To all my Patreon Supporters, χαίρειν!

In March 2023 I released a new audiobook, **Lucian's *Judgement of the Goddesses***, which I recorded as an opportunity to show six standardized variants of Lucian Pronunciation. Up to the present, I have produced hundreds of hours of audio for various Patreon tiers in only one variant of Lucian Pronunciation, which was the original "main" variant that Raphael Turrigiano and I recommended in 2020. The system of Lucian Pronunciation, however, was always designed to be modified into other variants based on chronological and regional varieties of the language during Classical Roman times.

Thus the "main" variant of Lucian Pronunciation, now called Samosatene Lucian, is only one of many newly standardized variants that I will be using in future recordings. In my *Judgement of the Goddesses* audiobook (already available to [Theodorei Tier Patrons](#) and at my audiobook store at [this link](#)) each character speaks in a different variant in order to demostrate the differences between Romaic Lucian, Pompeian Lucian, Alexandrine Lucian, Memphite Lucian, Samosatene Lucian, and Antiochene Lucian.

The dialogue in the audiobook is preceeded by a pronunciation guide that explains the genesis of these six variants, the historical evidence supporting each as a convention, and the reasons why someone may prefer to employ one variant over another. Today I am making that **Guide to the Variants of Lucian Pronunciation** available to you so that you can explore which Lucian Pronunciation variant might be best suited to your purposes. As much as I am compelled by the desire to accurately realize historical phonology, I am equally sensible to the importance of practicable conventions, and thus have attempted to harmonize these two potentially discordant requisits as best as possible in the commentary below.

In the following document, I will discuss phonology in terms of International Phonetic Alphabet (IPA) symbols. If you are unfamiliar with these symbols, I recommend the various Wikipedia pages and audio samples that

cover this topic in detail, or my introductory lessons available as videos on my YouTube channel polýMATHY (q.v. IPA vowels, IPA consonants).

N.B.: I use the terms *innovative* or *evolved* to indicate pronunciation characteristics more akin to Modern Greek or in that direction from a developmental perspective, and *conservative* or *archaic* for those more like Classical or pre-Classical Greek.

Thank you so much for your support! Χάριτας οἶδα.

Luke Amadeus Ranieri
Rome, March 2023

The Judgement of the Goddesses (2023), Irene La Preziosa

GUIDE to the VARIANTS of LUCIAN PRONUNCIATION

by Luke Amadeus Ranieri, February 2023

The Judgement of Paris (1645-1646), Claude Lorain

LUCIAN PRONUNCIATION & OTHER CONVENTIONS

In 2020 when Raphael Turrigiano and I developed the Lucian Pronunciation system (Ranieri & Turrigiano 2020), named after 2nd century AD author Lucian of Samosata, our intent was to standardize a pronunciation convention for Ancient Greek as it sounded during the Classical Roman Period (roughly 100 BC to 200 AD). While the phonology would be based in the Classical Roman Period, the convention was meant to be useful when working with all Ancient Greek, both Classical and Koine. Our reasons for choosing the Classical Roman Period as the basis for this convention included the following:

1) We wanted to have a sound system that would correlate chronologically to the Classical Latin authors — philologists arbitrarily qualify Latin authors as Classical if they flourished in the 1st century BC through the 2nd century AD. Importantly, the majority of these erudite Romans all read and highly esteemed both contemporary and more antique Greek literature.

2) The Classical Roman Period was also a time when Greek authors began to revive the great works of Classical Attic Greek literature, called the Second Sophistic (1st and 2nd centuries AD). This is therefore a good time period to find literature of the Koine Period (circa 350 BC to 600 AD) that is written in the variety of styles most often studied today, such as Classical Attic and Biblical Koine, meaning that the voices of early Christian authors may be represented as well.

3) This three-century time period also offers a Greek language in transition from its more archaic to its more modern phonology, allowing us to select certain phonetic characteristics extant in that time period that we deemed pedagogically sound for the majority of scholars today (to be discussed below).

Our philosophy in the establishing of a historical pronunciation convention involves the balance of four factors: historical accuracy in the sounds prescribed, aesthetic choices that can be made in reference to a universal default model that is linguistically and pedagogically sound, a system that is teachable and learnable, and ultimately comprehensible to and accepted, if not adopted, by those who already teach, study, or converse in Ancient Greek.

Prior to 2020, four pronunciation conventions were commonly known:

1) The Reuchlinian Pronunciation, which is just the Modern Greek Pronunciation applied to Ancient Greek, advocated for by Johann Reuchlin in the 16th century.

2) The Erasmian Pronunciation, named after Erasmus who in his 1528 essay *De Recta Latini Graecique sermonis pronuntiatione* attempted to reconstruct the

pronunciation of Ancient Greek (and also Latin) based on ancient grammarians' testimony.

3) The Restored Classical Attic Pronunciation of the authors of Athens of the 5th and early 4th centuries BC, famously codified by W. Sydney Allen in his book *Vox Graeca* (1968).

4) The Buthian Pronunciation, in which Dr. Randall Buth (2008) proposed a system of phonology that corresponds chronologically to later Koine.

All these pronunciation systems have their strengths and weaknesses. Reuchlinian has the advantage of being identical to Modern Greek, and thus is readily used by Greeks in their pedagogy. It has significant drawbacks, however, in that vital elements of grammar are completely obscured, such as λέγει "he says," λέγῃ "he would say," and λέγοι "he might say," which, as in English, have very different meanings, but in Reuchlinian Pronunciation sound identical: [lɛʝi]. This means that other circumlocutions are necessary in order to clarify the meaning of phrases where mergers occur in this pronunciation system, mergers that would not have occurred in antiquity, creating a never-ending series of obstacles for spoken communication. The other pronunciation systems listed above avoid most of the mergers of Modern Greek / Reuchlinian.

Erasmian Pronunciation if applied with strict linguistic rigor gets pretty close to something like Ancient Greek might have sounded in antiquity. It has two drawbacks, however. One is that "Erasmian" constitutes wildly different approximations made by people who pronounce the phonemes as they do in their native languages, whether English, Italian, German, French, etc., and thus is not truly a cohesive system if one considers how it is actually applied and taught worldwide. The other drawback to Erasmian is that Erasmus restored certain phonemes incorrectly; for example, the ει digraph is universally rendered in Erasmian as the diphthong /ei̯/, a sound it never had from Classical Antiquity onward (Allen 1968, pp. 66-71). Thus, in spite of better research that has emerged in the centuries since Erasmus' original dialogue, the various conventions called "Erasmian" have made no attempt to incorporate those

findings, and thus I do not consider them to be a true restoration of Ancient Greek phonology.

The system proposed by Allen, however, is an excellent model for Classical Attic Greek. In addition to correct Attic values for the vowel and consonant qualities, it also employs phonemic vowel and syllable length, as well as pitch accent. While Allen himself did not recommend pitch accent (Allen 1968, p. 129), apparently because he did not have any familiarity with living pitch accent languages, such as Japanese and Serbo-Croatian, it is an essential component to Classical Attic and indeed to the majority of spoken Ancient Greek (see Allen 1968, p.118, for sheet music from the 1st century AD that demonstrates near perfect melody coincidence with natural pitch accent, and the same chapter for examples of pitch accent into late antiquity). One drawback to using Classical Attic Pronunciation is aspirate pronunciations for φ θ χ /pʰ tʰ kʰ/, which I have found are virtually impossible for people to pronounce consistently unless they have had intensive linguistic training or are fluent in a language that has aspirates, such as Hindi. Another difficulty with Classical Attic is correctly rendering long diphthongs ᾳ ῃ ῳ /aːi̯ ɛːi̯ ɔːi̯/, as most people who attempt them merge them with short diphthongs unawares.

Buth's proposal for Koine phonology takes into account spelling errors recorded during the Koine Period, and presents a rather simplified phonology quite close to Modern Greek that is a good approximation for late Koine to early Byzantine (Mediaeval) Greek phonology. The simplicity of Buthian Pronunciation is very much to its advantage, and its similarity to Modern Greek is a plus. However, it does not go quite far enough in some areas it must for historical accuracy, such as not palatalizing velar consonants before front vowels (to be discussed later). Moreover, it makes no space for phonemic vowel or consonant length, much less pitch accent, which are demonstrated features of spoken Greek during much of the Koine Period as well as the Classical Attic Period. As these last features are fundamental to the majority of Ancient Greek literature, which is the target in learning Ancient Greek for most people, I

regard the Buthian Pronunciation to be too limiting as an approach to the whole corpus of pre-Mediaeval Greek.

Classical Attic and Buthian, as noted, represent the left and right end points of the changing phonology of Ancient Greek, and none of the systems mentioned above capture the nature of the the Greek voice during the Classical Roman Period. All these things considered compelled me and Turrigiano to recommend a main variant of Lucian Pronunciation that exhibited a transitional character for most of the major sound changes that were in progress two millennia ago.

SOUND CHANGES DURING THE KOINE PERIOD

Greek went through an impressive array of vowel and consonant mutations during the Koine stage of development, and most of these are attested in one form or another during the Classical Roman Period.

VOWELS & DIPHTHONGS

The vocalic mutations attested in the time between Classical Attic and Modern Greek are quite striking, and are typified by iotacism, where many of the formally distinct phones have merged with iota: ι /i/. The chart below summarizes the major vowel shifts; vowels whose qualities are virtually identical to Modern Greek are not shown for the sake of simplicity. Classical Attic and Modern Greek realizations are given as end points, but all of the phones on the chart may have been present at one time or another during the Koine Period (4th century BC to 6th century AD).

grapheme	Classical Attic	transitional stages	Modern Greek
η	/ɛː/	/ɛː/ > /ẹː/ > /eː/ > /ẹ̣ː/ > /iː/ > /i/	/i/
υ, ῡ	/y, yː/	/yː/ > /y/	/i/

grapheme	Classical Attic	transitional stages	Modern Greek
ω	/ɔː/	/ɔː/ > /o̞ː/ > /ɔ~o̞/	/ɔ~o̞/
ει	/eː/	/eː/ > /e̞ː/ > /iː/ > /i/	/i/
ου	/uː/	/uː/ > /u/	/u/
αι	/ai̯/	/ai̯/ > /ae̞/ > /æɛ̞/ (> /æː/) > /ɛː/ > /ɛ~e̞/	/ɛ~e̞/
οι	/oi̯/	/oi̯/ > /øi̯/ > /øy̯/ (> /øː/) > /yː/ > /y/	/i/
αυ	/au̯/	/au̯/ > /aw/ > /aβʷ~aɸʷ/ > /aβ~aɸ/ > /av~af/	/av~af/
ευ	/eu̯/	/eu̯/ > /ew/ > /eβʷ~eɸʷ/ > /eβ~eɸ/ > /ev~ef/	/ev~ef/
υι	/yi̯/	/yi̯/ > /yː/ > /y/	/i/
ᾳ	/aːi̯/	/aːi̯/ > /aː/ > /a/	/a/
ῃ*	/ɛːi̯/	/ɛːi̯/ > /e̞ː/ > /eː/ > /e̞ː/ > /iː/ > /i/	/i/
ῳ	/ɔːi̯/	/ɔːi̯/ > /o̞ː/ > /ɔ~o̞/	/ɔ~o̞/

The story of ῃ is actually quite a bit more complex, but not necessary for the present discussion; see Allen 1968, pp. 80-83.

It is important to note that the direct lineages shown above of one sound leading to another in continuity from Classical Attic to Modern Greek may be misleading, in that there exist well attested popular Koine dialects, such as in Egypt, that demonstrate various sound changes that could not have possibly led to Demotic (the basis of Modern Greek). Egyptian Koine retains, for example, aspirates as the majority pronunciation of φ θ χ until at least the beginning of the Byzantine Period circa 6th century AD. A common trend in Koine, as mentioned above, was the change of αυ and ευ by this scheme:

αυ   /au̯/ > /aw/ > /aβʷ~aɸʷ/ > /aβ~aɸ/ > /av~af/

ευ   /eu̯/ > /ew/ > /eβʷ~eɸʷ/ > /eβ~eɸ/ > /ev~ef/

However, spelling errors in Egyptian papyri show <ατός> (Gignac 1975, p. 227), which indicate the complete loss of the second element of the diphthong. In these varieties of Egyptian Koine, the path would instead be:

αυ   /au̯/ > /aw/ (> /aβ~aɸ/) > /a/

ευ   /eu̯/ > /ew/ (> /eβ~eɸ/) > /e/

It is therefore important, as J.N. Adams tells us with respect to spelling errors in Latin epigraphy (Adams 2013, pp. 52-67), not to take every spelling error as evidence of the eventual pronunciation attested much later, as different phenomena may be at work.

