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RECONSTRUCTING PHONOLOGIES
OF DEAD LANGUAGES.
THE CASE OF LATE GREEK ⟨H⟩

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This article compares prescriptive texts of the Indian and of the Greek scholarly tradition (*Prātiśākhya* and Atticist lexica), with a focus on a specific problem of Late Greek phonology, the pronunciation of ⟨η⟩. The Greek case-study shows how the learned texts attest to a conservative language of the educated. This variety retained special sets of phonological traits, perhaps for much a longer period than the same traits had survived in non-educated variants: the lexica that attest to it provide therefore valuable evidence of language change in Late Greek.

1. EVIDENCE FOR PRONUNCIATION

PHONOLOGICAL systems of ancient languages can be reconstructed only through indirect evidence. All investigation has to rest on what can be inferred from two factors, (a) writing systems and (b) indirect evidence from ancient sources.

In the following paragraphs I shall focus on Atticist lexica and the evidence provided by some of their glosses for a problem of Late Greek phonology. These lexica, most of which were written in the 2nd century CE, range from mere lists of words to collections of more extensive glosses.¹ They are prescriptive: their aim is not to describe meanings and/or usages, but to prevent speakers or writers from using certain words instead of others.

They are not grammars. Ancient Greek grammarians are normally concerned with specific aspects of the language, but fail to provide an exhaustive description of Greek phonology. They provide no systematic description of how sounds are articulated, like the ones that are normal in Indian treatises, which «speak in fact to the twentieth century rather than to the Middle Ages or even the mid-nineteenth century» (ALLEN 1953: 7).

1. 1. *Writing systems*

Spelling provides indirect proof of the different attitudes towards the language. Greek has preserved the same writing conventions from the 4th cen-

¹ From now on the term ‘gloss’ will be used to label the entries in Atticist lexica. For the various meanings of ‘gloss’ see DICKEY 2007: 11 n. 25.

tury BCE to the present day, with the result that many modern spellings bear nowadays very little resemblance to their current pronunciation: they are exactly the same as twenty-five centuries ago. For instance, ΥΓΙΕΝΟΣ must have been the current spelling for [hygie:nós] ‘healthy’ in Athens at the beginning of the 4th century BCE and nowadays is pronounced [jji'nɔs].²

The accuracy of information relying on writing systems varies greatly depending on the specific kind of writing. Some writing systems are nearly phonetic (as it is the case with the Avestan alphabet) or nearly phonological (as it is the case with Vedic) – these are writing systems that allow for at least a partial reconstruction of the phonological systems, since they are based on a one-to-one correspondence between phoneme and grapheme. However, other writing systems – for instance, those based on logograms or ideograms – provide no direct information at all about pronunciation.

The writing systems which have been used for Greek dialects are the syllabic and the alphabetic, the latter being by far the most common and widespread. There have been several attempts at understanding in detail the phonological system of Greek, mostly of the Attic dialect and of koiné, from the 5th century BCE to the 5th century CE (LUPAŞ 1972, TEODORSSON 1974, 1977, 1978, GIGNAC 1976, THREATTE 1980).

The alphabet used for Classical Greek³ tends to be phonological, even if not completely so. For instance, the grapheme Ϝ can denote both the phonemes /i/ and /i:/, ϜϞ both /g/ and the allophone [ŋ] of /n/.

Modern scholars reconstructed the phonological system of Ancient Greek on the basis of the graphemes’ possible original values – inferred through comparison of their Semitic ancestors – compared with their modern outcomes and their reflections both in borrowings and as renderings of foreign sounds in loanwords.

Interchanges between two or more graphemes (henceforth *variations*) are normally the sign of phonological change. Details of language change are deducted in great part from the analysis of variations: when two graphemes start to interchange, it is normally inferred that the phonemes they previously denoted ceased to be distinct and merged into a single phoneme (be it a new phoneme or a pre-existing one).

Through analysis of the variations in inscriptions and papyri, it has been argued that some of the changes that led to Modern Greek phonology had already been accomplished by the age of Plato.⁴ Bold as such conclusions may be, they however draw attention to the possibility that quite soon in the Greek speaking world there were concurrent diastatic variants (HORROCKS 2010: 163-5).

² Phonetic transcription system according to HORROCKS 2010.

³ By this I mean the writing system adopted by Athens in the 4th century BCE, on which the modern writing system and editions of ancient Greek authors are based.

⁴ See TEODORSSON 1974, 1977, 1978, and the criticism of RUIJGH 1978.

1. 2. *Indirect evidence*

For many languages (by far the majority of those ever spoken) indirect evidence of pronunciation is not available, but when it is it can take very different forms. Rhyme books and rhyme tables, for instance, do provide information on the evolution of Chinese phonology, which would otherwise have been utterly concealed by ideograms.⁵

We do have treatises on correct pronunciation (*orthoepy* from now on) for Vedic Sanskrit, and at the roots of Avestan phonetic spelling there must have been a similar care for the way in which the sacred hymns of the Avesta should be uttered (see MALANDRA 2002). In both cases it is noteworthy that the attention to orthoepy is caused by the importance given to some particular literature, i.e. the sacred texts of the Veda and of Zoroastrianism.

