

Mindaugas STROCKIS

Vilnius University

A NEW INTERPRETATION OF THE SYLLABLE TONES IN DORIC GREEK

A thorough understanding of ancient Greek accentuation, especially of the nature of the Greek syllable tones, can contribute to our knowledge of the accentuation of other Indo-European languages, among them the Baltic languages, at least by furnishing some useful typological examples.

We possess a fairly good knowledge of ancient Greek accentuation, but most of it is confined to the classical form of Greek, that is, Attic. The accentuation of the Doric dialect is scantily attested, and its relationship to the Attic is not quite clear. The amount of evidence that we have about Doric accentuation is just such as to make the problem interesting: not enough for obvious and decisive conclusions, but neither so little that one must abandon any attempt at interpretation altogether.

The evidence about the accentuation of literary Doric that was gathered by classical scholarship from the papyri of Alcman, Pindar, and Theocritus, as well as from the descriptions of ancient grammarians, was summarised by Ahrens in 1843, and little, if any, new information was added since that time. Ahrens' data can be summarised as follows:

Acute in the last syllable where Attic has non-final accentuation: Doric φρᾱτήρ : Attic φρᾱ́τηρ.

Acute in the names in -ᾱν (< -ᾱων), instead of Attic circumflex: Doric Ποτιδᾱ́ν : Attic Ποσειδῶν (< -δᾱ́ων); Ἀλκμᾱ́ν.

Acute in monosyllabic nouns, where Attic has circumflex: Doric σκῶρ : Attic σκῶρ, Doric γλαύξ : Attic γλαῦξ.

No 'short diphthongs'; all final -αι and -οι are 'long': nom. pl. ἀγγέλλοι, ἀνθρώποι, τυπτομένοι, ἀγκύραι, κρᾱ́ναι; contract verbs φορεῖται, ἐσσεῖται.

Imperfect and aorist third person plural forms are accented on the second last syllable, always with acute, where Attic has a recessive accent: ἐλέγον, ἐλύσαν, ἐφιλάθην, ἐστάσαν (Attic ἔλεγον, ἔλυσαν, etc.).

Third declension nominative and accusative plural have acute on the long root syllable, despite the short final syllable: *παῖδες, παῖδᾶς, γυναῖκες, πτώκᾶς* (Attic *παῖδες*, etc.).

First declension accusative plural with short ending *-ᾶς* (confirmed by metre) is accented, contrary to the third mora rule (also known as *final trochee rule*, *la loi σωτήρα*, *Dreimorengesetz*, *Properispomenierungsgesetz*, *ἤμα-Gesetz*, *Hemagesetz*, etc.), with an acute, as in corresponding Attic forms (where the *ā* is long): *Μοῖρᾶς* Theocr. 2.160 (= Attic *Μοῖρᾶς*); *τρωγοῖσᾶς* Theocr. 9.11 (= Attic *τρωγούσᾶς*).

Similar non-recessive accentuation of the accusative plural in *-ος* of the second declension: *νᾶσος* (= *νήσους*), *ἀμπέλως* (= *ἀμπέλους*).

Genitive plural of feminine adjectives and pronouns has circumflex on the final syllable, in contrast with the Attic, where feminine forms are accented like their masculine counterparts: *ἀμφοτέρᾶν, ἀκρᾶν* (= Attic *ἀμφοτέρων, ἄκρων*).

Present tense forms of verbs have acute on the second last syllable, despite the short final syllable: *συρίσδες* Theocr. 1.3 (= Attic *συρίζεις*).

Genitive plural of pronouns has circumflex on the last syllable, where Attic has non-final accentuation: *τουτῶν* (Attic *τούτων*), *τηνῶν, ἀλλῶν* (Attic *ἄλλων*).

Genitive plural of monosyllabic nominatives has circumflex on the last syllable where Attic has non-final accentuation: *παιδῶν, Τρώων, παντῶν* (= Attic *παίδων, Τρώων, πάντων*).

