῶ καὶ τὰν γὰν κινάσω [ˌdoːz.moɪ ˌpas.tɔː ˌkɛi.taŋ.ɣaːŋ ˌkɪˈnɛ.sɔː]
([ðɔzmoɪ ˌpas.tɔː ˌɕɛtaŋˈɣaŋ ɕiˈnasɔː])

Ἐγὼ δὲ ὀφείλω λέγειν τὰ λεγόμενα [e.ɣɔ.deoˈphei.lo ˈle.ɡɛiːn ˌtɛ.lɛˈɡo.me.nɛː] ([ɛɣɔ-
ðɛsˈfilɔ ˈlɛˈʒiːn ˌtaɛˈɣɔmɛnaː])

Εἷς οἰωνὸς ἄριστος, ἀμύνεσθαι περὶ πάτρης [ˌheɪ.soi.jɔː.nos ˈɛ.rɪ.stosː ˌɛˈmɯːnɛs.θɛiː
ˌpɛ.rɪˈpɾɛ.tɾɛsː] ([iːsiɔˈnos ˈa.rɪ.stosː ˌaːmiˈnɛsθɛː ˌpɛriˈpaˈtrisː])

Ἐκ τῶν ὧν οὐκ ἄνευ [ɛˌk.tɔn.ɔːn ˌuːkɛˈnɛuː] ([ɛkˈtɔˈnon ˌuˈkaˈnɛfː])

Ἐν οἶδα ὅτι οὐδὲν οἶδα [ɛˌnɔiːda ɔˈti ɔːdɛn ɔiːda] ([ɛˈnoɪda ˌɔtiːdɛn ˈoiːdaː])

Ἐνθεν μὲν Σκύλλην ἐτέρωθι δὲ διὰ Χάρυβδιδος [ɛˌnθɛn mɛn ˌskɯːllɛn ɛˈtɛˌroːθi ɔː
ˌdiːa ˌkɛˈrɯːbɪˈdiːdosː] ([ɛnθɛm mɛnsˌkɯːlɛn ˌhɛˈtɛˌroːθi
ˌdeːdiːɛ ˈkɛˌrɯːbɪˈdiːsː]) ([ɛnθɛm mɛnsˌciˈlin ˌɛˈtɛɾɔθi ðɛˈðia ˈxaˈrɪvˈðisː])

Εὐρηκα! [ɛˈu.rɛˌka] ([ɛˈvɾiːka])

Ζῶον δίπουν ἄπτερος [zɔː.jɔn ˌdiˌpɯːn ˈap.tɛˌɾosː] ([ˈzɔːn ˌðiˈpɯːn ˈap.tɛɾosː])

Ἡλθον, εἶδον, ἐνίκησα [ɛɪ.lθɔn ˌɛiːdon ˌɛˈni.kɛˈsɛː] ([_ilθɔn ˌiːðɔn ˌɛˈniːɕisaː])

Ἡ τὰν ἦ ἐπὶ τὰς [ɛˌtaːn ˌɛˌpiː taːsː] ([iˌtan ˌiɛˈpiːtasː])

Ἡ φύσις οὐδὲν ποιεῖ ἄλματα [ɛˈfɯːsɪs ɔːdɛn ˌpoiːɛi ˈalˌmaːta] ([iˈfɪsɪs ˌuðɛm piːiː
ˈalmataː])

Θάλασσα καὶ πῦρ καὶ γυνήν κακὰ τρία [ˌthɛ.lɛs.sɛ ˌkɛi.ɾɯːɛiː ˌkɛi.ɣɛˈnɛɛn | ˌkaˌkɛ ˌkɛ
ˌtɾiːaː] ([θaˈlasa ɕɛˌpiːɾ ˌɕɛʒiˈnin | ˌkaˈka ˌtɾiːaː])

Θάλαττα, θάλαττα! [ˌthɛ.lɛt.tɛ ˌθɛˈlɛt.tɛː] ([θaˈlata ˌθaˈlataː])

Θάνατος οὐδὲν διαφέρει τοῦ ζῆν [ˌthɛ.nɛˈtosː ˌuːdɛn.dɪˌɾɛˈpɛrɛi ˌtuːz.zɛɛnː] ([_θaˈ-
ˌnatɔs ˌuðɛnðjaˈfɛːriː tuˈzɪnː])

Ἰατρέ, θεράπευσον σεαυτόν [iˌaˈtɾɛ ˌθɛˈrɛˌpɛu.sɔn sɛˈvɔːtonː] ([jaˈtɾɛ ˌθɛˈrapɛfˌsɔn
sɛaˈftɔnː])