For the earliest stages of Greek we lack any sacred texts of this kind. We do not know whether there had been texts specifically meant for worship or liturgy, neither do we have evidence of any care paid to orthoepy, at least with regards to worship, as it surely was the case in Vedic ritual.

Greek treatises about orthoepy, unlike such texts in India, were not written with any religious purposes in mind. It is very likely that they were conceived as an aid to those who based their professional success on pronunciation, namely the orators. It is well known that oratory had been flourishing in the 2nd century CE,⁶ exactly at the time when Atticist lexica were being published.

Although the correspondence between pronunciation and spelling was becoming looser in the last stages of Sanskrit,⁷ phonetics are not intertwined with lexicography in ancient India, with the exception of some special dictionaries concerned with variations in spelling (*Śabdabhedakoṣas* and *Vaṃakoṣas*, cf. VOGEL 1979: 371-2). This is not the case with ancient Greek scholarship. Works that addressed an audience who aimed at learning to speak in Greek show a very different attitude towards pronunciation and its description than works on correct pronunciation of Sanskrit.

First of all, Greek Atticist lexica are prescriptive: they point out which is the correct word to use, or which is the correct pronunciation of a given word.⁸ *Prātiśākhya* are more general in that they address universal questions about the pronunciation of sounds or combinations of sounds. At the same time, they are «at once prescriptive and descriptive [...] and the authors refer to each other's opinions in a commendably objective manner» (ALLEN 1953: 6-7). In the

⁵ See BAXTER 1992: 32-43.

⁶ I refer to the so-called Second Sophistic, to distinguish it from 5th century BCE sophistic and 4th century BCE classical oratory. A recent survey in WHITMARSH 2005.

⁷ Cf. Epic Sanskrit (*Mahābhārata*, *Rāmāyaṇa*, *Purāṇa*) and the countless problems in defining what actually were the writing conventions of the so-called Buddhist Hybrid Sanskrit (cf. BROUGH 1954 and EDGERTON 1953).

⁸ General definitions in ZGUSTA 1980, HARTMANN & JAMES 1998.

Taittirīya Prātiśākhya, for instance, *ekeṣām* ‘[in the opinion] of some’ is used to mark opinions shared only by a part of the scholarship (*TP* 2.19, 27, 47 etc.).

Greek lexica do not present different points of view as reasonable alternatives to the opinion they support. Entries are arranged in a clear-cut opposition between a right and a wrong option, respectively represented by pure Attic and vulgar or illiterate varieties.

Moreover, the way in which Greek went through the ages in the transition from one phase to the other gave rise to a quite different picture from the Indian one. Attic Greek had been a living and spoken variant throughout most, if not all, of the time which ran from the age of Pericles to that of the Emperor Hadrian. Still during the 2nd century CE, the educated who could travel would claim that one should go to the countryside of Attica if one wished to hear a truly flawless pronunciation of Attic⁹ – and it is very likely that 5th century BCE Attic was a model for the Atticists’ writings, but that they tended to adopt the pronunciation current in contemporary Athens.¹⁰

Atticist lexica are interesting for the history of Greek because they tackle the problem of preserving a high standard of language among the educated. In doing so, they normally contrast different words or expressions, commending the ones that, in their opinion, belong to correct Greek, the variety an educated is expected to be using. They serve as evidence of the attitude of the higher social classes towards the innovations of the lower strata of the population.

Sometimes the lexicographers do not contrast two different words but two different spellings: such doublets can be examined as evidence of phonological changes in quite a similar way as variants in other written documents are examined. Since lexica address a specific audience of educated people, they are most useful in drawing a sketch of the phonological system of the educated that read and used them, i.e. of the higher diastratic variants spoken in the 2nd century CE, which can be compared to the data provided by inscriptions and papyri to have a deeper understanding of the processes that led from Ancient to Modern Greek phonology.

A final and very important remark should be made before turning to a specific case study in the Atticist lexica. Texts do have a story, and they ought to be approached philologically, not only from a linguistic point of view. In the case of Atticist lexica, we should keep in mind that these texts were in the first place study tools and reference works. This meant that in the copying process, which allowed their survival up to the present day, they were more prone to reworking and interpolation than most other kinds of texts. The richer a lexicon is, the more profitable is its use: especially in the case of liv-

⁹ Philostratus, *Vitae Sophistarum* 553.

¹⁰ Cf. a paper by P. James, *Atticistic Pronunciation in the Second Sophistic*, read at the annual conference of the American Philological Association, January 2008.

ing languages, this is a lesson that the constant flow of new editions still teaches nowadays. This is also particularly true for the tradition of general and etymological lexica of Greek.