CONSONANTS

grapheme	Classical Attic	transitional stages	Modern Greek
β	/b/	/b/ > /β/ > /v/	/v/
δ	/d/	/d/ > /ð/	/ð/
γ + back vowel	/g/	/g/ > /ɣ/	/ɣ/
γγ + back vowel	/ŋg/	/ŋg/ > /g/	/g/
γ + front vowel	/g/	/g/ > /ɟ/ > /j/	/j/
γγ + front vowel	/ŋg/	/ŋg/ > /ɲɟ/	/ɲɟ/
φ	/pʰ/	/pʰ/ > /p͡ɸ/ > /ɸ/ > /f/	/f/
θ	/tʰ/	/tʰ/ > /t͡θ/ > /θ/	/θ/
χ + back vowel	/kʰ/	/kʰ/ > /k͡x/ > /x~χ/	/x~χ/

grapheme	Classical Attic	transitional stages	Modern Greek
χ + front vowel	/kʰ/	/kʰ/ > /k͡x/ > /x~χ/ > /ç/ or /kʰ/ > /cʰ/ > /c͡ç/ > /ç/	/ç/
κ + front vowel	/k/	/k/ > /c/	/c/
ζ	/zd/	(/d͡z/ >) /zː/ > /z/	/z/
ῥ	/r̥/	/r̥/ > /r/	/r/

Consonants not shown are assumed to have retained their Classical value to the present day with minimal mutation. As with vowels, the consonants went through these series of changes, but not necessarily at the same time or in the same geographies or social registers. For example, there is ample evidence in Egypt that some or all of the voiced stops β δ γ became fricatives as in Modern Greek centuries before the voiceless aspirates φ θ χ, while in Italy the opposite appears to be true.

Geminated or long consonants, such as in ἀλλὰ "but," are all merged with single consonants in Standard Modern Greek, but not in some dialects of Modern Greek (Horrocks 2014, pp. 388-406). This demonstrates that phonemically long consonants were not lost universally during the Koine Period, and that the norm was likely that they were retained in most dialects. For the sake of comparison, consider Italian, which is the only major Romance language to retain phonemically long (geminated) consonants from Latin. If Italian and its dialects were ignored, one might assume that Latin had lost geminated consonants universally in antiquity, whereas that hasn't happened yet in Italy.

CHOOSING A MAIN VARIANT OF LUCIAN PRONUNCIATION

The aim of the Lucian Pronunciation proposal in 2020 was to find a single set of phones for the graphemes listed above that would be historically plausible as well as pedagogically useful. The following are some of the considerations that went into codifying that system.

PHONEMIC VOWEL LENGTH & PITCH ACCENT

Pitch accent is dependent on the existence of phonemic vowel length distinctions. Both are fundamental characteristics of Ancient Greek grammar, morphology, and orthography. Since I believe it is worth emphasizing, I will repeat that **Ancient Greek as it is taught, both in Classical and Koine grammar, is entirely dependent on understanding vowel length distinctions *as well as* pitch accent**. For example, nominative singular λεγόμενος "[being] said" is different from genitive singular λεγομένου due to phonemic vowel length, which changes the pitch accent; equally οὖσα "being" in the feminine nominative singular changes to οὔσᾱς in the accusative plural, another shift in pitch accent dependent on phonemic vowel length change. These are fundamental characteristics of phonology that are essential to the core grammar of the Ancient Greek language.

While this system was clearly retained by the majority of authors through the Classical Roman Period (Allen 1968, p. 88), that doesn't mean that we are not simply observing conservative orthography. Indeed, there is evidence for stress accent coming to replace pitch accent, and consequently eroding the vowel length distinctions (likely first in unstressed syllables, then later in stressed syllables, as in Latin, for which see Adams 2013, p. 67) in isolated geographies, such as Egypt (which may be due primarily to Coptic substrate influence in that dialect), and at different times.

The conclusion, however, reached by Buth (2008) that phonemic vowel length distinctions and consequently pitch accent had vanished from the Greek language before the Classical Roman Period is incompatible with the preponderance of evidence, as demonstrated by Allen (1968) and Sturtevant (1920). Buth assumes the interchange <ω~o> or <ει~ι> to indicate loss of vowel length, but that is only one possible explanation, as demonstrated by Allen (1968, p. 84). Such confusions are certainly indicative of a vowel *quality* merger, but not necessarily a loss of length distinction. This is because the importation by the Athenians of the η and ω letters from the Ionic alphabet was accomplished in order to mark their distinct *quality* difference in late 5th century BC Attic, not their length; thus any confusions of either letter with their short vowel equivalent are merely demonstrations of similar quality, not necessarily quantity. Allen's conclusion would have be challenged directly to be overturned, thus I consider it still to be valid.

There is better evidence for loss of phonemic vowel length where the effect of stress accent seems to cause the correption of post-tonic syllables, which can be found in Littman (1913, p. 143): the 3cAD-4cAD Syrian inscription <αναγεν> stands for ἀνάγαιον. There are many such examples in inscriptions in other localities, increasing *after* the Classical Roman Period, and I agree that these show definitive loss of phonemic vowel length in at least unstressed syllables, and thus loss of pitch accent. But insofar as the loss of these features becomes general in a dialect, that dialect will lose the ability to distinguish between minimal pairs that are not merged in standard Ancient Greek; and thus in order to communicate effectively with such a phonology, one will necessarily alter vocabulary, style, morphology, and the grammar itself (much as Mediaeval and Modern Greek have had to do) to accommodate this radical shift from mora-timed language to syllable-timed language. Said another way, a syllable-timed dialect's phonology is incompatible with the standard form of the language in the Koine Period: **Ancient Greek as a standardized system, in either its Classical or Koine form, does not exist separately from phonemic vowel length and pitch accent**. It is entirely fine to employ a syllable-timed

convention for Ancient Greek, as many do for Latin, but these conventions do not represent the natural sound of either language in its standard form.

We have ample evidence from grammarians' testimony that spoken Greek contemporary with Classical Latin retains phonemic vowel length and pitch accent through the Classical Roman Period. For example, the 2cAD-3cAD grammarian Terentianus Maurus (in *De litteris, de syllabis, de metris*) explains in verse the pronunciation of Greek vowels, notably how α ι υ are written the same both long and short, but η is the long version of ε, and ω is the long version of o, and does so while placing the η and ω in *long syllables of the meter.*

hinc **ῆτα** minus scrībimus, hinc et **ω** suprēmum;

ūnā quoniam fās habitum est notāre fōrmā,

prō temporibus quae geminum ministret ūsum. ...

litteram namque **ε** vidēmus esse ad **ῆτα** proximam,

sīcut **o** et **ω** videntur esse vīcīnae sibi:

temporum mōmenta distant, nōn sonī nātīvitās.

Popular Greek music, such as the sepulchral inscription of the Epitaph of Seikilos (Allen 1968, p. 119), demonstrates that both pitch accent and phonemic vowel length are still essential characteristics of new Greek compositions as late as the 2nd century AD. Greek poetry that is stress-based instead of quantitative begins around the 4th century AD, which is when Allen dates the general loss of pitch accent and phonemic vowel length.

Thus, for us to appreciate Greek literature from the Classical and Koine periods, I conclude that it is more sensible to train ourselves to employ vowel and syllable quantity as well as pitch accent to the best of our ability, as these are fundamental aspects of the literature, vocabulary, and grammar. In the case of reciting the texts by authors who may *possibly* have lacked phonemic vowel length and/or pitch accent, reading them aloud with these characteristics

intact will take little away from their prose. But the opposite is not true: for texts by authors who retained phonemic vowel length and pitch accent, not maintaining those characteristics in our recitations is to rob them of the most essential aspect of their speech and style. This is the reason why the characteristics of phonemic vowel length and pitch accent are the foundation of Lucian Pronunciation in all its variants.

ASPIRATES VS. FRICATIVES

As mentioned above, β δ γ φ θ χ have all become fricatives in Modern Greek. In 2020, Turrigiano and I were working from the assumption that β δ γ must have become fricatives before φ θ χ in all geographies, as believed by Horrocks (2014) and Buth (2008). Given that, we decided that each letter β δ γ φ θ χ should be some variety of fricative for the main variant of Lucian Pronunciation. This is because the aspirate pronunciation for φ θ χ /pʰ tʰ kʰ/ is usually realized so incorrectly by the majority of people who attempt it, we thought it best to choose the fricative version of φ θ χ, meaning that β δ γ would also be fricatives by that time as well, we reckoned. We assessed that a likely time period for this would be the 2nd century AD, when Lucian of Samosata flourished, hence the name of this pronunciation system: given that Lucian Pronunciation is meant to be a convention that one can use for any type of Ancient Greek, from Classical to Koine, the name of Lucian, who lived in the Classical Roman Period, during the greater Koine Period, and wrote in Classical Attic style, seemed an appropriate symbolic choice.

The labial stops β and φ went through the bilabial fricative stage /β, ɸ/ before they became labiodental fricatives /v, f/, which are their values in Modern Greek. The bilabial fricatives were chosen for the main variant of Lucian Pronunciation because they coincide with the transitional pronunciations of αυ and ευ (discussed below).

The first clear evidence for the pronunciation of γ as a fricative (as in Modern Greek) comes in the Attic inscriptional misspelling of Ἱερων- as <hιγερων> (Threatte 1980, p. 441) from the 3rd century BC, which is the only error of this type in Attic inscriptions (meaning it may have taken hold in the general Attic population only much later, which is supported by the hypothesis of Teodorsson, 1978), while there are numerous similar examples starting in the 1st century BC in Egyptian papyri (Gignac 1975, pp. 71-75). The presence of the γ here appears to represent something close to the palatal approximate /j/, but must in fact be more akin to a somewhat less innovative phone, namely the same sound found in Modern Greek /ʝ/, which is a voiced palatal fricative.

That γ plus any front vowel must be /ʝ/ in at least some dialects of Koine is extremely significant in its own right, but also tells us that **all velars, γ χ κ, must be palatalized before front vowels**. (This unavoidable consequence is something that Buthian Pronunciation does not take into account, but would have to in order to have a consistent and historically plausible sound system.) Thus γε χε κε are pronounced /ʝe çe ce/ as in Modern Greek in such a phonological system. Palatalization of velars before front vowels is part of the main variant of Lucian Pronunciation.

SIBILANTS ζ & σ

In all stages of Greek, there is no reason to believe that the sibilant σ was other than a retracted /s̱/, just as it is in Modern Greek and most varieties of European Spanish. This is because languages that lack a phonemic /ʃ/ sound regularly have a retracted /s̱/; thus this is also true for Classical Latin phonology as well as Greek. For this reason, the retracted /s̱/ is a standard part of all Lucian Pronunciation variants.

The letter ζ was most likely /zd/ in Classical Attic, but by the end of the Classical Period this was changing in Athens. In some other dialects of Greek during the Classical Period, ζ was the affricate /d͡z/, and the later simplification

to the geminate /zː/ was more probably a result of that affricate rather than a derivation of /zd/. Thus as Attic took on /zː/ in favor of /zd/, this may have been a result of dialectical replacement of non-Attic into Attic, rather than a direct evolution. A similar phenomenon occurred where ττ was replaced by σσ as Great Attic transitioned into Koine (Sturtevant 1920, p. 115, p. 187, Horrocks 2014, p. 80). While 2nd century AD Latin grammarian Velius Longus comments that /d͡z/ and /zd/ pronunciations for ζ survived in isolated communities of his day, the majority pronunciation was /zː/ (Sturtevant 1920, pp. 116-117). For this reason, Lucian Pronunciation prescribes ζ as /zː/ for all variants, and prefers the retracted form /z̠ː/, which is also its outcome in Modern Greek (where it is not, however, geminated).