Adverbial suffix *-ως* is accented in those forms where in Attic it is not: *ούτῶς* (Attic *οὔτως*), *ἀλλῶς* (Attic *ἄλλως*), *παντῶς* (Attic *πάντως*).

Accented adverbial suffix *-ως* has acute in Doric: *σοφῶς* (Attic *σοφῶς*), *καλῶς* (Attic *καλῶς*).

Adverbial suffix *-α* (*-η*) is always accented: *ἀλλᾶ, παντᾶ* (= Attic *ἄλλη, πάντη*). Other adverbs are also accented on the last syllable: *τουτεῖ, τηνεῖ, τουτῶ, τηνῶ; ὅπᾶ* (= Attic *ὅπη*), *ὅπεῖ; ἄμᾶ, κρυφᾶ, διχᾶ* (= Attic *ἄμᾶ, κρύφᾶ, δίχᾶ*).

The process nowadays known as Vendryes's Law fails to operate in Doric: *ὄμοιος, ἐτοῖμος* never became *ὄμοιος, ἔτοιμος*, as they did in Attic.

During more than a century and a half that has elapsed since Ahrens' time, very little new evidence has emerged. One notable addition was the

peculiar final accentuation of dat. sg. of γλῶσσα (sometimes appearing as γλάσσα in Doric texts) in a Pindar papyrus: γλωσσᾶ (= Attic γλώσση). This was mentioned by Hermann (1919, 176), Schwyzer (1939, 384), Kuryłowicz (1958, 120), and other scholars.

Various researchers have offered various hypotheses to explain the historical processes that caused the Doric accent to be so different from the Attic in such a seemingly random and chaotic manner. For our purpose it would be interesting and useful to review, in an outline, the history of the explanations since Ahrens' time.

Ahrens himself offered his explanations to the Doric accentuation phenomena that he collected (Ahrens 1843, 26–35). Here is an abridged list:

- ἀγγέλοι, ἀνθρώποι: there are no 'short' αι and οι; diphthongs are always 'long' in Doric;
- ἐλέγον < *ἐλέγοντ. The last syllable was long before the prehistoric dropping of the final -τ, thence such accent must have been regular, and was preserved in Doric; Attic recessive accent as in ἔλεγον must be new (this explanation was also mentioned by Schwyzer 1939, 384);
- παίδες, παῖδες: old accent, which once must have been regular, when, according to Ahrens' theory (by modern understanding of the matter, erroneous), these nom. pl. and acc. pl. endings were long, like they are in some pronouns, such as ἡμεῖς, ἡμᾶς, or in the Latin third declension;
- ἀμφοτερᾶν, ἀκρᾶν: regular product of the contraction from -άων, while the Attic forms (ἀμφοτέρων, ἄκρων) are accented by analogy with the masculine forms. As we can see, this explanation (unlike the previous one) would be perfectly acceptable also for modern scholarship;
- παιδῶν, Τρωῶν, παντῶν: analogy with the corresponding forms from other monosyllabic nominatives (such as μνηῶν, ποδῶν, etc.), while the Attic παίδων etc. are 'against analogy' (*analogia laesa*);
- ἀλλᾶ, παντᾶ: analogy with the adverbs in -ῶς.

Karl Brugmann in 1913 noted the fact that the placement of the Doric accent in most cases appears to be shifted rightwards by one mora (sometimes by two), compared to the Attic, and called the Doric accent

‘processive’ (that is, shifted rightwards): “Im Dorischen zeigt sich, am Att. gemessen, eine ‘prozessive’ Verschiebung des Akzents <...>. Gegenüber dem att. Akzent ist dieser dorische teils um eine Mora (z. B. ἐλάβον), teils um zwei Moren (z. B. ἐστᾶσαν) vorgerückt”. Yet it seems that Brugmann himself did not quite believe that such generalisation could pass for an explanation; he put the word ‘prozessive’ into inverted commas, and further on, he gave separate cases separate treatment:

- αἶγες: old accent, unaffected by the third mora rule (cf. nominative αἶξ with acute);
- 3rd plural ἐλάβον: innovation; etc. (Brugmann 1913, 186–187).