Καὶ σὺ τέκνον; [ˌkaɪ.sɯː ˌtɛˈkɔnɔnː] ([ɕɕɛˈsiː ˌtɕˈtɛkɔnonː])

Κακὸς ἀνὴρ μακρόβιος [ˌkaˌkoː sɛˈnɛɛr ˌmɛˈkɾoːbɪos] ([kaˈkɔ sɛˈniːr ˌmaˈkɾɔnˌvɪosː])

Κακοῦ κόρακος κακὸν ὦόν [ˌkaˌku ˌkoːrɛˈkosː ˌkaˌkoː nɔˈonː] ([kaˈku ˌkɔˈrakɔsː ˌkaˈ-
ˌkɔ nɔˈɔnː])

Καλλίστη [ˌkɛlˈlɪs.tɛi] ([kaˈlisti])

Κρήτες ἀεὶ ψεύσται [ˌkrɛˌtɛs ˌɛˌɛiːpsɛʊs.tɛiː] ([ˈkrɪˈtɛs ˌaɪˈpsɛfˌstɛː])

Κτήμα ἐς ἀεὶ [ˌkɛˌtɛmɛˌsɛˈɛiː] ([kˈtɪmaɛ saˈiː])

Κύριε ἐλέησον [ˌkɯːɾiːɛ ˈlɛɛ.sɔnː] ([ˈciːrɪɛ ˈlɛɪsɔnː])

Λάθε βιώσας [ˌlɛˌθɛ ˌbiːɔːsasː] ([ˈlaˈθɛ ˌvɪɔːsasː])

Μέτρον ἄριστον [ˌmɛˌtɾon ˈɛ.rɪs.tɔnː] ([_mɛˈtɾon ˈaˈrɪstɔnː])

Μὴ μοῦ τοὺς κύκλους τάραττε [ˌmɛˌmuː tuːsˌkɯːklɯːs ˌtɛˌrɛt.tɛː] ([ˈmɛmuː tuːsˌciː-
ˌklus ˌtaˈrateː])

Τὸ γὰρ ἡδύ, ἐὰν πολὺ, οὐ τί γε ἡδύ [to_ger .he'dʊ̯| .e_em .po'li̯| .u'ti .ge.he'dʊ̯'] ([to-
'ga ri'di̯| e'am po-li̯| u'ti j'e'i'di̯.])

Τὸ δις ἐξαμαρτεῖν οὐκ ἀνδρὸς σοφοῦ [to_di.sek̯ .se.meɾ.tein̯| .su.keɾ.dros .so.phu:]
([t̥s̥di̯ seksamar'tin̯| ukap̥dros so'fu.])

Τὸ πεπρωμένον φυγεῖν ἀδύνατον [to.pe.pɾo'me.nom .phɛ.gei .ne'dʊ̯.ne.ton'] ([to-
pe.pɾo'me.no.n̩ fi'ji̯ na'di̯.na.ton.])

Υἱὸς μονογενῆς [hɛi.joz .mo.no.ge'neɛs'] ([j̥oz mo.no.je'nis.])

Ὑστερον πρότερον [hɛs.te.rom 'pro.te.ron'] ([i'steɾom 'pɾo'teɾon.])

Φοινικήϊα γράμματα [phoi.ni'keɛ.je 'gɾem.me.te'] ([f̥ini'ci̯a 'gɾa'mata.])

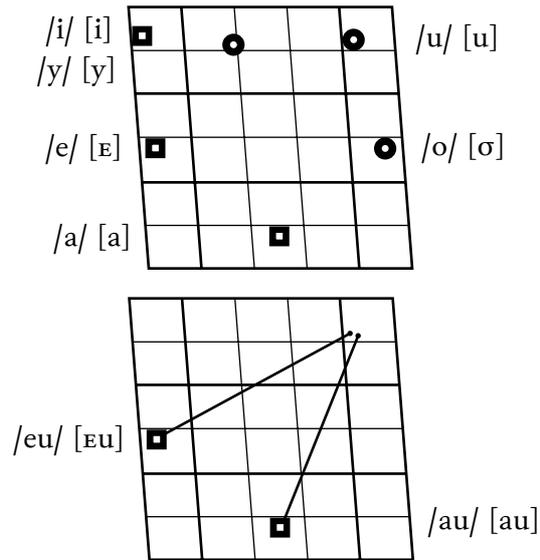
Φρονεῖν γὰρ οἱ ταχεῖς οὐκ ἀσφαλεῖς [phɾo.nei̯ .gei.hoi.te.kheis̯ .su.keɾ.phɛ'leis̯]
([f̥ɾo'ni̯e̯ .χaɾita'çis̯ u,kasfa'lis̯.])