DIGRAPHS, DIPHTHONGS, VOWELS

The digraph ει represents /eː/ in Classical Attic, **not the diphthong /ei̯/**. Prior to the 6th century BC, some of what we write today as ει were in fact representative of the true diphthong /ei̯/, such as εῖ < *ehí (ἐσσί in Epic), but others stood for the long monophthong /eː/, such as "to be" εἶναι < *εενναι. By the 6th century BC, these had all fallen together as the long monophthong /eː/ (Allen 1968, p. 72). Starting in the 4th century BC, we can observe spelling confusions where ī and ει become interchangeable before consonants, while spelling errors between ει and η are more common before vowels. This suggests that a following vowel causes the sound in ει to remain more open for a few centuries. This is confirmed by Latin transcriptions of terms like Εὐκλείδης as *Euclīdēs* and Ἀλεξάνδρεια as *Alexandrēa*. By the 1st century BC, interchanges of ī and ει become increasingly common before vowels as well, and by the 1st century AD ει appears to have merged phonetically with ī in all positions (although I will present later an alternative transitional stage, for which see *Heraclean Lucian variant* below). Thus the main variant of Lucian Pronunciation has ει as /iː/.

The originally diphthongal pronunciation of αυ /au̯/ and ευ /eu̯/ eventually becomes /av~af, ev~ef/ as in Modern Greek (whether the final element is /v/ or /f/ depends on the following consonant; if a voiced consonant follows, as in Εὐγένιος, then /v/ is the pronunciation; if it is a voiceless consonant, as in αὐτός, then it must be /f/). This is the path of transitions:

αυ   /au̯/ > /aw/ > **/aβʷ~aɸʷ/** > /aβ~aɸ/ > /av~af/

ευ   /eu̯/ > /ew/ > **/eβʷ~eɸʷ/** > /eβ~eɸ/ > /ev~ef/

The false diphthongs marked in bold that terminate in a rounded bilabial fricative have been chosen for the main variant of Lucian Pronunciation for a few reasons:

1) They sound very much like the more conservative true diphthongs, and so those who use Erasmian or Classical Attic pronunciation will perceive them thus when hearing them; while those who use Reuchlinian or Buthian pronunciation will hear the fricative final element and comprehend them as their more innovative counterparts.

2) The fricative component to the false diphthongs is bilabial, thus recommending the bilabial pronunciation of β φ as /β ɸ/ as noted above.

3) In a hypothetical pronunciation of the dominant dialect of Koine, if letters β φ are /β ɸ/ and digraphs αυ and ευ are /aβʷ~aɸʷ/ and /eβʷ~eɸʷ/, this resolves the paradox that there exist spelling errors, although sporadic, suggestive of something nearer to the Modern Greek sounds, while they could also still sound like their more archaic versions, thus explaining the absence of earlier commentary on this change.

The diphthongs αι and οι follow these paths from more archaic to more innovative:

αι   /ai̯/ > /ae̯/ > **/æe̯/** > /εe̯/ > /ɛ:/ > /ɛ~e̯/

οι   /oi̯/ > /øi̯/ (oe̯) > **/øy̯/** > /ø:/ > /y:/ > /i/

For the main variant of Lucian Pronunciation, the narrow transitional diphthongs αι /æe̯/ and οι /øy̯/ are chosen, as they sound very nearly like the monophthongs of Buthian Pronunciation αι /ε/ and οι /y/ while still being acoustically distinct from monophthongs, and thus are heard as true diphthongs.

The long diphthongs ᾳ ῃ ῳ are generally agreed to have merged entirely with ᾱ η ω in Greek speech between 150 BC and 50 BC. Their existence contemporary with pre-Classical Latin can be seen from cōmoedia < κωμῳδίᾱ, while Classical era borrowings like rhapsōdus < ῥαψῳδὸς show that the merger was by then complete, confirmed by contemporary grammarians (Allen 1968, p. 84).

As noted above, η and ω are often misspelled as ε and ο, and while this does not necessarily indicate a merger of quantity, it does suggest a merger in quality. Thus η and ω are taken to be true-mid /e̞ː o̞ː/ in the main variant of Lucian Pronunciation, and the short vowels ε and ο /e̞ o̞/. (Their actual phonetic realization might have wandered quite a bit, as in Modern Greek.) Other vowels are essentially the same as in other Ancient Greek reconstructions, such as /y/ for υ, and the fundamental qualities of α ε ι ο have remained virtually unchanged into Modern Greek.

THE MAIN VARIANT OF LUCIAN PRONUNCIATION

The following chart compares Classical Attic and Modern Greek (Reuchlinian) pronunciation to the main variant of Lucian Pronunciation, highlighting the major differences.

Greek letter + C = before a consonant + V = before a vowel	Classical Attic	main variant of Lucian	Reuchlinian
υ	y	y	i

Greek letter + C = before a consonant + V = before a vowel	Classical Attic	main variant of Lucian	Reuchlinian
η	ɛː	e̞ː	i
ει + C	eː	iː	i
ει + V	eː	iː	i
ω	ɔː	o̞ː	o̞
ου	uː	uː	u
αι	ai̯	æe̞̯	e̞
αυ	au̯	aβʷ~aɸʷ	av~af
ευ	eu̯	e̞βʷ~e̞ɸʷ	ev~ef
οι	oi̯	øy̯	i
υι	yi̯	yː	i
ᾳ	aːi̯	aː	a
ῃ	ɛːi̯	e̞ː	i
ῳ	ɔːi̯	o̞ː	o̞
‘	h	h	∅
ζ	zd	z̠ː	z̠
σ	s̠~z̠	s̠~z̠	s̠~z̠
γ + back V	g	ɣ (/g/ after /ŋ/)	ɣ (/g/ after /ŋ/)
γ + front V	g	ʝ (/ɟ/ after /ɲ/)	ʝ (/ɟ/ after /ɲ/)
δ	d	ð (/d/ after /n/)	ð

Greek letter + C = before a consonant + V = before a vowel	Classical Attic	main variant of Lucian	Reuchlinian
β	b	β (/b/ after /m/)	β
χ + back V	kʰ	x	x
χ + front V	kʰ	ç	ç
θ	tʰ	θ	θ
φ	pʰ	ɸ	f
κ + front V	k	c	c
ρ	r̥~ɾ	r̥~ɾ	r~ɾ

I have made hundreds of recordings of Ancient Greek in the main variant of Lucian Pronunciation since 2020 in the form of audiobooks and YouTube videos, and have used it in conversation with speakers of Ancient Greek. These experiments have shown that Lucian Pronunciation largely meets the practical requirement Turrigiano and I intended: a phonology that is comprehensible to users of Erasmian, Buthian, and Classical Attic, even to speakers of Modern Greek (q.v. this video where I speak with a Greek on my YouTube channel ScorpioMartianus, and these responses from Greeks in praise of Lucian Pronunciation).

In our 2020 essay and YouTube video, Turrigiano and I stated that our proposed main variant of Lucian Pronunciation was one of many possible variants that one could construct based on the principles of the Lucian Pronunciation system. One could, for example, use more archaic phones from the sound shift chains and thus effect a voice closer to Erasmian or Classical Attic, or more innovative ones to approach Buthian or Reuchlinian. We did not, however, present fully detailed, prescribed variants within the Lucian Pronunciation system from which one could select. A total of six variants will now be demonstrated.

THE VARIANTS OF LUCIAN PRONUNCIATION

LUCIAN PRONUNCIATION VARIANTS

VOICELESS ASPIRATE-AFFRICATE-FRICATIVE DEVELOPMENT
φ θ χ /pʰ tʰ kʰ/
/p͡ɸ t͡θ k͡x/
/ɸ~f θ x~χ/

VOICED STOP TO FRICATIVE
β δ γ /b d g/
initial /b d g/
intervocalic /β̞ ð̞ ɣ̞/
/β ð ɣ/

TRUE TO FALSE DIPHTHONGS
αυ /au̯/
/aw/
/aβʷ~aɸʷ/
/aβ~aɸ/
/av~af/
ευ /eu̯/
/ew/
/eβʷ~eɸʷ/
/eβ~eɸ/
/ev~ef/

Romaic
ʽ /h/
φ θ χ /pʰ tʰ kʰ/
β δ γ /b d g/
αι /ae̯/
οι /oe̯/
αυ /au̯/
ευ /eu̯/
* ει+V /e:/

Pompeian
ʽ /h/
φ θ χ /f θ x/
β δ γ /b d g/
αι /ae̯/
οι /oe̯/
αυ /au̯/
ευ /eu̯/

Alexandrine
ʽ /h/
φ θ χ /pʰ tʰ kʰ/
β δ γ /β ð ɣ~j/
χε κε γε γγε
/cʰe ce je ŋje/
αι /ai̯~aj/
οι /oi̯~oj/
αυ /aw/
ευ /ew/
η /e:/
ω /o:/

Memphite
ʽ /∅/
φ θ χ /pʰ tʰ kʰ/
β δ γ /β ð ɣ~j/
χε κε γε γγε
/cʰe ce je ŋje/
αι /æ:/
οι /ø:/
αυ /aβ~aɸ/
ευ /eβ~eɸ/
η /e:/
ω /o:/

Antiochene
ʽ /∅/
φ θ χ /f θ x/
β δ γ /v ð ɣ~j/
χε κε γε γγε /çe ce je ŋje/
αι /ɛ:/
οι /y:/
αυ /av~af/
ευ /ev~ef/
η /e:/

Samosatene
ʽ /h/
φ θ χ /ɸ θ x/
β δ γ /β ð ɣ~j/
χε κε γε γγε /çe ce je ŋje/
αι /æ:/
οι /øy/
αυ /aβʷ~aɸʷ/
ευ /eβʷ~eɸʷ/

Right: Under each of the pronunciation convention names are listed the changes from the convention directly above it.

Below: pronunciation conventions from most conservative to most innovative:

Classical Attic

Romaic

Pompeian • Alexandrine

Samosatene • Memphite

Antiochene

Byzantine

Modern

Classical Attic

Romaic
ζ /z:/
ᾳ ῃ ῳ /a: e: o:/
ει + C /i:/
|
Pompeian
φ θ χ /ɸ~f θ x~χ/
ει + V /i:/

Samosatene
φ θ χ /ɸ θ x~χ/
β δ γ /β ð ɣ/
κε γε γγε /ce je ŋje/
αι /æ̞/
οι /øy/
αυ /aβʷ~aɸʷ/
ευ /eβʷ~eɸʷ/
|
Antiochene
ʽ /∅/
φ /f/
β /v/
αι /ɛ:/
οι /y:/
αυ /av~af/
ευ /ev~ef/

Alexandrine
β δ γ /β ð ɣ/
χε κε γε γγε /cʰe ce je ŋje/
ει + V /i:/
αι /ai̯~aj/
οι /oi̯~oj/
αυ /aw/
ευ /ew/
η /e:/
ω /o:/
|
Memphite
ʽ /∅/
αι /æ:/
οι /ø:/
αυ /aβ~aɸ/
ευ /eβ~eɸ/

Byzantine
η /i:/

Modern
υ, οι = /i ~ i:/

These figures are ways to conceive of the variants as dialects that either differ diatopically (their geography on a map) or diachronically (a timeline of sound shifts). Their nicknames are inspired by cities around the Roman Empire where pieces of evidence for their phonologies can be found. I will explain each in detail.

ROMAIC LUCIAN PRONUNCIATION

Roman Forum (1893), Giuseppe Becchetti

The Romaic Variant of Lucian Pronunciation, from Ῥωμαϊκός "Roman," was something I first devised in 2021 in response to active and passive feedback I received after presenting my audio recordings and while attempting to converse in the main variant of Lucian Pronunciation. Although my speech was generally understood by those who already knew Ancient Greek, some said they

found certain sounds difficult to make, and others proved to be a small obstacle in comprehension. A good example might be a word like αὖθις, "immediately," which in IPA is /aɸʷθiṣ/ in the main variant of Lucian Pronunciation. The sequence of a rounded bilabial fricative (for which there are few living language examples to draw from) plus a dental fricative is a bit tricky to get used to producing, whereas Erasmian /au̯θis/ and Buthian-Reuchlinian /afθis/ are much easier to produce for the majority of those who work with Ancient Greek, namely people who speak languages from Western European countries like Italy, France, Germany, England, and of course Greece itself. Another more challenging element is the /j/ discussed above for γ plus front vowels, and palatalized velars in general; the ability to produce them well and consistently is not immediate.