Even lexica transmitted under the name of a specific author – e.g. the works of Phrynichus – have undergone quite complex textual transmissions. Some of the texts we use as ‘Atticist lexica’ are collections of fragments edited during the last century, as it is the case with Erbse’s edition of Aelius Dionysius and Pausanias. Some other lexica circulated almost anonymously, and any attempt at reconstructing the real identities of their authors is futile. It is therefore most difficult to point out the exact age and place of their composition; consequently one needs to be particularly cautious when inferring linguistic data on such a slippery ground.

When approaching a linguistic study of Atticist lexica, one must therefore keep in mind that their complex textual transmission could have favoured the insertion of later variants and/or glosses. Therefore, it is often impossible to reduce all data to a specific variety in time or in space: as Mancini (2007) has shown for Vulgar Latin and the *Appendix Probi*, quite often the shape in which lexica and word lists are available to us reflects a multi-layered stratification in time rather than the freeze frame of a single moment in the evolution of the language.

2. THE CASE OF *ETA*

The pronunciation corresponding to the letter ⟨η⟩ (*eta*) provides a good example of a problem in Late Greek phonology as seen through the Atticist lexica.¹¹ Glosses concerning ⟨η⟩ show the typical ambiguity of Atticist lexica, which in most cases do not make a clear distinction between phonology, spelling and, even, morphology. The results of a survey on glosses concerning ⟨η⟩ will consequently be complex and – to a certain extent – as ambiguous as the lexica providing the data.

The letter ⟨η⟩ had been introduced – through Attic – in the official writing system of Greek koiné to denote a long open [e]-quality vowel, reconstructed as [ɛ:]. The data of Egyptian papyri dating from the Roman period onwards (roughly since the beginning of the Common Era),¹² show quite a complex picture. In these papyri *eta* interchanges both with [i]-quality vowels, spelt ⟨ι⟩ and ⟨ει⟩, and with [e]-quality vowels, spelt ⟨ε⟩ and ⟨α⟩ (GIGNAC 1976: 235-49). The former variation seems to attest to the first instances of the change which led to the modern pronunciation of ⟨η⟩, whereas the latter may

¹¹ A remark on textual transmission: where relevant, variant readings in manuscripts have been mentioned, otherwise glosses are reproduced in the way in which they have been printed by their editors. It is remarkable though that there is relatively little variance as far as the spelling of the glossed words is concerned, whereas there is relatively great freedom in the wording of some expressions (e.g. διὰ τοῦ, μετὰ τοῦ, ἐν τῷ... = ‘spelt with...’).

¹² MAYSER & SCHMOLL 1970: 46-53, especially 49 ff.

depend on the survival of a more archaic pronunciation of *eta* as an [e]-quality vowel.

Lexica seem to reflect a reality that scarcely takes into account the more recent innovations attested in the papyri. In other words, they seem to aim at contrasting the innovations that were changing the pronunciation of Attic, whose phonology until very recently did not show the same changes that affected Greek koiné as spoken outside Attica (THREATTE 1982). They agree much more with Attic inscriptions than they do with papyri: they seem to presuppose a pronunciation that is unproblematic as far as *ἠ* is concerned. This must depend on what audience Atticist lexica addressed.

In fact, lexica are selective. They address people who could read and use them as reference works. Their readers should have mastered Greek and were interested in using a very high-register variety of it. Most likely they were already familiar with the conservative pronunciation of Attica, and only needed to be shown the genuine Attic variant among the current pronunciations of particular words.

My guess is that most instructions about the pronunciation of *ἠ* are based on the conservative pronunciation still current in Attica in the first centuries CE, a pronunciation which is likely to have preserved *ἠ* as an [e] vowel until the mid 2nd century CE (THREATTE 1980: 165-6). Lexica seem not to pay attention to the possibility of a confusion between *ἠ* and [i]-quality vowels (see examples (1)(2)(3)), which nevertheless by the 2nd century CE should have been the pronunciation current in most of the Greek speaking world – outside Attica.

2. 1. *Eta and the [i]-quality vowels.*

Only a few glosses contrast *eta* with [i]-quality vowels, i.e. the spellings *ῶ* and *ῠ*. None of them, however, can be accepted as uncontroversial evidence for any pronunciation of *eta* rather than [e:].

The following are the only available examples of *eta* interchanging with the digraph *epsilon-iota* (by the 2nd century CE no more than a spelling for long [i:]). They refer to *εὔειλος* ‘sunny, warm’ and *ἀναπηρία* ‘lameness, mutilation’:

- (1) *εὔειλος*: *εὐήλιος*. Ἀριστοφάνης.
εὔειλος: *εὐήλιος*. Aristophanes.
 (Ael. D. ε 69)
- (2) *ἀναπηρία*: *διὰ τοῦ ἠ τὴν τρίτην, οὐ διὰ τῆς εἰ διφθόγγου, ὡς οἱ ἀμαθεῖς, τὸ μὲν οὖν ἀνάπηρος καθωμίληται, τὸ <δ’> ἀναπηρία σπάνιον.*
ἀναπηρία: the third [syllable] with *ἠ*, not with the diphthong *ῠ*, in the manner of the uneducated. Indeed, *ἀνάπηρος* is current, yet *ἀναπηρία* is rare.
 (Phry. PS 13, 4-6)

Both cases show the weakness of the hypothesis that there was uncertainty between the vowels spelt *ῠ* and *ἠ*. Both words are uncommon. Moreover,

Aelius Dionysius's gloss on εὔειλος does not seem to be prescriptive, but rather the definition of a rare word's meaning.¹³ In both cases paraetymology with ἥλιος 'sun' and πείρα 'trial, attempt' / ἀνάπειρα 'trial, proof' might have been at work.