Χαλεπὰ τὰ καλὰ [khe.le.pɛ̯ .te.ke'le'] ([xale'pa̯ .taka'la.])

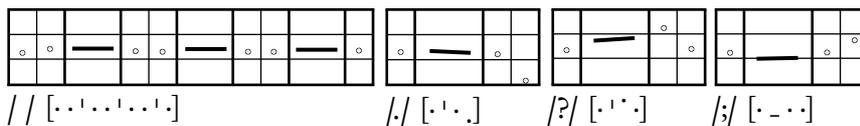
Ψυχῆς ἰατρεῖον [p.sɥ.kheɛ .sia.tɾei.jon'] ([psi'çi̯ sja'tɾiɔn.]).

20. *Hellenistic Greek* had six short vowels and two diphthongs (which had not yet become /af, av; ef, ev/ yet). It had the given xenophonemes (in round brackets) for loanwords, the sequences /ps, ts, dz, ks/, and [n≡C]. There was no prenasal voicing yet, and the (ancient) tonemes had disappeared, but the opposition C ≠ CC was preserved.

Although belonging to (quite) different situations and epochs, these rather synthetic descriptions are clear enough.



m	[m]	[n]	n	[l]	[ŋ]
p (b)		t (d)		[k (g)]	k (g)
	f v	θ s δ z		[x ç]	x ç
		[l]	r-l	j	



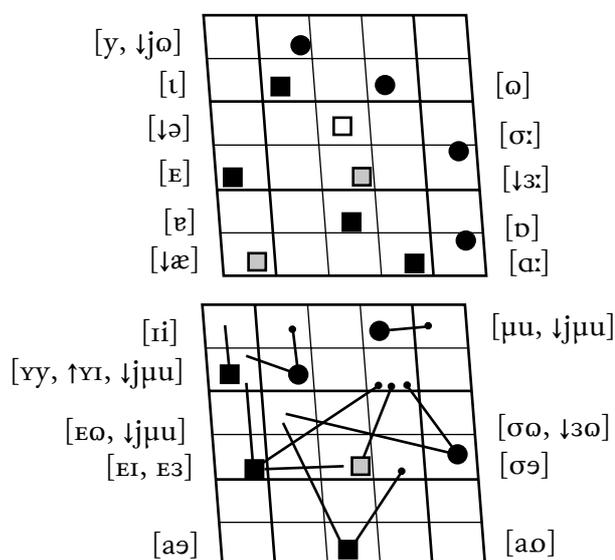
22. *English 'Academic' Greek* is the most possible far away 'reality', in comparison with all other phonopses given in this chapter, it is rather more complicated. All that, in spite of being a simplified version, ie with fewer taxophones than actually used in scientific and medical usages nowadays in English.

The first vocogram shows the 'monophthongs' (and some less favorable diphthongal variants given in the second vocogram): υ [y, ↓jɔ], ι [ɪ], ε [ɛ], α [ɐ, ↓æ], ᾱ [ɑ:, ↓ɛɪ], ο [ɒ], ω [σ:, ↓ɜɔ]. Furthermore, ↓[ə, ɜ:] are also included for frequent use in unstressed and stressed syllables, in accordance with typical British English practice.

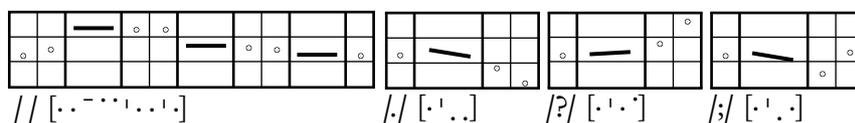
The second vocogram gives the typical diphthongal realizations: αι [aə, ↓aə(jV)], αυ [aɔ, ↓aɔ(wV)] (including ᾰυ), ει [ɛɪ, ↓ɛɪ(jV)], ευ [ɛɔ, ↓ɛɔ(jV)], ↓↓jμυ (including ηυ), οι [σə, ↓σə(jV)], ου [μυ], η [ɛ, ↑ɛɜ], ῑ [iɪ], ῡ [yɣ, ↓jμυ], υι [yɣ, ↑yɪ, ↓yɣ(jV)], ↓jμυ(jV), ωυ [σɔ, ↓ɜɔ].