Thus I turned to Rome, and imagined what an Ancient Roman accent might be in Greek; or rather, how Ancient Romans pronounced the Greek of their time. This is actually pretty easy to know, thanks to the testimony of Roman grammarians on Greek phonology, and to the transcriptions of Greek words into Latin from the Classical Roman Period. The result is a phonology very much like Classical Attic (IPA characters are highlighted in the thematic color of the variant where they differ from Classical Attic; sounds that are virtually unchanged from ancient times to the present are not presented; for these details, see the complete chart of all variants at the end of this document):

Greek letter + C = before a consonant + V = before a vowel	Classical Attic	Romaic Lucian	main variant of Lucian	Reuchlinian
υ	y	y	y	i
η	ɛː	e̞ː	e̞ː	i

Greek letter + C = before a consonant + V = before a vowel	Classical Attic	Romaic Lucian	main variant of Lucian	Reuchlinian
ει + C	eː	iː	iː	i
ει + V	eː	ẹ̆ː	iː	i
ω	ɔː	ọ̆ː	ọ̆ː	ọ̆
ου	uː	uː	uː	u
αι	ai̯	aĕ̯	æĕ̯	ẹ̆
αυ	au̯	au̯	aβʷ~aɸʷ	av~af
ευ	eu̯	eu̯	ẹ̆βʷ~ẹ̆ɸʷ	ev~ef
οι	oi̯	oĕ̯	øy̯	i
υι	yi̯	yi̯	yː	i
ᾳ	aːi̯	aː	aː	a
ῃ	ɛːi̯	ẹ̆ː	ẹ̆ː	i
ῳ	ɔːi̯	ọ̆ː	ọ̆ː	ọ̆
‘	h	h	h	Ø
ζ	zd	z�	z̠ː	z̠
γ + back V	g	g	ɣ (/g/ after /ŋ/)	ɣ (/g/ after /ŋ/)
γ + front V	g	g	ʝ (/ɟ/ after /ɲ/)	ʝ (/ɟ/ after /ɲ/)

Greek letter + C = before a consonant + V = before a vowel	Classical Attic	Romaic Lucian	main variant of Lucian	Reuchlinian
δ	d	d	ð (/d/ after /n/)	ð
β	b	b	β (/b/ after /m/)	β
χ + back V	kʰ	kʰ	x	x
χ + front V	kʰ	kʰ	ç	ç
θ	tʰ	tʰ	θ	θ
φ	pʰ	pʰ	ɸ	f
κ + front V	k	k	c	c
ρ	r̥~ɾ	r̥~ɾ	r̥~ɾ	r~ɾ

The strong point of Romaic Lucian is that, for those who have a good grasp of Restored Classical Latin phonology, especially the letters used to spell Greek loanwords like PH TH CH Y Z (remembering that Z in Restored Classical Latin is pronounced exactly like in Modern Greek, only geminated, and not /d͡z/ or /zd/, for which see the discussion on sibilants above), it is exactly the same sound system they already know and use in Latin. The short diphthongs αι and οι are like the equivalent AE OE diphthongs in Latin: /ae̯ oe̯/, and the digraph ει is /iː/ before consonants, just as in the main variant of Lucian, but /eː/ before vowels, consistent with Latin transcriptions of Greek words, such as the nymph *<Dēiopēa>* in the Aeneid (1.72), from Δηϊόπεια, and *<Alexandrēa>* (Horace *Carmina* 4.14.35) from Ἀλεξάνδρεια. While Latin authors would eventually render the digraph ει as /iː/ in all positions later in the Classical Roman Period

(<*Alexandrīa*>, Propertius *Elegiae* 3.11.33), as noted above, the transitional stage of more open /eː/ for ει before vowels but /iː/ for ει before consonants is well attested, if a bit conservative. Like Classical Attic and the main variant of Lucian Pronunciation, Romaic Lucian uses the voiceless /r̥/ for ῥ, which is written RH in Latin, such an Rhodus for Ῥόδος. This sound is long when the consonant is geminated.

Romaic Lucian lacks the long diphthongs, an appropriate chronological choice for the Classical Roman Period, and represents a somewhat more conservative variant within the Lucian Pronunciation system. The letters β δ γ remain voiced stops, just as in Classical Attic. The weakest point of Romaic Lucian is that, like Classical Latin's PH TH CH, φ θ χ are the aspirates /pʰ tʰ kʰ/. While the correct or incorrect application of aspiration to Latin words with PH TH CH seldom causes complications in spoken Latin since their occurrence is rare, φ θ χ are extremely frequent in Greek discourse. As discussed above, very few people are able to use aspirates consistently or correctly, so I tend not to recommend them. If, however, you are confident in your usage of aspirates, then the Romaic variant of Lucian Pronunciation might be for you.

Pompeii (1978), Harry Green

As mentioned above, one of the practical disadvantages of Romaic Lucian for the majority of people is that it has aspirates /pᵗ tᵗ kʰ/ for φ θ χ, a difficulty it has in common with Classical Attic. Certain graffiti found in the ruins of Pompeii, however, have compelled me to recommend another variant named after that city.

There is an ancient restaurant there called *Thermopolium of the Phoenix* (also called *Caupona of Euxinus and Justus*), and this 1st century AD fresco on one of the walls (now in the Naples Museum) gives the place its archaeological name:

Its inscription reads PHOENIX FELIX ET TV. While a Classical Latin pronunciation of this slogan /phoe̯niːkṣ feːliːkṣ e̯tːuː/ would not be especially catchy, rendering PHOENIX as if it were FENIX makes for perfect alliteration: /fe̯niːkṣ feːliːkṣ e̯tːuː/. The OE diphthong in Latin had monophthongized into Ē much earlier than AE for many speakers (Allen 1965, p. 62), and this inscription suggests exactly that; and most fascinating for our purposes, it seems likely that PH used in the Latin of Pompeii was commonly pronounced /f/ rather than /pʰ/.

Other Pompeian inscriptions such as DAFNE as the transliteration for Δάφνη, and FISICA for φυσικά show how Latin speakers heard certain Greek terms. The normality of PH for /f/ in Pompeii is seen in the inscription RVPHVS for the Latin name *Rufus.* Perhaps most astonishing of all is the inscription LASFE for λάσθη. The only way that such a transcription could occur, is if the

Latin speaker writing it heard the θ as a fricative /θ/, and rendered it with an acoustically similar letter in Latin, here F.

This extraordinary set of inscriptions shows an alternative phonology extant in Italy besides the one represented by the Romaic Lucian Pronunciation, where at least φ and θ are fricatives. By contrast, there is no coaeval evidence of β δ γ becoming fricatives in the same time period in Italy. There does exist an incipient confusion of Latin V for B as early as the first century AD, but not B for V until the 2nd century AD. This suggests that V was changing from /w/ to /β/, but that Latin B was still /b/ at least in the 1st century AD (Adams 2013, pp. 184-185). In any case, the fact that original aspirates had changed into fricatives with no equivalent evidence for fricativization of voiced stops presents the mirror opposite of the developments in contemporary Egyptian Koine (to be discussed below). This conspicuous dichotomy has led me to conclude that there were indeed multiple phonologies of Koine Greek in active use in the same time period.

Finding inscriptional evidence for a fricative pronunciation of χ is more challenging, since interchanges of the type λάσθη > LASFE would not occur. We have, however, the names of various Germanic tribes that give us useful data. Dating to the 1st century BC, tribes like the Cherusci were transcribed with CH (Caesar, *De Bello Gallico* 6.10.5.3), along with the Chatti (Pliny, *Naturalis Historia* 4.100.3), Chauci (Livy, *Periochae Librorum* A. U. C. 140.2), and Chamavii (Tacitus, *De Origine et Situ Germanorum* 33.1.1), while others like the Calucones (Pliny, *Naturalis Historia* 3.137.4) and Canninefates (Velleius, *Historia Romana* 2.105.1.1) are written with just a letter C. This suggests an acoustic difference to the Latin ear. The Cherusci name is derived either from Proto-Germanic *herut* "hart," or from *heru-*, a type of sword. In any case, the *h* of Proto-Germanic in this century is reconstructed as a fricative /x/ (Ringe 2006, p. 94), and evidently is not yet debuccalized as in /h/. Given that Latin in the Classical Roman Period has a majority of speakers who pronounce the letter H as /h/, among whom we may safely include Julius Caesar, it seems reasonable to conclude that Germanic names were transcribed with CH because Latin's CH, a digraph mostly for Greek

words, was associated with the fricative /x/ for letter χ in at least some contemporary Greek phonologies known to the Romans.

There is another 1st century BC piece of evidence which we can find in the works of Catullus. In Catullus 84 the poet mocks a certain Arrius for adding Greek aspiration to Latin words where they don't belong, like "chommoda" for "commoda," and "hinsidias" for "insidias," which Arrius does evidently as a way of making himself sound erudite as those trained in rhetoric in Greece. The last couplet is of particular interest; after Arrius is sent across the sea, the horrible message is brought:

"Īoniōs" flūctūs, postquam illūc Arrius isset,
jam nōn Īoniōs esse sed "Hīoniōs".

The traditional explanation is that the joke is a play on words: Arrius puffing so much windy air due to the aspiration he was adding to everything caused the Ionian sea itself to freeze over, or to experience snowy, wintry storms: χῑόνιος from χῑών "snow." In Attic and Koine the ι in χιών is normally short, but in Epic poetry it's normally long (Liddell et al. 1848, χιών, χιόνιος), which makes it perfectly appropriate for Catullus to imply here, assuming that was his intention. If Catullus did want us to think χῑόνιος based on "Hīoniōs," then a possible conclusion is that in the Greek voices of at least some people of Catullus' day, χ was pronounced as a fricative, thus χῑόνιος /xiːonio̥s/ or /çiːonio̥s/ instead of /kʰiːonio̥s/ or /cʰiːonio̥s/.

While this is not as clear as the case of LASFE for φ and θ, the above along with the clear Pompeian evidence seems enough to suggest the possible existence of fricative pronunciations for all three former aspirates φ θ χ in some parts of Italy. It is also pedagogically more convenient to make all three fricatives, rather than just one or two (though the gradual fricativization of some letters before others is very likely). For this reason, Pompeian Lucian is almost the same as Romaic Lucian, but it has fricatives for φ θ χ /f θ x/, and also has the digraph ει as /iː/ in all positions.

Greek letter + C = before a consonant + V = before a vowel	Classical Attic	Romaic Lucian	Pompeian Lucian	main variant of Lucian	Reuchlinian
υ	y	y	y	y	i
η	ɛː	ẹː	ẹː	ẹː	i
ει + C	eː	iː	iː	iː	i
ει + V	eː	eː	iː	iː	i
ω	ɔː	ọː	ọː	ọː	ọ
ῡ	yː	yː	yː	yː	i
αι	ai̯	ae̯	ae̯	æe̯	ẹ
αυ	au̯	au̯	au̯	aβʷ~aɸʷ	av~af
ευ	eu̯	eu̯	eu̯	ẹβʷ~ẹɸʷ	ev~ef
οι	oi̯	oe̯	oe̯	øy̯	i
υι	yi̯	yi̯	yi̯	yː	i
ᾳ	aːi̯	aː	aː	aː	a
ῃ	ɛːi̯	ẹː	ẹː	ẹː	i
ῳ	ɔːi̯	ọː	ọː	ọː	ọ
'	h	h	h	h	ø
ζ	zd	z̪ː	z̪ː	z̪ː	z̪
γ + back V	g	g	g	ɣ (/g/ after /ŋ/)	ɣ (/g/ after /ŋ/)
γ + front V	g	g	g	ʝ (/ɟ/ after /ɲ/)	ʝ (/ɟ/ after /ɲ/)
δ	d	d	d	ð (/d/ after /n/)	ð
β	b	b	b	β (/b/ after /m/)	β
χ + back V	kʰ	kʰ	x	x	x
χ + front V	kʰ	kʰ	x	ç	ç

Greek letter + C = before a consonant + V = before a vowel	Classical Attic	Romaic Lucian	Pompeian Lucian	main variant of Lucian	Reuchlinian
θ	tʰ	tʰ	θ	θ	θ
φ	pʰ	pʰ	f	ɸ	f
κ + front V	k	k	k	c	c
ρ	r̥~ɾ	r̥~ɾ	r̥~ɾ	r̥~ɾ	r~ɾ

ALEXANDRINE LUCIAN PRONUNCIATION

Lighthouse of Alexandria: Assassin's Creed Origins (2014), Raphael Lacoste

As mentioned above, the phonology of Egyptian Koine with respect to fricatives presents the opposite arrangement of phones as discussed for Pompeian Lucian: while there is extensive evidence through spelling errors in Egyptian papyri that β δ γ attained a fricative pronunciation during the Classical Roman Period, there is no evidence that the same occurred for the aspirates (Gignac 1975, p. 98). Indeed, Bohairic Coptic uses the Greek letters φ θ

χ for Coptic ϕ ϴ ϧ, whose original pronunciations are /pʰ tʰ kʰ/ (Allen 2020, p. 9). Bohairic Coptic does have fricative /f/ and /x/, however, but since the Greek known to the Egyptians likely did not have fricatives for φ and χ, Coptic authors had to devise the new letters ϥ and ϧ for these sounds, derived from Demotic Egyptian writing, ultimately from hieroglyphs.