Seemingly straightforward confusion between *eta* and *iota* is attested only in a subset of glosses, all referring to the doublet νήστης ~ νῆστις.

- (3) νήστης βάρβαρον, τὸ δὲ ἀρχαῖον νῆστις διὰ τοῦ ι.¹⁴
 νήστης is not Greek, the ancient (form is) νῆστις with ι.
 (Phry. *Ecl.* 298)

Even these glosses, however, should be discarded as evidence for a pronunciation [i] of *eta* and *iota* both because they are isolated and because they all refer to a single lexical item, νῆστις. They actually tackle the problem posed by the interchanging of νῆστις with its variant νήστης, which has a common agent noun suffix, -της. The lexicographers' glosses match the epigraphic data from Attica: Attic inscriptions of the 2nd century CE show some degree of confusion between ⟨η⟩ and ⟨ι⟩ only when suffixal ⟨ης⟩ and ⟨ις⟩ are concerned (THREATTE 1980: 166). This confirms that the lexicographers tackled a problem in morphology rather than in phonology. One of the glosses (Phry. *PS* 91,5-6, providing forms of the plural of νῆστις) clearly shows that the lexicographer had an interest in inflexion, not only – or perhaps not at all – in pronunciation.

Two glosses contrasting ⟨η(ι)⟩ and ⟨η⟩ with ⟨ει⟩ (Ael. *D.* κ 29 κληῖσαι ~ κλειῖσαι, Moer. λ 25 λητουργεῖν ~ λειτουργεῖν) do not reflect a trend of 2nd century CE Greek. They are more likely to show the traces of a shortening process of 4th century BCE Attic. The Atticist glosses could merely depend on concurrent spellings in the copies of Attic literature that the lexicographers would read, and not on a contemporary trend towards the shortening of ⟨ηι⟩ to ⟨ει⟩. Note that Ael. *D.* κ 29 is one of the instances where the lexicographer labels one form as 'ancient' (κληῖσαι οἱ ἀρχαῖοι λέγουσι, 'the ancient say *klēi-sai*'). It is impossible to tell whether the terms were different only in their spellings or in their pronunciations as well.

2. 2. Eta and /e/

If ⟨η⟩ had retained its old pronunciation as long [e] vowel, this could explain the number of glosses in the Atticist lexa contrasting ⟨η⟩ and ⟨ει⟩. The contrast between long and short counterparts could be the outcome of a

¹³ ἀναπειρία is not found in still extant ancient Greek texts, except for two quotes in the lexa (*Antiatt.* 78, 11, *Suda* α 2014) and Pollux, *Onomasticon* 11 61. The quotes have been edited by R. Kassel and C. Austin (*Poetae Comici Graeci*) as Aristophanes, fr. 460 and Cratinus, fr. 179. The spelling with ⟨ει⟩ of the cognate form ἀνάπηρος is attested in the manuscripts (LSJ s.v. ἀνάπηρος).

¹⁴ Similarly Moer. ν 12, Phry. *PS* 91,5-6.

well-attested trend of Late Greek, the loss of distinctive vowel quantity (or isochrony).¹⁵

The examples are:

- (4) σύνθημα μετὰ τοῦ ἡ Ἀττικοί· μετὰ δὲ τοῦ ε Ἑλληνες
 ‘The (speakers of) Attic (use)¹⁶ σύνθημα with ⟨η⟩: the *Hellenes*¹⁷ with ⟨ε⟩’
 (Moer. σ 21)

Similar treatments are found as well for the doublets ἀνάθημα ~ ἀνάθεμα (Moer. α 57, Philem. 354 C.) as for εὔρημα ~ εὔρεμα (Philem. 393, 22 R., Phry. Ecl. 420).