Hermann Hirt in 1929 offered a different explanation: the Doric accent was not shifted rightwards; it stays where it was. Conversely, it is the Attic accent that was shifted leftwards as a consequence of the third mora rule (in Hirt’s terminology, *ῥήμα-Gesetz*). This rule, according to Hirt, failed to operate in Doric: “das sogenannte ῥήμα-Gesetz <...> gilt für das Dorische nicht”. Yet, according to Hirt, not everything can be explained by the non-operation of the third mora rule: “außerdem gibt es noch einige Abweichungen anderer Art” (Hirt 1929, 65).

Eduard Schwyzer in 1939 also noted the ‘processive’ nature of the Doric accent (rightwards by one or two moras, or syllables, compared to the Attic): “Das ‚Dorische‘ zeigt anscheinend die umgekehrte Neigung wie das Attische und Lesbische, nämlich die, den Akzent um eine oder zwei Moren oder Silben zum Ende hin zu verschieben” (Schwyzer 1939, 384).

As mentioned, ‘processive’ means ‘rightwards’; ‘recessive’, as it is customary in accent studies, means ‘leftwards’. Let us inspect some examples for clarity:

- Doric ἐλάβον $\acute{\text{---}}$: Attic ἔλαβον $\acute{\text{---}}$ (the Doric placement of the accent is ‘processive’ by one mora, compared to Attic);
- Doric ἐστᾶσαν $\acute{\text{---}}$: Attic ἔστησαν $\acute{\text{---}}$ (the Doric accent is ‘processive’ by two moras).¹

¹ In this example (like everywhere else in this article) only vowel moras are taken into account; in other words, here we talk about the quantity of vowels, not the quantity of syllables. For this reason, the first syllable of ἔστησαν is taken as one mora (–), which is the quantity of the epsilon, although in poetry, of course, such syllable would be reckoned as long (‘long by position’, or, in Sanskrit scholars’ terminology, ‘heavy’).

Yet, like Brugmann, neither did Schwyzer seem to accept this rightwards-shift observation as a valid explanation of the phenomenon; instead, like his predecessors, he offered separate cases separate explanations. Some examples:

- σοφώς etc.: in the Doric -ως adverbs the old instrumental case form could be lurking (which must be responsible for the acute, differently from the Attic, where the prehistoric ablative ending lurking in these forms must be responsible for the circumflex): “In σοφώς u.ä. kann alter Instrumental stecken”;
- ἀμπέλος, νῆσος: old accent, regular by the third mora rule in the reconstructed proto-forms *ἀμπέλωνς, *νῆσωνς;
- αἴγες: old accent, as in the nominative αἴξ, unaffected by the third mora rule (in Schwyzer’s terminology, *Properispomenierungsgesetz*, Schwyzer 1939, 377).

A completely new explanation of the Doric accent phenomena was offered by Jerzy Kuryłowicz in 1958. He stated that the output of the third mora rule in Doric and Attic was inverted; the rest was the operation of morphological processes: “La différence $\acute{\sim} \sim : \tilde{\sim} \sim$ est du reste l’unique trait distinguant les systèmes prosodiques ionien-attique et dorien. Toutes les autres sont d’ordre *morphologique*” (Kuryłowicz 1958, 157–158).

From this abridged review of the history of Doric accent research, a reader might get an impression that many and various accent changes, processes, phonetic laws, and analogies operated, or failed to operate, in Doric, and nearly always with the same result: the Doric placement of the accent every time ended *on the mora to the right* of the Attic accent placement on the same word form (or in some cases, it must be added for precision, by *two moras* to the right).

So there is a strong temptation to offer a new explanation of the Doric placement of word accent, which would simplify most of the available data into one simpler and more homogenous rule.