As for the *consonants*, let us notice: τ [t(h)], δ [d], θ [θ, ↓t(h)], φ [f], χ [x, ɣ, ↓k(h), ↓k̄(h)], ψ [ps, ↓#s], ξ [ks, ↓#s, ↓↓#z], ζ [z, zɔ], λ [lV, †C, †#], ρ [r, ↓ɹ, ↓ɹ], ρ̄ [r, ↓ɹ, ↓ɹ, †hr], and homorganic ν [n≡C] followed by a consonant, [n; m, m̄, n, ↓n̄, n̄, n̄]; σ/ς [s] (but: + μ [zm], β [zb], δ [zd], γ [zg]).

Geminates are rendered as [C] (or, possibly, as [†CC]). A phonic zero corresponds to the 'rough breathing' (´), but some people may choose to insert /h/ [h, h̄].



m	[m̄]	[n̄]	n	↓[n̄]	[ŋ]	[ŋ]	
p b		[t d]	† d	↓[t d]	[k g]	k g	[ʔ]
	f	θ				x	
		s z			↓[ɹ]	j	w h [h̄]
			r				
		[ʃ]	l	[ʃ]			



Summary of main usual average English realizations (with some possible variants): α [e, ↓æ], ᾱ/α [ɑ, ↓EI], ε [E], η/η [Eɜ], ι [i], ῑ [Ii], ο/ω/ω/ωυ [ɒ, σ, σω, ↓ɜω], υ [y, ↓jɔ], ὠ/ωι [ɣy, ↑YI, ↓jμy], ου [ɔy, μy, ω], ει [EI], οι [σə], αι [aə], αυ/ᾠυ [aω], ευ/ηυ [Eω, ↓jμy], VιV [VəV], VυV [VωV]; and: ‘ [θ, ↑h, ↓ʔ], ’ [θ], ‘/ˆ [ˈ], ‘ [ˈ, ˈ, ˈ];

β [b], γ [g, g], δ [d, ↓dɹ], ζ [z, zd], θ [θ], κ [k(h), k(h)], λ [l, l], μ [m, m], ν [n, m, m], ξ [ks, ↓#s, ↓↓#z], π [p(h)], ρ [r, ↓r, ↓r], ρ [r, ↓r, ↓r, ↑hr], σ/ς [s, #s, s#], zm, zb, zd, zg], τ [t(h), ↓t(h)ɹ], φ [f], χ [x, x, ↓k(h), ↓k(h)], ψ [ps, ↓#s].

There follows a possible sample of the Aesopian fable given in § 4, illustrating the kind of pronunciation generally used at school and university, unless more genuine, but more complicated, realizations are favored, as precisely in § 4.

[bə'ɹEɜs khaə'elɪɒs ,phɛɹjɔdə'nɑ'meɪɒs 'ɛɹəzɒn: 'ɛdɒk,SEI dɛɪaɔ'thɔs ɛ'kheɪnɔɔ
 ʃɛn'nɪkɛɪ nɛpə'nɛɪmɑ: ,ɒsən aɔ'thɔ:n 'ɛnθɹəpɒn ,ɒdɔə'hɒɔɹən ɛk'djμuseɪ.] ,khaə-
 σɔbə'ɹEɜs ɑ'(ɪ)k'sɑ'məɒs (s)ʃə'dɹɒsɛn: ,ʃμudɪɛn'θɹɔpɹu ɛn,ʃɛxə'mɛnμy ,ʃɛsɛθɛzɹɔz
 'mɛlən ɛ'phɛkɛɪ,ʃɔɔ..]

,σɔdɛɪə'phɔɔ ʃə(p)'sjμuxəs ,kheɹəpɔɔ'nμməɒs: ,ɛʃi'mɛlɔɹ ,kəpəɹɹə'thɛɹən ɛs-
 'θɛzʃə ,pɹɒsə'lɛmbənən: 'ɛɔs əpɒkə'mɔ:n σɔbə'ɹEɜs ʃɔɔə'lɪσɔ ,mɛʃəpə'ɹɛdə,kɛɪ.] kə-
 'kheɪɒs ,ʃɔɔmɛm'phɹɔɔʃɔm mɛ'thɹɪɒs pɹə'sɛləmp,SEɪ: ,ʃμudɛɪn'θɹɔpɹu ,ʃɑpɛ-
 ɹɪ'sɑ: ʃɔ'nɪmə'thɪɒn ɛpɒʃɪθə'mɛnμy: sʃə'dɹɔɹən ʃə'khaɔmə ʃɛ'phɛʃɛɪ,ɛɪ 'mɛxɹɪs
 ʃμy pɹɒs,ʃɛnə'lɛɪən ʃɛn'thɛxɛɪm ,mɛdʃɔ'nɑ'məɒs: ,əpɒdʃɔ'sɑ'məɒs ,pɒʃə'mμy ,pɛ-
 ɹə'ɹɛɔnʃɔs ʃɛpɹɪlə'thɹɔn ʃə'phɛɪɪ.]