All these are instances of verbal formations in -μα. These glosses are by far the most common type among those contrasting ⟨η⟩ and ⟨ε⟩. Yet the very fact that they belong to the same derivation class must make one wonder whether some word-formation problem underlies their alternation. This is indeed the case: -μα formations are paralleled by -σις formations,¹⁸ which normally require a zero-grade of the root. For instance, Vedic *dīti* ‘distribution, liberality’ comes from a root *dā*, exactly as *dāman* ‘gift’ does. Yet *dīti* has a root vowel *i* that is explained as the outcome of a zero-grade formation **dh₃-ti*, whereas *dāman* points to a full grade **deh₃-mṇ*. Likewise, in Greek as well θέσις is expected as the outcome of a zero-grade formation **d^hh₁-ti* from the root **d^heh₁* of τίθημι, and it is through the influence of these formations that one should explain -μα deverbatives with a short pre-suffixal vowel (such as θέμα instead of θῆμα).¹⁹

Similar analogical pressures are to be invoked in the following example:

- (5) ἀνυπόδητος ἐρεῖς ἐν τῷ ἡ· τὸ γὰρ ἐν τῷ ε ἀμάρτημα. καὶ γὰρ ὑποδήσασθαι λέγεται, οὐχ ὑποδέσασθαι.²⁰
 ‘You shall say ἀνυπόδητος with ⟨η⟩: for the (form) with ⟨ε⟩ is a mistake. And indeed one says ὑποδήσασθαι, not ὑποδέσασθαι.’
 (Phry. Ecl. 419)

ἀνυπόδητος is a derivative of ὑποδέω, and has a long vowel because of the aorist stem ὑπέδησα from which it is derived. Indeed non-verbal compounds from the same root,²¹ i.e. adjectives that cannot be linked to any aorist, keep the original short vowel of the verbal adjective δετός, like for instance λινόδετος ‘tied with flax, with a flaxen rope’.

¹⁵ A general survey in ALLEN 1987: 28, see also DEVINE & STEPHENS 1994: 215-6 (accent), MAYSER & SCHMOLL 1970: 73-6 (on the short and long /o/ vowels ω ~ εω in the Ptolemaic period), GIGNAC 1976: 275-7 (isochrony in Egyptian papyri), THREATTE 1980: 385-7 (isochrony in Attic inscriptions).

¹⁶ The phrasing of the lexicographers is ambiguous. Since there is no verb, it is impossible to decide whether the gloss refers to spelling and/or to pronunciation. See paragraph 3 for further remarks.

¹⁷ Moiris seems to label *Hellenes* the speakers of Greek, possibly of koiné – even though sometimes the latter seem to be addressed by κοινόν/κοινῶς. Cf. MAIDHOF 1912.

¹⁸ SCHWYZER 1939: 522-3.

¹⁹ Which seems to be a rare word, perhaps a new formation, in Sophocles, fr. 541 (LSJ s.v. θῆμα).

²⁰ Similar glosses to ἀνυπόδητος are found in Moer. α 63, Philet. 149, Phry. PS 27,12.

²¹ δέω < **deh₁*, cf. LIV s.v. 1. *deh₁*.

Rather than orthoepic, the gloss must be lexical and based on word-formation criteria: it only prescribes the variant ἀνυπόδητος, which it links to the aorist of (ὑπο)δέω, and implicitly contrasts to -δετος compounds with a nominal first member.

The following gloss by Phrynichus is more surprising:

- (6) ἀπέσβησε πῦρ· ὁμοίως καὶ λύχνον. διὰ τοῦ η, οὐ διὰ τοῦ ε
 ‘He put out²² the fire: and similarly a lamp. With <η> not <ε>.’
 (Phry. *PS* 26,9-10)

The aorist ἀπέσβησα that the lexicographer prescribes is never attested in Classical Greek as the aorist of ἀποσβέννυμι. A long vowel <η> is indeed attested in the old root aorist ἀπέσβην.²³ This must have been the model for more (and more recent) long vowels in the paradigm: namely in the perfect ἀπέσβηκα, and in the middle future ἀποσβήσομαι (contrasting a more ancient active ἀποσβέσω). Modern Greek shows the outcomes of this trend, in that it continues only the more recent forms with *eta* of the verb (present σβήνω, aorist έσβησα). The lexicographers thus attest an early stage in the shaping of the Modern Greek verb. Yet the process attested involves morphology rather than phonology.

Similar analogical reworkings must have been at work for the variations addressed in the following glosses:

- (7) a. ἤμελλον ἠβουλόμην ἠδυνάμην ἠῤῥάμην διὰ τοῦ η διὰ τοῦ ε “Ἑλληνας.²⁴
 ‘ἤμελλον ἠβουλόμην ἠδυνάμην ἠῤῥάμην with <η>: with <ε> the *Hellenes*.’
 (Moer. η 5)
 b. ἠδύνω ἠπίστω Ἄττικοί· ἐδύνασο ἐπίστασο “Ἑλληνας.
 ‘ἠδύνω ἠπίστω is Attic: the *Hellenes* (say) ἐδύνασο ἐπίστασο.’
 (Moer. η 22)

Analogical reworking explains the η-augment in the imperfects ἠβουλόμην ἠμελλον ἠδυνάμην of βούλομαι, μέλλω, δύναμαι ‘I wish, I am about to, I am able to’. As verbs beginning with a consonant, they are expected to take a short ε as the augment. The occurrence η as their augment is explained by analogy with the verb θέλω ‘I wish’. This high-frequency verb had a variant present θέλω: the variation

| | | |
|------------|---|-------------------|
| present | ~ | imperfect, aorist |
| ἐθέλω/θέλω | | ἠθέλ- |

triggered the diffusion of η among this group of modal verbs (DEBRUNNER 1954: 103). These verbs are most frequently augmented with η in Ptolemaic

²² The 3rd person singular is used as the quotation form for the aorist of ἀποσβήννυμι.