It is to be borne in mind that there was no system of accent notation devised specially for the Doric dialect. As it is universally known, the Alexandrine system of Greek accent notation was intended primarily for Homeric and classical Attic (which forms of Greek, in terms of accentuation, appear to be nearly identical). Also one must bear in mind that Greek grammarians

(not unlike their counterparts in ancient India) described and marked with written signs *not the phonological accent* in its modern sense, but the *tone contour* of an entire word or even phrase. It is modern scholars who extract the phonological place of the word accent from the contour notation in ancient manuscripts, be it ancient Greek or Vedic Sanskrit. While in Attic Greek the phonological placement of the accent is obvious, in Doric it is less so. In other words, when modern books say that the Dorians accented, for example, γεραιάτοι instead of Attic γεραιάτοι, one must not forget that such Doric placement of accent was distilled by scholars from the original notation (found in papyri) which is γεραιάτοι, where the grave mark means a low pitch for the syllable, and acute a high one. For Attic, we know for sure that the ancient high pitch corresponds to the phonological accent simply because the stress of later forms of the Greek language, including the one spoken nowadays, stays on the same syllables (with a few easily explainable differences) which in ancient Greek carried the high pitch; also by systematic agreements of the Attic accentuation with that of other IE languages, mostly Vedic.

For the Doric dialect, there is no such certainty at all. Come to think of it, the written accent marks in Doric papyri, such as in the form γεραιάτοι, do not at all reveal which phonetic tone, low on παί (marked with the low tone mark), or high on τα (marked with the high tone mark), carried the function of the *phonological* accent of the word.

We argue that the Doric accents that we have on papyri and described in ancient grammatical treatises were marked by ancient grammarians who based their markings not on some phonological analysis (a thing that one would not readily expect from ancient grammarians), but on *acoustic impression*, as compared with the sound of classical Attic. In other words, there were no accent marks devised specifically for the Doric accent; the Greek accent notation that we know was devised by Alexandrian grammarians for Homeric and classical Attic. The accents of other dialects could not be marked otherwise but *with Attic marks* by *acoustic comparison* with the sound of Attic.

So we propose a hypothesis that the phonological accent in Doric was phonetically actualised with a *lower* tone (not higher, as in Attic) than that of the subsequent post-accentual syllable (or mora); accordingly, the Doric accent was indicated in writing by grammarians with the grave, which mark

meant a low tone in the Alexandrine system of accent notation; the subsequent syllable (or mora) had an acoustically higher tone in Doric (not unlike the post-accentual *svarita* syllable in Vedic), and was accordingly marked with an acute – which mark, from the Attic point of view, is now understood as the mark of the phonological word accent – and this creates the impression that the Doric accent was shifted by one mora rightwards in comparison to Attic.

Let us analyse some examples for clarity. The grave mark in the following diagrams is used in its *Alexandrine* (not Byzantine or modern) meaning, that is, for marking the low pitch of moras or syllables. A long vowel or a diphthong (–) consists of two moras (◡◡).

Ποτιδᾶν, Ἀλκμᾶν:

Doric -ᾶν ◡ = ◡◡ = phonetic contour ◡◡ = phonological accent ◡◡

Attic -ῶν ◡ = ◡◡ = phonetic contour ◡◡ = phonological accent ◡◡

σῶρ, γλαύξ:

Doric αἶξ ◡ = phonetic contour ◡◡ = phonological accent ◡◡

Attic αἶξ ◡ = phonetic contour ◡◡ = phonological accent ◡◡

κράναι, φορεῖται, ἐσσεῖται:

Doric κράναι ◡ = ◡◡◡ = ◡◡◡ = phonological accent ◡◡◡

Attic κρήναι ◡ = ◡◡◡ = ◡◡◡ = phonological accent ◡◡◡

παῖδες, παῖδᾶς, γυναῖκες, πτώκᾶς:

Doric παῖδες ◡ = ◡◡◡ = ◡◡◡ = phonological accent ◡◡◡

Attic παῖδες ◡ = ◡◡◡ = ◡◡◡ = phonological accent ◡◡◡

σοφῶς, καλῶς:

Doric σοφῶς ◡ = ◡◡◡ = ◡◡◡ = phonological accent ◡◡◡

Attic σοφῶς ◡ = ◡◡◡ = ◡◡◡ = phonological accent ◡◡◡

In the above examples, the Doric ‘procession’ of the accent placement does not transgress syllable boundaries, although it creates an acoustic impression of the tone change in the accented syllable, that from circumflex to acute. However, syllable boundaries do not seem to be any obstacle at all for the operation of the process: the adjacent mora to the right could equally easily find itself in a different syllable:

ἀγγέλοι, etc.:

Doric ἀγγέλοι ὄουου = ὄουου = phonological accent ὄουου

Attic ἄγγελου ὀουου = ὀουου = phonological accent ὀουου

τουτῶν, τηγῶν, ἀλλῶν:

Doric τουτῶν ὀουου = ὀουου = phonological accent ὀουου

Attic τούτων ὀουου = ὀουου = phonological accent ὀουου

παιδῶν, Τρωῶν, παντῶν:

Doric παιδῶν ὀουου = ὀουου = phonological accent ὀουου

Attic παίδων ὀουου = ὀουου = phonological accent ὀουου

Exactly the same with the apparently ‘mobile’ accentuation of γλώσσα:

Nominative:

Doric γλώσσα ὀουου = ὀουου = phonological accent ὀουου

Attic γλωττᾶ ὀουου = ὀουου = phonological accent ὀουου

Dative:

Doric γλωσσᾷ ὀουου = ὀουου = phonological accent ὀουου

Attic γλώττη ὀουου = ὀουου = phonological accent ὀουου

As we can see, the seemingly ‘mobile’ accentuation paradigm of Doric γλώσσα (as if Doric γλώσσα, γλωσσᾷ were accented on the same pattern as Attic κύων, κυνί) is an illusion; the seemingly final accentuation of the dative form is the outcome of exactly the same phonetic process which makes καλώς out of καλώς, with no participation of morphology whatsoever.

All above examples were related to the accent ‘procession’ by *one* mora. Let us separately inspect the less frequent cases where the Doric accent ‘proceeds’ to the right by *two* moras. As we can see, all such examples are polysyllabic words with long second-last syllable: ὀρνίθες, ἄνθρωποι, ἐλύσαν, that is, those words which constitute a certain exception in the accentuation of Attic itself. In their forms with short final syllable, the Attic placement of accent is actually on the *fourth*, not third, mora from the end (ἄνθρωποι, not *ἄνθρωποι; ὀρνίθες, not *ὀρνίθες, etc.), as if their middle syllable, albeit long, somehow behaved as one mora. Some scholars consider such a long middle syllable as ‘half-long’ (die lange Mittelsilbe als halblang gerechnet, Schwyzer 1939, 378). If we take the presupposition

that the middle syllable, despite its phonetic length, behaved as one mora, in the accentuation of these words we would see exactly the same Doric-to-Attic relation, as with the previous (‘procession by one mora’) words:

Doric ὀρνίθεξ $\cup \acute{\cup} \cup = \grave{\cup} \acute{\cup} \cup =$ phonological accent $\grave{\cup} - \cup$
 Attic ὀρνίθεξ $\acute{\cup} - \cup = \acute{\cup} \grave{\cup} \cup =$ phonological accent $\acute{\cup} - \cup$

Doric ἀνθρώποι $\cup \acute{\cup} \cup = \grave{\cup} \acute{\cup} \cup =$ phonological accent $\grave{\cup} - \cup$
 Attic ἄνθρωποι $\acute{\cup} - \cup = \acute{\cup} \grave{\cup} \cup =$ phonological accent $\acute{\cup} - \cup$

In this way we see that the ‘procession by two moras’ words are only seemingly an exception; in fact, they behave in Doric in the same way as the ‘procession by one mora’ words do. So it appears to be exactly that kind of exception which confirms the rule: the placement of the high pitch in Doric goes by one mora to the right compared to the Attic; in those words where a long syllable acts as one mora in Attic, it does precisely likewise in Doric.