Alexandria therefore gives its name to this variant of Lucian Pronunciation. Alexandrine Lucian is informed by Coptic transliterations and Greek spelling errors in papyri discovered in Egypt dated to the Classical Roman Period:

Greek letter + C = before a consonant + V = before a vowel	Classical Attic	Romaic Lucian	Pompeian Lucian	Alexandrine Lucian	main variant of Lucian	Reuchlinian
υ	y	y	y	y	y	i
η	ɛː	ẹː	ẹː	eː	ẹː	i
ει + C	eː	iː	iː	iː	iː	i
ει + V	eː	eː	iː	iː	iː	i
ω	ɔː	ọː	ọː	oː	ọː	ọ
ῡ	yː	yː	yː	yː	yː	i
αι	ai̯	aẹ̯	aẹ̯	aj	æẹ̯	ẹ
αυ	au̯	au̯	au̯	aw	aβʷ~aɸʷ	av~af
ευ	eu̯	eu̯	eu̯	ew	ẹβʷ~ẹɸʷ	ev~ef
οι	oi̯	oẹ̯	oẹ̯	oj	øɥ	i
υι	yi̯	yi̯	yi̯	yj	yː	i
ᾱͅ	aːi̯	aː	aː	aː	aː	a
ῃ	ɛːi̯	ẹː	ẹː	eː	ẹː	i
ῳ	ɔːi̯	ọː	ọː	oː	ọː	ọ
'	h	h	h	h	h	∅
ζ	zd	z̠ː	z̠ː	z̠ː	z̠ː	z̠

Greek letter + C = before a consonant + V = before a vowel	Classical Attic	Romaic Lucian	Pompeian Lucian	Alexandrine Lucian	main variant of Lucian	Reuchlinian
γ + back V	g	g	g	ɣ (/g/ after /ŋ/)	ɣ (/g/ after /ŋ/)	ɣ (/g/ after /ŋ/)
γ + front V	g	g	g	ʝ (/ɟ/ after /ɲ/)	ʝ (/ɟ/ after /ɲ/)	ʝ (/ɟ/ after /ɲ/)
δ	d	d	d	ð (/d/ after /n/)	ð (/d/ after /n/)	ð
β	b	b	b	β (/b/ after /m/)	β (/b/ after /m/)	β
χ + back V	kʰ	kʰ	x	kʰ	x	x
χ + front V	kʰ	kʰ	x	cʰ	ç	ç
θ	tʰ	tʰ	θ	tʰ	θ	θ
φ	pʰ	pʰ	f	pʰ	ɸ	f
κ + front V	k	k	k	c	c	c
ρ	r̥~ɾ	r̥~ɾ	r̥~ɾ	r̥~ɾ	r̥~ɾ	r~ɾ

It is characterized by aspirates for φ θ χ, but fricatives for β δ γ just as in the main variant of Lucian Pronunciation. Another feature that Alexandrine Lucian shares with the main variant is palatalization of velars before front vowels, which is mandatory if γε is /ʝe/, as is demonstrated extensively by epigraphy in Egypt (Gignac 1975, p. 71, Horrocks 2014, p. 170). Diphthongs in Alexandrine Lucian are as in Coptic, where αι οι αυ ευ are /aj oj aw ew/, meaning that the second element is a true consonant instead of a glide; this second-element consonant will therefore be geminated when followed by a vowel, thus Αθηναῖος is /atʰɛːnajːos/ rather than Classical Attic /atʰɛːnai̯os/, giving Alexandrine Lucian's diphthongs a slightly different acoustic quality when compared Classical Attic's. The existence of realizations such as /aw ew/

for αυ ευ is further supported by spelling errors of the type <αουτου> for αὐτοῦ and <υπογραφεουσ> for ὑπογραφεύς (Gignac 1975, pp. 230-231).

Alexandrine Lucian also has close /eː/ for η and close /oː/ for ω, whereas the equivalent short vowels ε and o are open /ɛ/ and /ɔ/. This is consistent with the reconstructed phonology of Coptic (Allen 2020, p. 8), which borrows Greek η and ω for ⲏ and ⲱ, being close vowels (the development signifies the reverse of the Classical Attic model, where η and ω are open in quality). Thus Alexandrine Lucian is primarily inspired by Coptic orthography, just as Romaic Lucian is primarily inspired by Latin orthography.

MEMPHITE LUCIAN PRONUNCIATION

Dusk on Memphis: Assassin's Creed Origins (2014), Raphael Lacoste

Some of the more innovative traits of Egyptian Koine are captured in the variant called Memphite Lucian. It is like Alexandrine Lucian, with the exception that it has monophthongized the main diphthongs.

Greek letter + C = before a consonant + V = before a vowel	Classical Attic	Romaic Lucian	Pompeian Lucian	Alexandrine Lucian	Memphite Lucian	main variant of Lucian	Reuchlinian
υ	y	y	y	y	y	y	i
η	ɛː	ẹː	ẹː	eː	eː	ẹː	i
ει + C	eː	iː	iː	iː	iː	iː	i
ει + V	eː	eː	iː	iː	iː	iː	i
ω	ɔː	ọː	ọː	oː	oː	ọː	ọ
αι	ai̯	aẹ̯	aẹ̯	aj	æ	æẹ̯	ẹ
αυ	au̯	au̯	au̯	aw	aβ~aɸ	aβʷ~aɸʷ	av~af
ευ	eu̯	eu̯	eu̯	ew	eβ~eɸ	ẹβʷ~ẹɸʷ	ev~ef
οι	oi̯	oẹ̯	oẹ̯	oj	øː	øy̯	i
υι	yi̯	yi̯	yi̯	yj	yː	yː	i
ᾳ	aːi̯	aː	aː	aː	aː	aː	a
ῃ	ɛːi̯	ẹː	ẹː	eː	eː	ẹː	i
ῳ	ɔːi̯	ọː	ọː	oː	oː	ọː	ọ
‘	h	h	h	h	∅	h	∅
ζ	zd	z�̄ː	z̄ː	z̄ː	z̄ː	z̄ː	z
γ + back V	g	g	g	ɣ (/g/ after /ŋ/)	ɣ (/g/ after /ŋ/)	ɣ (/g/ after /ŋ/)	ɣ (/g/ after /ŋ/)
γ + front V	g	g	g	j̠ (/ɟ/ after /ɲ/)	j̠ (/ɟ/ after /ɲ/)	j̠ (/ɟ/ after /ɲ/)	j̠ (/ɟ/ after /ɲ/)
δ	d	d	d	ð (/d/ after /n/)	ð (/d/ after /n/)	ð (/d/ after /n/)	ð

Greek letter + C = before a consonant + V = before a vowel	Classical Attic	Romaic Lucian	Pompeian Lucian	Alexandrine Lucian	Memphite Lucian	main variant of Lucian	Reuchlinian
β	b	b	b	β (/b/ after /m/)	β (/b/ after /m/)	β (/b/ after /m/)	β
χ + back V	kʰ	kʰ	x	kʰ	kʰ	x	x
χ + front V	kʰ	kʰ	x	cʰ	cʰ	ç	ç
θ	tʰ	tʰ	θ	tʰ	tʰ	θ	θ
φ	pʰ	pʰ	f	pʰ	pʰ	ɸ	f
κ + front V	k	k	k	c	c	c	c
ρ	r̥~ɾ	r̥~ɾ	r̥~ɾ	r̥~ɾ	r~ɾ	r̥~ɾ	r~ɾ

In Memphite Lucian, the aspirate <'> is silent /Ø/ (Gignac 1975, p. 133), while in Alexandrine Lucian it is still pronounced /h/ as that variant reflects many of the phones available to native Coptic speakers. Diphthongs αι οι are /æː øː/, an intermediate stage proposed by Horrocks (2014, p. 167) and Allen (1968, p. 77). While closer /ɛː/ and /yː/ were later developments for these diphthongs and likely took hold in Egypt at some point, some of the spelling errors demonstrated by Gignac (1975, p. 194, pp. 199-200) such as αι > α and οι > o are better explained by the lower monophthongs /æː øː/. The diphthongs αυ ευ move from /aw ew/ in the Alexandrine variant to more innovative /aβ eβ/ (Gignac 1975, p. 226). The prescribed system in Memphite Lucian therefore explores various transitional stages.

Mosaic of Duck, Urfa (ancient Edessa, near Samosata*),* circa 2nd to 5th century AD

Several variants having been established so far, all nicknamed after cities, the "main" variant of Lucian Pronunciation is now named after Samosata, the small western Asian town that Lucian called home. As Asia Minor may have hosted a number of innovations to phonology at an earlier date than in other parts of the Greek speaking world (Schwyzer 1898, p. 109, Gignac 1975, p. 98 footnote 1), this seems a fitting name. Samosatene Lucian, as you know from the above discourse, is essentially a more conservative version of the Buthian Pronunciation which inspired its genesis. Like Buthian, it has six fricatives φ θ χ β δ γ. Unlike Buthian, however, Samosatene Lucian prescribes the palatalization of velars γ κ χ before front vowels, which is a mandatory consequence of γε being reconstructed as /je/, as noted above, a characteristic that Samosatene Lucian has in common with both Alexandrine Lucian and Memphite Lucian.

The diphthongs αι, οι, αυ, ευ are all distinct but nearly merged in quality with monophthongal ε, υ, αβ~αφ, εβ~εφ, respectively. Thus αι has evolved from /ai̯/ to /æe̯/ and οι from /oi̯/ to /øy̯/. The diphthongs αι and οι are considerably narrowed, in that there is less distance across the vowel space

during their utterance. They both start with front vowels, which means that they cause palatalization of velars. In the original studies that Turrigiano and I made for the Lucian Pronunciation project, we thought this to be an eminently desirable feature, since it means that the commonest word in the language, namely καὶ "and," will be /cæe̦/ (not /kæe̦/) — thanks to palatalization, the same word καί /cæe̦/ sounds very close to Modern Greek καί /ce̦/. This makes Samosatene Lucian more comprehensible to and more readily accepted by Greeks, while still preserving the information that the diphthongs αι and οι convey.

The letters β and φ are bilabial, as this permits the final member of αυ ευ to be a rounded bilabial fricative /βʷ~ɸʷ/, the acoustic result being that αυ ευ can sound simultaneously like the Classical Attic and Modern Greek pronunciation of the digraphs. Samosatene Lucian retains the aspirate /h/, and the voiceless pronunciation of vibrant ῥ /r̥/.

Antioch Mosaic, found in Defne (ancient Dafne, near Antioch) circa 2nd century AD, Metropolitan Museum of Art

The Antiochene variant of Lucian Pronunciation is essentially the Buthian Pronunciation but improved for historical accuracy and pedagogical utility.