²³ Cf *LIV s.v. *(s)g^hesh₂. *sg^hes* according to RUIJGH 2004: 61.

²⁴ But cf. Philem. 394, 10 R. ἐβουλόμην· οὐκ ἠβουλόμην, who seems to recommend (as Attic?) the very same form Moiris ascribed to the *Hellenes*.

papyri (MAYSER 1938: 93-4), but – with the exception of (ἐ)θέλω – they tend to take the classical ε-augment in Roman times (GIGNAC 1980: 228).

The augmented aorist ἠύξαμην and imperfect ἠπίστω are but the expected augmented forms of εὐχομαι and ἐπίσταμαι. Curiously, Moeris labels as Attic the form ἠύξαμην, a form that is only ‘more ancient’, as opposed to ‘more Attic’, than its counterpart εὐξάμην (which had undergone a shortening to ευ of its initial ηυ – cf. SCHWYZER 1939: 655). Moeris’ view may be related to the overlapping of the categories ‘Attic’ and ‘ancient’ seen in Ael. D. κ 29 κλησαι and Phry. Ecl. 298 νήστης (examples (1) and (3) – cf. also Phry. 414, a variant of Phry. Ecl. 133, ex. (9) below).

Three glosses contrast concurrent forms that might not have been influenced by inflectional paradigms. They are:

- (8) ἐθάς· φίλος, συνήθης. τινὲς δὲ καὶ ἠθάς.
 ‘ἐθάς: friend, acquaintance. Some (say) also ἠθάς’
 (Ael. D. ε 10)
- (9) ἦνυστρον λέγε, μὴ ἔνυστρον.²⁵
 ‘say ἦνυστρον, not ἔνυστρον’
 (Phry. Ecl. 133)
- (10) γήινον λεκτέον διὰ τοῦ ἠ, ἀλλ’ οὐχὶ διὰ τοῦ ε, γέινον.
 ‘One must say γήινον with ⟨η⟩, and not with ⟨ε⟩, γέινον.’
 (Phry. Ecl. 69)

There is a possibility that ἔνυστρον is the result of paraetymology with the prefix ἐν, but γέινον can only be viewed as the outcome of a real shortening. ἐθάς can be explained as the outcome of the shortening of ἠθάς (MEISSNER 2006: 76-8), and possibly a recent one – Aelius Dionysius however does not give any information as to the relative chronology of ἐθάς and ἠθάς. The latter is accounted for only as a variant in the speech of some speakers.

The latter examples are the only ones pointing to an equivalence of ⟨η⟩ and ⟨ε⟩. To them one should add

- (11) ἡμωδῖαν ἐπὶ τῶν ὀδόντων διὰ τοῦ ἠ Ἀττικοί· αἰμωδῖαν Ἑλληνας.
 ἡμωδῖαν referring to teeth has ⟨η⟩ in Attic: the *Hellenes* (say) αἰμωδῖαν.
 (Moer. η 17)

where *eta* is interchanging with the digraph *alpha-iota*, by the beginning of the 2nd century CE an alternative spelling for [e] (THREATTE 1980: 268).

None of the instances above provides significant evidence that a phonetic change prompted the need for glosses banishing incorrect forms. It is remarkable, however, that there are many more glosses dealing with the interchange between ⟨η⟩ and [e]-quality vowels than between ⟨η⟩ and [i]-quality

²⁵ The gloss is repeated, with an interesting appraisal of chronology, in Phry. Ecl. 414 ἔνυστρον μὴ λέγε, ἀλλὰ ἦνυστρον, ὅτι καὶ ἀρχαῖον. This gloss is possibly to be attributed to a copyist (the glosses 412-424 of the *Ecloga* are considered to be a later addition, cf. FISCHER 1974: 29-31).

vowels. The latter, besides being fewer in number, can all be explained through paraetymologies or the interchange of concurrent suffixes. However, the picture is not radically different in the case of ⟨η⟩ interchanging with [e] quality vowels. It is not easy to rely on such glosses to draw the conclusion that ⟨η⟩ and ⟨ε⟩ were only concurrent spellings for the same sound.

One could argue that concurrent formations with ⟨η⟩ or ⟨ε⟩ had become more likely to interchange precisely because no distinction between long and short [e] quality vowels was being made anymore – and it is a fact that Attic was losing contrastive vowel length at the time when the lexica were composed, or even earlier elsewhere. But such a principle is true in general for the few glosses contrasting ⟨η⟩ to [e] quality vowels. Moreover, even if lexica point to [e] as the likeliest pronunciation of ⟨η⟩, still the pronunciation of ⟨η⟩ eventually merged with [i] and not [e] in Modern Greek. A tentative explanation of the variety of glosses is that somehow lexica took into account both pronunciations, preferring the one with [e], current in Attica, but also mentioning variants triggered by the [i] pronunciation already spread elsewhere in the Greek speaking world.