ɹɹɹɹ'ʃɛsɔɔ σɔ'mɪθɔs: | ɹɹɹɹə'lɔməθɛ: ɹɹɹɹ'ɹɔm 'phɑ'lɪn 'lɛɹɪn:'].

[bo'reas ka'jɛljɔs pe,riɔdy'na'meɔ 'sɛ:riɔɔɔɔɔnː| 'ɛdɔksɛ deautɔi se'kɛino ten'ni'ke
 napo'ne'imaiː ,osa,nauto'nanθɔɔpo ,noɔoi'pɔ'ro nek'dy:zɛː.] ,kajobɔ'rea sark'same-
 nos ,foɔro'sɛnː ,tudean'θɔ'ɔpuan ,texo'mɛnu ,teses'θɛtoz 'mallo ne'pɛ:keitoː.]

,oɔey'pɔtup'sy'xus ,katapo'nu:menosː| ,ɛti,mallon ,kaipe,ritto'tɛ'ra nes'θɛta ,pro-
 ze'lambanenː| 'ɛo sa,poka'mɔ'no bo'reas to'e'lio metapa're:ɔkeː.] ka'kɛinos ,tomem-
 'pɔ'tom metrios pro'zɛ:lampseːː| ,tudean'θɔ'ɔpu ,tape'ris'sa to,nimatiɔ napo'tiθe'mɛ-
 nuː| sfo'drɔ'te,ron to'kaumae 'pɛ:teineː 'mɛxri 'supros ,tena'lea nan'tɛ'xeim ,medy-
 'na:menosː| apody'za:menos ,pota'mu parar'ɛo'nto sepilu'tɔ na'pɛeiː.]

ζα'ρεα'dɛ'sɔjo 'my:θɔsː| ζεbu'lw:meθaː ζau'tɔm palin'le:geinː].

24. Here is the typical Greek alphabet, with some possible older variants.

Α (Α, Α, Α, Α, Α, Λ, Λ) α (α, α, α, α),
 Β (Β, Β, Β, Β) β (β, β, β, β),
 Γ (Γ, Γ, Γ, Γ, Υ) γ (γ, γ, γ, γ, Υ),
 Δ (Δ, Δ, Δ) δ (δ, δ, δ),
 Ε (Ε, Ε, Ε, Ε, Ε, Ε) ε (ε, ε, ε),
 Ζ (Ζ, Ζ, Ζ) ζ (ζ, ζ, ζ),
 Η (Η, Η, Η) η (η, η),
 Θ (Θ, Θ) θ (θ, θ, θ, θ, θ),
 Ι (Ι) ι (ι, ι, ι, ι),
 Κ (Κ, Κ, Κ, Κ) κ (κ, κ, κ, κ),
 Λ (Λ) λ (λ, λ, λ, λ, λ),
 Μ (Μ, Μ, Μ, Μ, Μ, Μ) μ (μ, μ),
 Ν (Ν, Ν, Ν, Ν) ν (ν, ν, ν, ν),
 Ξ (Ξ, Ξ, Ζ, Ζ) ξ (ξ, ξ),
 Ο (Ο, Ο) ο (ο, ο),
 Π (Π, Π, Π, Π) π (π, π, π, π, π, π),
 Ρ (Ρ, Ρ, Ρ) ρ (ρ, ρ, ρ, ρ, ρ),
 Σ (Σ, Σ, Σ, Σ) σ-ς (σ, σ, σ, σ, σ, σ, -ς, -ς, -ς, -ς, -ς),
 Τ (Τ, Τ) τ (τ, τ, τ, τ),
 Υ (Υ, Υ, Υ) υ (υ, υ, υ, υ, υ),
 Φ (Φ) φ (φ, φ, φ, φ, φ, φ),
 Χ (Χ, Χ, Χ, Χ) χ (χ, χ, χ, χ),
 Ψ (Ψ) ψ (ψ, ψ, ψ),
 Ω (Ω, Ω, Ω, Ω) ω (ω, ω, ω).