Greek letter + C = before a consonant + V = before a vowel	Classical Attic	Romaic Lucian	Pompeian Lucian	Alexandrine Lucian	Memphite Lucian	Samosatene Lucian	Antiochene Lucian	Reuchlinian
υ	y	y	y	y	y	y	y	i
ᾱ	aː	aː	aː	aː	aː	aː	aː	a
ει + C	eː	iː	iː	iː	iː	iː	iː	i
ει + V	eː	eː	iː	iː	iː	iː	iː	i
ω	ɔː	o̞ː	o̞ː	oː	oː	o̞ː	o̞ː	o̞
ου	uː	uː	uː	uː	uː	uː	uː	u

Greek letter + C = before a consonant + V = before a vowel	Classical Attic	Romaic Lucian	Pompeian Lucian	Alexandrine Lucian	Memphite Lucian	Samosatene Lucian	Antiochene Lucian	Reuchlinian
αι	ai̯	ae̜	ae̜	aj	æː	æe̜	ɛː	e̜
αυ	au̯	au̯	au̯	aw	aβ~aɸ	aβʷ~aɸʷ	av~af	av~af
ευ	eu̯	eu̯	eu̯	ew	eβ~eɸ	e̜βʷ~e̜ɸʷ	ev~ef	ev~ef
οι	oi̯	oe̜	oe̜	oj	øː	øy̜	yː	i
υι	yi̯	yi̯	yi̯	yj	yː	yː	yː	i
ᾳ	aːi̯	aː	aː	aː	aː	aː	aː	a
η	ɛːi̯	e̜ː	e̜ː	eː	eː	e̜ː	eː	i
ω	ɔːi̯	o̜ː	o̜ː	oː	oː	o̜ː	o̜ː	o̜
‘	h	h	h	h	Ø	h	Ø	Ø
ζ	zd	z̜ː	z̜ː	z̜ː	z̜ː	z̜ː	z̜ː	z̜
γ + back V	g	g	g	ɣ (/g/ after /ŋ/)	ɣ (/g/ after /ŋ/)	ɣ (/g/ after /ŋ/)	ɣ (/g/ after /ŋ/)	ɣ (/g/ after /ŋ/)
γ + front V	g	g	g	ʝ (/ɟ/ after /ɲ/)	ʝ (/ɟ/ after /ɲ/)	ʝ (/ɟ/ after /ɲ/)	ʝ (/ɟ/ after /ɲ/)	ʝ (/ɟ/ after /ɲ/)
δ	d	d	d	ð (/d/ after /n/)	ð (/d/ after /n/)	ð (/d/ after /n/)	ð (/d/ after /n/)	ð
β	b	b	b	β (/b/ after /m/)	β (/b/ after /m/)	β (/b/ after /m/)	β (/b/ after /m/)	β
χ + back V	kʰ	kʰ	x	kʰ	kʰ	x	x	x
χ + front V	kʰ	kʰ	x	cʰ	cʰ	ç	ç	ç
θ	tʰ	tʰ	θ	tʰ	tʰ	θ	θ	θ
φ	pʰ	pʰ	f	pʰ	pʰ	ɸ	f	f
κ + front V	k	k	k	c	c	c	c	c

Greek letter + C = before a consonant + V = before a vowel	Classical Attic	Romaic Lucian	Pompeian Lucian	Alexandrine Lucian	Memphite Lucian	Samosatene Lucian	Antiochene Lucian	Reuchlinian
ρ	r̥~ɾ	r̥~ɾ	r̥~ɾ	r̥~ɾ	r~ɾ	r̥~ɾ	r~ɾ	r~ɾ

Like Memphite and Alexandrine Lucian, Antiochene Lucian has close /eː/ for η and therefore open /ɛː/ for αι. Its οι and ῡ have entirely merged as /yː/, as have αυ αβ~αφ /av~af/ and ευ εβ~εφ /ev~ef/, meaning that β and φ are labiodental fricatives /v/ and /f/. The aspirate is silent, and ῥ no longer has a voiceless realization, as in Memphite Lucian.

Unlike Buthian, Antiochene Lucian palatalizes velars before front vowels, which makes it more historically authentic, for the reasons discussed above. It is also more pedagogically useful as a phonology for working with Ancient Greek of any period, since all variants of Lucian Pronunciation prescribe phonemic vowel length and syllable length as well as pitch accent.

COMMENTARY ON THE PRONUNCIATION VARIANTS

ARE THESE PRONUNCIATION VARIANTS REGIONAL?

The cities invoked by *Romaic*, *Pompeian*, *Alexandrine*, *Memphite*, *Samosatene*, and *Antiochene* are fundamentally nicknames, inspired by certain characteristics found in those localities, but are **by no means an attempt to declare a specific phonological set in a particular geography in a particular time**. Instead, the spectrum of variants demonstrates possible phonologies that could have existed at some time and in some place in the Greek world for some number of speakers.

I believe it is possible that any of these six varieties or something very much like them could have been heard anywhere in the Roman Empire from the 1st century BC to the 2nd century AD. The Mediterranean was rich with commerce and movement of peoples, meaning a trader from Alexandria could easily have found himself residing in Rome, or an author from Asia Minor touring Greece.

As a way of applying subjective interpretations to these phonologies, we might be tempted to imagine that the more conservative variants represent an erudite way of speaking and the innovative ones the voice of common people, but this need not necessarily be the case: many innovations in speech can in fact be associated with the upper classes. For example, Received Pronunciation (RP) British English has a reputation for being posh, but is non-rhotic (meaning syllable-coda 'r' is not pronounced as it is in, say, General American English), which is an innovation, while rhotic accents in England are associated with rusticity (consider also the trilled 'r' /r/ of some Northern English and Scottish accents, which is highly conservative but even more "rustic" in character to most British ears). Attitudes in this regard were similar even in the late 1700s in England when phonetician John Walker (1791) wrote that the trilled 'r' in syllable-coda had a "harsh" quality, but that the trend in London to drop syllable-coda 'r' (that is, non-rhotic, as in modern RP) was vulgar. Walker prescribes a syllable-coda 'r' like today's General American English, and a trilled initial 'r' as Italian, Scots, etc. Eventually, however, the non-trilled initial 'r' would become the only prestige pronunciation in Southern England, and rhoticity would leave the high-class language entirely (something previously associated with low-class Londoners), giving us modern RP. Thus we see that more conservative phonologies can actually be associated with lack of erudition.

Two notable examples of this in ancient grammarians come to mind: Pompeius writes in the 5th century AD that pronouncing words like *Titius* as /titius/ instead of /tit͡sius/ (Wright 1982, p. 60) is a form of barbarism. Such barbarisms are associated with Greek speakers of Latin, whose accent probably

reflected a traditional pronunciation of the language from the period of earlier colonization. (This might also be what we read in Apuleius' *Metamorphoses* where Greek characters often use sightly more archaic Latin.) Another is the *Appendix Probi* dated to the 3rd century AD, whose final recommendation is "amfora nōn ampora," showing that it was becoming chic or even proper to apply the newer fricative pronunciation of φ to words of Greek origin, something attested to have begun in Pompeii as early as the 1st century AD, hence RVPHVS and PHOENIX FELIX ET TV (as discussed above).

While I believe the six variants presented for Lucian Pronunciation are possible realizations of real Ancient Greek speech of the Classical Roman Period, there are not enough data to determine if these varieties were fundamentally oriented according to the diatopic (differentiated by geography), diastratic (differentiated by class), diaphasic (differentiated by social setting), or diachronic (differentiated by time period) dimension within that space of three centuries (for more on these dimensions of language see Coseriu 1981). Given the clear representation of the sound system in Egypt, as compared with that in Italy, my best guess is that they are diatopically oriented. Thus the names have been placed on the below map; however, it's important to repeat that the nicknames of the variants are just mnemonics, and that their geographical basis is merely possible at best:

LUCIAN PRONUNCIATION VARIANTS

VOICELESS ASPIRATE-AFFRICATE-FRICATIVE DEVELOPMENT
φ θ χ /pʰ tʰ kʰ/
/p͡ɸ t͡θ k͡x/
/ɸ~f θ x~χ/

VOICED STOP TO FRICATIVE
β δ γ /b d g/
initial /b d g/
intervocalic /β ð ɣ/
/β ð ɣ/

TRUE TO FALSE DIPHTHONGS
αυ /au̯/
/aw/
/aβʷ~aɸʷ/
/aβ~aɸ/
/av~af/
ευ /eu̯/
/ew/
/eβʷ~eɸʷ/
/eβ~eɸ/
/ev~ef/

Romaic
ʽ /h/
φ θ χ /pʰ tʰ kʰ/
β δ γ /b d g/
αι /ae̯/
οι /oe̯/
αυ /au̯/
ευ /eu̯/
* ει+V /e:/

Pompeian
ʽ /h/
φ θ χ /f θ x/
β δ γ /b d g/
αι /ae̯/
οι /oe̯/
αυ /au̯/
ευ /eu̯/

Alexandrine
ʽ /h/
φ θ χ /pʰ tʰ kʰ/
β δ γ /β ð ɣ~j/
χε κε γε γγε
/cʰe ce je ɲɟe/
αι /ai̯~aj/
οι /oi̯~oj/
αυ /aw/
ευ /ew/
η /e:/
ω /o:/

Memphite
ʽ /Ø/
φ θ χ /pʰ tʰ kʰ/
β δ γ /β ð ɣ~j/
χε κε γε γγε
/cʰe ce je ɲɟe/
αι /æ:/
οι /ø:/
αυ /aβ~aɸ/
ευ /eβ~eɸ/
η /e:/
ω /o:/

Antiochene
ʽ /Ø/
φ θ χ /f θ x/
β δ γ /v ð ɣ~j/
χε κε γε γγε /çe ce je ɲɟe/
αι /ɛ:/
οι /y:/
αυ /av~af/
ευ /ev~ef/
η /e:/

Samosatene
ʽ /h/
φ θ χ /ɸ θ x/
β δ γ /β ð ɣ~j/
χε κε γε γγε /çe ce je ɲɟe/
αι /æe̯/
οι /øy/
αυ /aβʷ~aɸʷ/
ευ /eβʷ~eɸʷ/

Other than their possible existence, I cannot comment on which of these varieties was the most popular at any place or time. We have no idea, of course, if Lucian himself spoke Greek like any of the variants of the pronunciation system that bears his name. My impression, however, is that the six variants give a realistic picture of the living variety of the language in one of its most exciting and well-studied periods, with each being a perfectly adequate convention for working with Ancient Greek of all eras.

Let's consider a modern analog. If one were to describe the pronunciations of English around the world, one would have to mention that there are two especially popular varieties that foreigners learn: British and American. But one would be remiss not to mention that Australia, New Zealand, and Ireland have distinct accents as well. One would then have to add that Scottish English sounds distinct from the English in most of England, and that Wales has its own accent too. Canadian English can be quite similar to General American, but often a British Colombia accent, an Alberta accent, and an Ontario accent can sound rather distinct. Within the US, there are dozens of different regional speech varieties, and in England there are hundreds. We

ought to further subdivide all the regions listed, but the analogy is clear: one or two pronunciation variants can do a lot of work in covering the living variety of a language, and three or four or more can be even better; and ultimately the real complexity is yet much more detailed.
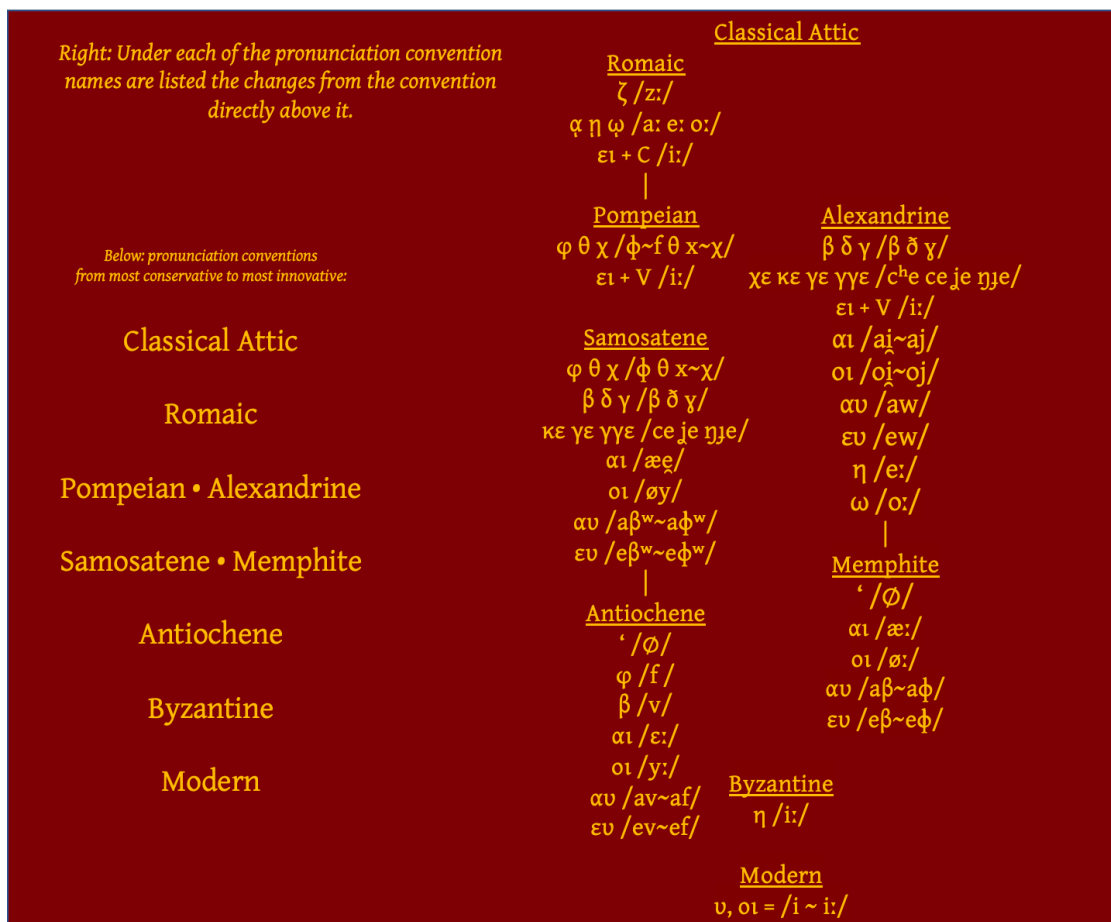
On the left margin of the above map, I have placed three important transitions. As mentioned earlier, the aspirates changed to affricates and finally to fricatives. I have not recommended affricates in any of the variants on the map for the reasons stated above, but they could be a possible realization of φ θ χ in certain varieties. The voiced stops also may have had an initial-intervocalic allophonic variation akin to Spanish, but this is not captured by any of the prescribed variants mentioned here, as it introduces further complexity. Since, however, Lucian Pronunciation's aim is to explore numerous variations and transitions during the Classical Roman Period, brave experimenters may make idiosyncratic modifications to the prescribed variants for their own purposes.