The evidence about a single phoneme being so scanty and difficult to understand, is it still possible to talk of orthoepic prescriptions in the Atticist lexica?

3. PRESCRIPTIONS IN GREEK LEXICA

Quite different from Atticist lexica, *Prātiśākhyā* deal with pronunciation systematically and straightforwardly. It is usual in the *Prātiśākhyā* to dwell for several paragraphs just on the way in which sounds must be articulated (cf. for instance *AP* 1.18 ff.). Even just one instance from the *Taittirīya Prātiśākhyā* on the *Black Yajurveda* is revealing:

- (12) *rephoṣmasaṃyoge rephasvarabhaktiḥ*
 'In the combination of *r* and a spirant, there is a *svarabhakti* of *r*'
 (*TP* 21.15)²⁶

Here a sub-phonological case of *sandhi* is clearly explained (the exact phonetic value of *svarabhakti* is to be inferred by two preceding paragraphs, *TP* 2.19 and 21.6). A whole chapter (the second) of the *Taittirīya Prātiśākhyā* is dedicated to the utterance of sounds, with descriptions of how the speech organs should move to articulate the sounds of Sanskrit, and all of chapter 21 deals with the problems of sound-combinations.

There is nothing like this in the Atticist lexica. The information we have is always confined to isolated items; there are no general statements about how the language sounds behave. The strictest orthoepic prescriptions prescribe pronunciations of isolated words, yet they never state general rules.

²⁶ Cf. WHITNEY 1871: 391-3, ALLEN 1953: 73-5 on *svarabhakti*.

Here follow some more examples showing how Atticist lexicographers employ (more or less technical)²⁷ terms related to pronunciation:

- (13) γρυλλίζειν διττὴν ἔχει ἀμαρτίαν, ἔν τε τῇ προφορᾷ καὶ τῷ σημαينوμένῳ: ἐν μὲν τῇ προφορᾷ διὰ τῶν δύο λλ, ἐν τῷ σημαينوμένῳ ὅτι παρὰ τοῖς ἀρχαίοις τὸ γρυλλίζειν ἐστὶ τιθέμενον ἐπὶ μὲν τῆς τῶν ὕων φωνῆς, οἱ δὲ νῦν τάττουσι ἐπὶ τῶν φορτικῶς καὶ ἀσχημόνως ὀρχουμένων. ἐρεῖς οὖν γρυλλίζειν καὶ γρυλισμός, οὐ γρυλλισμός.
 ‘γρυλλίζειν has a double mistake, in the pronunciation and in the meaning: in the pronunciation because of the two λλ, in the meaning because in the ancient writers γρυλλίζειν is used for the call of the pigs, whereas contemporary writers use it for the vulgar and unpleasant dancers. You shall therefore say γρυλλίζειν and γρυλισμός, not γρυλλισμός.’²⁸
 (Phry. *Ecl.* 72)
- (14) πύελος διὰ τοῦ ε καὶ μυελός ὀητέον.
 ‘you shall say πύελος and μυελός with ε.’
 (Phry. *Ecl.* 281)
- (15) διονυσεῖον· ἀπαίδευτον οὕτω λέγειν, δέον βραχύνειν τὴν σι συλλαβὴν· οἱ γὰρ ἐκτείνοντες παρὰ τὴν Ἀττικῶν διάλεκτον λέγουσιν. [...] ‘διονυσεῖον: it is of the uneducated to say so, whereas the σι syllable has to be short:’²⁹ those who lengthen it speak against [the rules of] the Attic dialect. [...]’
 (Phry. *Ecl.* 346)
- (16) υἰέος· ἀμαρτάνουσιν οἱ διὰ τοῦ ω τὴν γενικὴν προφέροντες, ὡς Πηλέως.
 ‘υἰέος: those who pronounce the genitive with ω as Πηλέως make a mistake.’
 (Phry. *PS* 118,3-4)

Quite differently from Indian *Prāṭiśākhya*, the technical vocabulary of Atticist lexicographers is ambiguous. Although verbs such as προφέρειν ‘pronounce’ seem to refer beyond doubt to pronunciation, others – such as λέγειν ‘say’ – could be just metaphorical denotations of spelling. Yet, lexicographers were most probably read by orators who published (or aimed at publishing) their compositions in public declamations; therefore it seems obvious that Atticist lexicographers were more functional regarding the utterance of texts rather than their spelling.

Describing the double status of high and low variants of Greek, Latin and Arabic, Kees Versteegh (1987: 268-9) stated that «[n]either the grammatical writings nor the texts can ever give us an idea of the chronology of the changes in the popular language [...]. These texts do not reflect the development of popular speech, but only the development of the attitude towards

²⁷ For a list of technical terms of ancient Greek scholarship cf. DICKEY 2007.