IS THIS REALLY ALL JUST ONE PRONUNCIATION?

Given the differences they span, it is reasonable to ask if these phonological variants should be classified as distinct pronunciation schemes in their own right. One may certainly do so, as the taxonomy employed is mostly for my convenience, and, I hope, for the convenience of others interested in exploring this spectrum of sound systems. All the nicknames — "Romaic," "Pompeian," "Alexandrine," "Memphite," "Samosatene," "Antiochene," even "Lucian" — are merely evocative of certain characteristics, and are fundamentally just mnemonic devices, as previously mentioned, rather than attempts to assign dominant phonologies to certain areas or time periods.

What all these variants have in common, and why I am comfortable placing them as interrelated conventions under the same umbrella, is that they consistently employ a specific design philosophy for the whole convention: they are drawn from historical data, and are intended to be pedagogically

useful for most people who study Ancient Greek. This fulfills what Turrigiano and I set out to do, as we stated in our 2020 essay: "What we ultimately want is that aesthetic choices be made in reference to a universal default model, such that while there is diversity in pronunciation, that diversity centers around a shared standard that is scientifically and pedagogically sound, rather than a complete free-for-all. Additionally, we believe that this standard will make it easier for people to make the aesthetic choices that work best for them. For instance, many people may like aspects of the Attic reconstruction and aspects of the modern pronunciation but not know how to reconcile the two in a coherent manner. If you like our system, we encourage you to follow it, but we also grant you may want to make archaizing or innovative modifications according to your preferences." Now that you are familiar with prescribed variants of Lucian Pronunciation and the origins of each phonological set, you can make those modifications more easily.

Right: Under each of the pronunciation convention names are listed the changes from the convention directly above it.

Below: pronunciation conventions from most conservative to most innovative:

Classical Attic

Romaic

Pompeian • Alexandrine

Samosatene • Memphite

Antiochene

Byzantine

Modern

Classical Attic

Romaic
ζ /zː/
ᾳ η ῳ /aː eː oː/
ει + C /iː/
|

Pompeian
φ θ χ /ɸ~f θ x~χ/
ει + V /iː/

Samosatene
φ θ χ /ɸ θ x~χ/
β δ γ /β ð ɣ/
κε γε γγε /ce je ɲɟe/
αι /æe̯/
οι /øy/
αυ /aβʷ~aɸʷ/
ευ /eβʷ~eɸʷ/
|

Antiochene
' /∅/
φ /f/
β /v/
αι /εː/
οι /yː/
αυ /av~af/
ευ /ev~ef/

Alexandrine
β δ γ /β ð ɣ/
χε κε γε γγε /cʰe ce je ɲɟe/
ει + V /iː/
αι /ai̯~aj/
οι /oi̯~oj/
αυ /aw/
ευ /ew/
η /eː/
ω /oː/
|

Memphite
' /∅/
αι /æː/
οι /øː/
αυ /aβ~aɸ/
ευ /eβ~eɸ/

Byzantine
η /iː/

Modern
υ, οι = /i ~ iː/

PHONEMIC VOWEL & SYLLABLE LENGTH

Given its core importance in Lucian Pronunciation, it is worth giving some guidance for how to recite or speak Ancient Greek while observing the concept of phonemic vowel length and phonemic syllable length.

VOWEL LENGTH

Short vowels α ε ι ο υ are uttered with a duration that is relatively shorter than long vowels like ᾱ η ει ῑ ω ῡ ου and diphthongs like αι οι αυ ευ. How *much* shorter? The key word is *relative*, that is, perceptible to the ear, but a beginner at the practice could get used to this by making long vowels twice as long as their short counterparts. Ultimately a 50% increase for long vowels is usually adequate.

SYLLABLE LENGTH

Long syllables are those that end with a consonant, such as ἀλ- in ἀλλά, or -οκ- in ἄοκνος, or a long vowel (or diphthong), as mentioned above. The key to uttering these correctly is simply to give the consonant in syllable coda a bit of time, such that the rhythm of a longer duration (a longer syllable) can be perceived acoustically, just as explained for long vowels.

The fundamental syllabic building blocks, called morae, will be discussed in the following section on pitch accent.

PITCH ACCENT

While deemed by some as challenging, pitch accent is actually easier to employ in Ancient Greek than many have reported. I believe much of this

confusion comes from the lack of familiarity in the Classics community with pitch accent languages, like Japanese or Serbo-Croatian. As pitch accent is a fundamental element in Lucian Pronunciation for all its variants, and was present in most Greek voices during the majority of the centuries associated with Ancient Greek literature, it is worth learning and putting into practice.

HOW TO EMPLOY PITCH ACCENT

Ancient Greek, like Latin, Finnish, Hungarian, etc., is a mora-timed language, unlike English which is stress-timed, and Spanish which is syllable-timed. This means that the fundamental building block of a word is a mora. In a very basic sense, a short syllable is composed of only one mora, while long syllables have two (sometimes three) morae.

For example, τά /tá/ is a one-mora word: this syllable pertains to the group of countless others with minimum finite length. The word τώ /tòó/ however has two morae in isolation. This is also true for τοῦ /túù/. The word τόν /tón/ in isolation also has two morae; the second mora is the ν. Thus a long syllable is one that contains at least two morae. Some long syllables can contain three morae, such as τῶν /tóòn/

In the IPA of a word like τοῦ /túù/, we see that the first mora /tú/ has high pitch marked with an acute accent. While this looks like a *rising* melody, that's actually misleading; think of it instead as simply a high monotone point. The second mora is /ù/; here, think of this not as a fall, but as lower monotone point. Representing this graphically, I will use an interpunct and a period to demonstrate the two pitches:

· .

If we treat this as two discrete short notes, as in music, we get a series of two pitches, the first high and the second low. If we say τοῦ /túù/ instead of singing it, we get a natural "fall" between a high and low pitch. This is the meaning of a

circumflex accent: a falling pitch contour between a relatively higher and lower point.

It is worth interjecting now that *how much* higher or lower is not particularly important, just like phonemic vowel and syllable length, where long syllables are relatively longer than shorter ones by some perceptible degree. Similarly, a high phonemic pitch is relatively higher than a lower pitch that follows it. Some ancient grammarians said that the difference could be *as much as* a major fifth (Allen 1968, p. 109), *but that does not mean for every word in a sentence.* When compared with living pitch accent languages, it is apparent that the higher pitch is not something up to which one must leap by a whole fifth in every word: when a high pitch is marked, as with an acute or the first part of a circumflex accent, the implication is solely that *the following pitch must be lower.* This is called a downstep.

Enclitics like γε /ge/ have no pitch accent. If we add γε /ge/ to τά /tá/, we get τά γε /tá gè/: the γε is marked with a low pitch, as the *downstep* is the thing that marks the high pitch that precedes it. We can also hear this with ἀλλά γε /allá gè/, and Ἑλληνικά γε /helleeniká gè/. Any syllables preceding the accented one are not necessarily lower; the only rule is that in the whole word the highest syllable is the one with the high pitch accent. Removed from normal speech, the syllables preceding the accented one in Ἑλληνικά are all the same pitch.

In normal speech, however, there are various prosodic tendencies that will alter the landscape of pitch contours, like interrogatives or other situations. First, let's take a phrase, and only execute the mandatory downsteps:

Ἑλληνικά γε τὰ πρᾱ́γματα τᾶλλα γεγραμμένα

/helleeniká gè ta pràágmàta táàlla gegramménà/

The effect is something like walking down a series of steps, hence *downsteps*, which normally become shallower and shallower as the phrase goes on. In

normal speech, however, many additional melodic effects are quite natural, like general rises or falls, or certain words gaining particular emphasis.

Ἑλληνικά γε τὰ πράγματα τᾶλλα γεγραμμένα

/helleeniká gè ta pràágmàta táàlla gegramménà/

Here is a phrase from Aphrodite's first line in Lucian's *Judgement of the Goddesses*:

Χρὴ δὲ καὶ ταύταις ἀρέσκειν τὸν ἄνθρωπον.

/xree de kai tàu̯tài̯s aréskiin ton ánθròopon/

In a word like ἄνθρωπον /ánθroopon/ the downstep may begin on the consonant that follows the high pitch vowel if that consonant can carry pitch (like nasals and liquids), such that /áǹθroopon/ may also work.

The exact meaning of the grave accent is unclear, but the best explanation (Allen 1968, p. 115) is that there is a negligible pitch accent effect, and that the grave is mostly subordinate to the prosody of the phrase. This is how I render the grave accent in my Lucian Pronunciation recordings, occasionally giving the grave accent syllable some stress accent or even a minor pitch contour, especially with an added hiatus following. I also allow phrase-final acutes to rise a bit, as I believe their presence in the orthography indicates the general rise in the prosody of the phrase.

These are the principles of pitch accent. Many more possibilities and variations could exist, but it is best not to overcomplicate what is fundamentally a very simple matter. When pitch accent is observed carefully accompanied by fluid speech, all the natural complexities of the human voice come into play, which create a fascinating acoustic landscape. Given these facts, I think it is best not to prescribe too much here, particularly since the true realizations of natural Ancient Greek prosody over various centuries in different geographies were certainly as varied and multiplex as those in any

other language. For example, the prosody of interrogatives varies greatly from language to language, and even dialect to dialect. In my own Ancient Greek recordings, I have endeavored to use Modern Greek interrogative and other patterns, superimposing them on the lexical pitch accent contours wherever they allow. There appears to be considerable evidence to support this idea in the preserved Ancient Greek sheet music (Allen 1968, p. 110).

The best advice I can give is not to jump up a major fifth at every acute or circumflex accent, as this is very unlikely to represent Ancient Greek or any human language. As with phonemic vowel length, try your best, keep the principles in mind, and eventually you will master an outcome that pleases you.

ANCILLARY STRESS ACCENT

In the vast majority of my recordings of Lucian Pronunciation, I use stress accent — otherwise known as dynamic accent, which is increased loudness, but without change in length as occurs in languages like English and Italian — to support the pitch accent. By this I mean that I permit loudness (dynamic stress) change to aid in marking the accented syllable. Japanese lacks stress accent altogether and has only pitch contours, while Serbo-Croatian has both, and some Serbo-Croatian words have stress accent and pitch accent on different syllables within the same word, depending on the dialect. Whether Ancient Greek had pure pitch accent or not is a matter of on-going research. It is expected, however, that at some point Ancient Greek transitioned into using only stress accent, which likely occurred for the majority of speakers after the 4th century AD (Allen 1968, p. 119). The stage immediately prior to this would be a Greek language governed primarily by lexical pitch, with stress accent accompanying the pitches, until such point that for native speakers the stresses overtake the pitches in semantic importance, and pitch becomes ancillary.

As Lucian Pronunciation is fundamentally a set of transitions from more archaic to more innovative forms of Greek, an ancillary stress accent helping to

mark pitch accent is an appropriate choice. Moreover, it is a pedagogically useful practice, since the vast majority of those who work with Ancient Greek have no knowledge of living pitch accent languages, and removing dynamic emphasis entirely can be a significant obstacle to communication. Nevertheless, the use of ancillary stress accent is merely optional for users of Lucian Pronunciation, while pitch accent is mandatory.

ONE MORE VARIANT WORTHY OF MENTION: HERACLEAN LUCIAN

One variant not mentioned above is the closest to a modified Erasmian-type pronunciation, which I call "Heraclean" after Herculaneum, a city near Pompeii also buried under the eruption of Vesuvius in 79 AD. The reason for choosing the nickname "Heraclean" is merely to invoke the closeness of Heraclean Lucian to Pompeian Lucian, just as the two cities are in proximity to each other.