²⁸ Note that some manuscripts of the *Ecloga* have this gloss with λλ-forms throughout (especially MSS UC). Their reading is less satisfactory than the one chosen by FISHER 1974, especially since the final prescription ‘οὐ γρυλλισμός’ would be unclear if we read γρυλλίζειν/γρυλλισμός instead of γρυλλίζειν/γρυλλισμός.

²⁹ Indeed a branch of the tradition (b) has διονύσιον instead of διονυσεῖον; see FISHER 1974 *ad loc.*

the standard language and towards the constraints of written language *vis-à-vis* spoken language».

It is certainly true that neither the Greek Atticist lexica nor the Indian *Prāṭiśākhya* present a direct picture of the changes in popular speech. Yet, they do provide information about the specific kind of pronunciation they prescribe – possibly more than just the “attitude towards the standard language” in Versteegh’s words.

There are instances of glosses that do not prescribe a specific word or spelling, but a specific pronunciation. The clearest example comes from Phrynichus’ *Ecloga*:

- (17) πελαργός· οἱ ἀμαθεῖς ἐκτείνουσι τὸ α, δέον συστέλλειν· Πελαργός γὰρ οὐδὲν ἄλλο ἢ Ἐρετριακῶς Πελασγός.
 ‘πελαργός: the uneducated lengthen the α, but it has to be short: for πελαργός is nothing but the Eretrian for πελασγός.’
 (Phry. *Ecl.* 80)

Here it is clear that the difference in pronunciation does not involve anything but the length of the vowel (and not for instance the accent or the metrical value of the syllable with α). This is conclusive evidence that lexica such as Phrynichus’ *Ecloga* did record the different pronunciations current at the time of their composition.

Lexica and – more generally – prescriptive grammars are useless if one wishes to reconstruct the evolution of Greek popular language. To do so, one must rely on the most useful evidence of inscriptions and papyri. Quite differently from Indian *Prāṭiśākhya*, Atticist lexica do not even provide a full description of the whole phonological system of Late Greek.

Nevertheless, learned texts such as lexica and grammars do confirm that the language of the educated featured special sets of phonological traits in some of its variants: they are the only pieces of evidence we have to explain why such archaic features as the retention of a distinction between *eta* and *iota* survive as late as the early Byzantine times, and do survive despite the fact that they seem on the verge of being lost much earlier. Atticist lexica make an interesting case study because they are a special instance of a written corpus³⁰ that explicitly prescribes the features of a specific variety. In the Greek-speaking world, the standard language they aim at prescribing is possibly the first instance of “decreolized” Greek,³¹ a purist variety meant to be used for the composition of literary texts. It established the high variety that kept out the most innovative dialects of Modern Greek in the making of the new standard.

³⁰ Cf. SCHNEIDER 2002, VERSTEEGH 2002: 57-66.

³¹ Cf. VERSTEEGH 2002: 71; for the concept of *decreolization* see THOMASON & KAUFMAN 1988.

ABBREVIATIONS

- Ael. D. = ERBSE, H. (ed.) (1950). "Aelii Dionysii atticistae fragmenta". In ERBSE, H., *Untersuchungen zu den Attizistischen Lexika*. Berlin: Akademie-Verlag, 95-151.
- Antiatt. = BEKKER, I. (ed.) (1814). "Ἀντιᾶττικιστῆς". In BEKKER, I. (ed.), *Anecdota Graeca. I. Lexica Segueriana*. Berlin: Nauck, 75-116.
- AP = *Atharvaveda Prāṭisākhya*, see WHITNEY 1863.
- Moer. = HANSEN, D. U. (ed.) (1998). *Das attizistische Lexikon des Moeris*. Berlin, New York: de Gruyter.
- LIV = RIX, H. & KÜMMEL, M. (eds.) (2001). *Lexicon der indogermanischen Verben*. Wiesbaden: Reichert.
- LSJ = LIDDELL, H. G. & SCOTT, R. (eds.) (1940⁹). *A Greek-English lexicon*, Oxford: Clarendon Press.
- Philem. C. = COHN, L. (ed.) (1898). "Der Atticist Philemon". *Philologus* 11, NF: 353-367.
- Philem. R. = REITZENSTEIN, R. (ed.) (1896). "Philemon's lexicon". In REITZENSTEIN, R., *Geschichte der griechischen Etymologia*. Leipzig: Teubner, 392-396.
- Philet. = DAIN, A. (ed.) (1954). *Le Philétaeros attribué à Hérodien*. Paris: Les Belles Lettres.
- Phry. Ecl. = FISCHER 1974
- Phry. PS = DE BORRIES, I. (ed.) (1911). *Phrynichi sophistae Praeparatio sophistica*. Leipzig: Teubner.
- TP = *Taittirīya Prāṭisākhya*, see WHITNEY 1871.

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