The only difference that this variant has from Pompeian Lucian is that the digraph ει is /eː/ instead of /iː/, meaning that η is necessarily a lower than true-mid vowel, and is a long open /ɛː/. Alternatively, ει may be a very close long mid vowel [e̝ː], while η may be long true-mid [e̞ː]. (In the International Phonetic Alphabet, the slight raising or lowering of a phone (height or closeness) is indicated by an arrow under the letter that looks like a capital T for the down-arrow, e.g. [e̞ː], and an upside-down T for the up-arrow, as [e̝ː]. Here are the four 'e' vowels sounded in sequence from open to close [ɛː e̞ː eː e̝ː].) As a result, ῑ will have to be an appreciably high [i̝ː] vowel to remain acoustically distinct from [e̝ː].

There actually exists precedence for considering this a real Greek vowel system that may have flourished during the earlier Hellenistic period, if not also during the Classical Roman Period. We have testimony from Latin

grammarians that states the Greek way of pronouncing <i> to be, as I would interpret, more close in quality, while the Latin way of rendering <i> is lower (Adams 2003, pp. 37-70, Calabrese 2002). This may be demonstrated in inscriptions such as <Δομετιος> for <Domitius> and <Λεπεδος> for Lepidus (Threatte 1980, p. 139). Why this should be the case is actually easy to determine when examining the difference in quality between /i/ in French, Italian, and Modern Greek. Modern Greek only has five phonemic vowels, and thus the /i/ vowel is often a bit more open, which might be represented in IPA as [i̞]. Italian, however, has seven phonemic vowels in accented syllables, thus there is an important difference in Italian between open-mid [ɛ], close-mid [e], and [i] on the front axis. As a result, Greeks often critique Italians for making their /i/ in Modern Greek too acute or close in quality, too high on the front axis. Similarly, French has an especially high /i/ for most speakers, perhaps due to the number of phonemic vowels on the front axis, and thus Frenchmen who speak Italian can be critiqued by Italians as making their /i/ too high and sharp sounding. If you listen to a stereotypical French accent in English, you will hear a similar phenomenon, as French /i/ is usually higher than that of most English speakers.

　　Classical Latin, meanwhile, only has five phonemic vowel qualities (Calabrese 2002), putting it in the position of Modern Greek today. If in the 1st century BC Latin speaking Romans heard Εὐκλείδης as [eu̯klḛːdḛːs̠] and Ἀλεξάνδρεια as [aleks̠andre̞ːa], where the ει before a consonant was more close (i.e **[ḛː]**) than the same digraph before a vowel (i.e **[eː]**), we might expect Romans to transcribe the former as <Euclides> and the latter as <Alexandrea>. This is exactly what we see in the early 1st century BC. As the century goes on, the spelling <Alexandria> — and similarly for other words where ει precedes a vowel — becomes increasingly common. This demonstrates a sound shift of ει approaching ῑ. Does this mean that the ει digraph had necessarily merged completely with ῑ, or could ει have been [ḛː] in all positions? I believe it is a possibility. The simpler explanation is that ει and ῑ had completely merged, which is consistent with the spelling errors in Greek texts of the same time

period (though the existence of not-infrequent errors like η for ει further support something like the Heraclean Lucian model I am now discussing). Nevertheless, the possibility exists that for a time ει was [ẹ:] in all positions during the Classical Roman Period for some speakers.

My main reason for offering this variant is for the sake of practicality when working with those used to Erasmian Pronunciation. The ubiquity of the ει digraph in Greek means that whatever sound it has will permeate the language, and the listener will expect certain acoustic results in any given phrase. Users of Erasmian Pronunciation, which predominate across the world today, expect that ει will be the diphthong /ei̯/, and while this is a sound the digraph never had from late pre-Classical Greek to the present, I cannot blame those accustomed to it to easily abandon the convenience and what is for them naturalness of keeping ει separated from ī. Since I can't in good conscience accept a diphthongal pronunciation of ει as historical from Classical Greek through Koine, but still wish to be clearly understood by Erasmian users, I have often rendered my ει as [ẹ:] in their presence, which seems to be close enough to their /ei̯/ for them to instantly follow with virtually no difficulty.

The Heraclean variant also has φ θ χ as fricatives but keeps β δ γ as stops, like most Erasmian, and retains the diphthongal pronunciation of αι οι αυ ευ. While Erasmian may render ζ as /d͡z/ or /zd/, Heraclean Lucian keeps it as /z:/, as in all Lucian Pronunciation variants. Most Erasmian speakers don't use phonemic vowel length or pitch accent, but these are mandatory for all Lucian Pronunciation variants, as is the retracted 's' sound [s̱] for σ.

Having used this Heraclean Lucian Pronunciation with several speakers of Erasmian, I have found that the differences do not seem to cause any confusion, and that the rendering of ει as [ẹ:] makes my speech much more comprehensible and seems to go unnoticed. This is comparable to certain subtleties of Classical Latin phonology; for example, I render <gn> in Latin as [ŋn], while most Restored Pronunciation users aren't even aware of this being the most likely dominant pronunciation in the Classical Period; nevertheless,

my saying *magna* as [maŋna] where they would expect [magna] seems to cause zero confusion and similarly goes unnoticed.

So if you are used to the Erasmian Pronunciation but wish to modify it to something closer to historical possibility, I offer this Heraclean Lucian Pronunciation as a way to do exactly that while being highly comprehensible to the wide range of people who use a version of Erasmian.

CONCLUSION

In this guide to pronunciation, I have sought to demonstrate a rational synthesis of historical phonological data with practicable conventions. As much as I hope this was an adequate guide *to* pronunciation, I also intended it to be a guide *through* pronunciation and the reasoning I employed while making my recommendations.

Based on the facts assembled, an inescapable conclusion we must reach is that the pronunciation of Greek was distinctly heterogeneous during the target era of the Classical Roman Period 100 BC to 200 AD, and that we have strong evidence for at least two somewhat opposite phonologies in the localities of Pompeii and Egypt in the same few decades of the 1st century AD, with a great deal more variety very probable in diatopical and diachronical dimensions. This is not surprising in light of the nature of modern languages, which, whether geographically isolated or globally diffused, can have multiple complementary phonological systems, and still be part of the same language.

One's interest in studying, reciting, and even speaking Ancient Greek may be driven by a passion for the Classics, a desire to connect with original religious scholars, or any number of worthy reasons, and thus one may wish to utilize a prestige accent of the past, or perhaps instead a lower class accent of the common people. I myself am deeply curious to uncover these sorts of

subjective preferences among the ancients; but **I would like to emphasize extreme caution in drawing conclusions about prestige or vulgarity from the evidence currently available**. To borrow from one among countless living examples, those who learned English as a second language in academic settings during the early 20th century would often use the Received Pronunciation of British English as the target phonology, as RP was the universally acclaimed prestige accent. Having myself internalized this tendency as the default, I have been astonished by the growing number of L2 (second language) English speakers who have mastered a General American accent in the 21st century. While L1 (first language) and L2 English speakers once regarded General American as less worthy of esteem, this attitude has clearly changed. As noted above, General American has conservative features like rhoticity that are not found in RP, and vice versa; conservative or innovative traits do not necessarily speak to a phonology's prestige or popularity.

Thus if one were to try to assign a dominant or standard phonology to the English language of the three hundred year period of the 19th, 20th, and 21st centuries, one would be hard-pressed to claim which of the possibilities was universally the most fashionable, most studied, or most correct. We must be equally vigilant against assuming the more innovative varieties (such as the Antiochene Lucian variant represents) were either vulgar or prestige, even in its eponymous Antioch, much less that something like the Romaic Lucian variant could be exclusively associated with higher class speech in any region in any century, when it could also be akin to rural speech where chic innovations had not yet reached.

For now, we must settle for using our imaginations in such considerations. In the meantime, if Lucian Pronunciation has a variant that is useful for your purposes, or if this commentary has given you a basis from which to make your own decisions for recitation, then I am glad.

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Greek letter + C = before a consonant + V = before a vowel	Classical Attic	Romaic Lucian	Pompeian Lucian	Alexandrine Lucian	Memphite Lucian	Samosatene Lucian	Antiochene Lucian	Reuchlinian
α	a	a	a	a	a	a	a	a
ε	ẹ	ẹ	ẹ	ɛ	ɛ	ẹ	ɛ	ẹ
ι	i	i	i	i	i	i	i	i
o	ọ	ọ	ọ	ɔ	ɔ	ọ	ọ	ọ
υ	y	y	y	y	y	y	y	i
ᾱ	aː	aː	aː	aː	aː	aː	aː	a
η	ɛː	ẹː	ẹː	eː	eː	ẹː	eː	i
ει + C	eː	iː	iː	iː	iː	iː	iː	i
ει + V	eː	eː	iː	iː	iː	iː	iː	i
ῑ	iː	iː	iː	iː	iː	iː	iː	i
ω	ɔː	ọː	ọː	oː	oː	ọː	ọː	ọ
oυ	uː	uː	uː	uː	uː	uː	uː	u
ῡ	yː	yː	yː	yː	yː	yː	yː	i
αι	ai̯	ae̯	ae̯	aj	æː	æe̯	ɛː	ẹ
αυ	au̯	au̯	au̯	aw	aβ~aɸ	aβʷ~aɸʷ	av~af	av~af
ευ	eu̯	eu̯	eu̯	ew	eβ~eɸ	ẹβʷ~ẹɸʷ	ev~ef	ev~ef
οι	oi̯	oe̯	oe̯	oj	øː	øy̯	yː	i
υι	yi̯	yi̯	yi̯	yj	yː	yː	yː	i
ᾳ	aːi̯	aː	aː	aː	aː	aː	aː	a
ῃ	ɛːi̯	ẹː	ẹː	eː	eː	ẹː	eː	i
ῳ	ɔːi̯	ọː	ọː	oː	oː	ọː	ọː	ọ
ʽ	h	h	h	h	Ø	h	Ø	Ø
ζ	zd	z̠ː	z̠ː	z̠ː	z̠ː	z̠ː	z̠ː	z̠
σ	s̠~z̠	s̠~z̠	s̠~z̠	s̠~z̠	s̠~z̠	s̠~z̠	s̠~z̠	s̠~z̠

Greek letter + C = before a consonant + V = before a vowel	Classical Attic	Romaic Lucian	Pompeian Lucian	Alexandrine Lucian	Memphite Lucian	Samosatene Lucian	Antiochene Lucian	Reuchlinian
γ + back V	g	g	g	ɣ (/g/ after /ŋ/)	ɣ (/g/ after /ŋ/)	ɣ (/g/ after /ŋ/)	ɣ (/g/ after /ŋ/)	ɣ (/g/ after /ŋ/)
γ + front V	g	g	g	ʝ (/ɟ/ after /ɲ/)	ʝ (/ɟ/ after /ɲ/)	ʝ (/ɟ/ after /ɲ/)	ʝ (/ɟ/ after /ɲ/)	ʝ (/ɟ/ after /ɲ/)
δ	d	d	d	ð (/d/ after /n/)	ð (/d/ after /n/)	ð (/d/ after /n/)	ð (/d/ after /n/)	ð
β	b	b	b	β (/b/ after /m/)	β (/b/ after /m/)	β (/b/ after /m/)	β (/b/ after /m/)	β
χ + back V	kʰ	kʰ	x	kʰ	kʰ	x	x	x
χ + front V	kʰ	kʰ	x	cʰ	cʰ	ç	ç	ç
θ	tʰ	tʰ	θ	tʰ	tʰ	θ	θ	θ
φ	pʰ	pʰ	f	pʰ	pʰ	ɸ	f	f
κ + back V	k	k	k	k	k	k	k	k
κ + front V	k	k	k	c	c	c	c	c
τ	t	t	t	t	t	t	t	t
π	p	p	p	p	p	p	p	p
ρ	r̥~ɾ	r̥~ɾ	r̥~ɾ	r̥~ɾ	r~ɾ	r̥~ɾ	r~ɾ	r~ɾ
ξ	ks̠	ks̠	ks̠	ks̠	ks̠	ks̠	ks̠	ks̠
ψ	ps̠	ps̠	ps̠	ps̠	ps̠	ps̠	ps̠	ps̠
λ	l	l	l	l	l	l	l	l
μ	m	m	m	m	m	m	m	m
ν	n	n	n	n	n	n	n	n