Finally, we must discuss the counter-examples which do not fit well into the proposed theory. In Doric φρᾱτήρ (Attic φρᾱτήρ) the accent appears shifted by two moras, although this word does not belong to the above discussed class of polysyllabic words with ‘half-long’ middle syllable; and that is an isolated example. Regular shift by one mora from φρᾱτήρ would have given *φρᾱτήρ; perhaps a circumflex in the form whose visual analogy with the classical πατήρ and other words in -ήρ was so obvious, seemed too unusual for the Alexandrine grammarians to mark it thus in writing. For a comparison, it could be remarked that the regular one-mora-rightwards output of the contracted feminine gen. pl. *ἄμφοτερᾶων would have become *ἄμφοτερᾶν, not ἄμφοτερᾶν, in exactly the same way as *Ποτιδᾶων becomes Ποτιδᾶν, not -ᾶν (in which form, third declension nominative, the Doric acute did not offend the grammarians’ eye). So it could be that the circumflex in ἄμφοτερᾶν is a purely orthographic one, written by the grammarians to mark the genitive ending. If we admit that in some Doric forms that we received through the grammarian tradition the accent marking could be tainted purely orthographically, then φρᾱτήρ could also be one of such forms.

Another exception to the proposed theory seems to be βίσχυν (= *φίσχυν), mentioned by Ahrens, which corresponds to the Attic ἰσχύν; here we have a very rare case of a leftwards, not rightwards shift.

Also a puzzling case seems to be the *first* person singular verb forms, such as ἔλαβον, compared to the *third* plural ἐλάβον. Although the Doric *third* person plural ἐλάβον appears to be a regular consequence of the proposed Doric rightwards shift, it remains unexplained why the *first* person singular remained ἔλαβον and was *not* likewise changed into ἐλάβον, if our knowledge of this issue, passed on by ancient grammarians, is reliable.

Yet, aside from these few special cases, most of the Doric material, as we can see, lends itself to the proposed interpretation. If, despite the counterexamples mentioned above, we were to accept the proposed explanation of the Doric accent, we would see that the phonetic realisation of Attic and Doric syllabic tones in long vowels (acute and circumflex), was phonetically inverted: the Attic circumflex was, as it is universally known, rising-falling (such as γλαῦξ = $\overset{\sim}{\curvearrowright}$); the Doric counterpart appears to be falling-rising (γλαυξ = $\overset{\sim}{\curvearrowleft}$) – and therefore marked in writing, to our confusion, with an acute. Aside from this Doric rightwards shift of the high-pitch – which results either in the change of the audible syllable tone, or in audible accent on a different syllable – the *phonological* placement of the word accent in Doric appears to be *identical to that of classical Attic*.

The fact that two dialects of the same language have their syllabic tones phonetically inverted furnishes us a typological example, which might be useful also in the study of Baltic accentuation. As we know, it happens that closely related languages or dialects may have their syllabic tones phonetically inverted; the example of the Greek dialects confirms that this is possible and should not be considered extraordinary. It appears that syllable tones, as well as other accent phenomena, exist and survive as a complex network of systemic relations, while the exact phonetic realisation of its constituents is of secondary importance.

NAUJA DORIEČIŲ PRIEGAIÐŲ INTERPRETACIJA

Santrauka

Senosios graikų kalbos doriečių dialekto kirčiavimas, fragmentiškai paliudytas senovės filologų veikaluose ir doriečių poetų papirusuose, skiriasi nuo klasikinės graikų kalbos (Atikos dialekto) kirčiavimo. Liudijimų apie doriečių kirtį ir priegaidę išliko per mažai, kad būtų galima daryti tvirtas galutines išvadas, bet ne tiek mažai, kad tektų

visiškai atsisakyti mėginimo interpretuoti turimus duomenis. XIX–XX a. mokslininkų pastebėta, kad doriečių kirčio vieta yra tarsi pasislinkusi per vieną (retkarčiais dvi) moras į dešinę, lyginant su Atikos dialektu, bet šis įžvalgus apibendrinimas buvo laikomas labiau atsitiktinumu nei dėsnigumu. Straipsnyje keliamą hipotezę, kad doriečių *fonologinis* kirtis buvo realizuojamas *žemesniu* (ne *aukštesniu*, kaip Atikos dialekte) moros tonu, o kirčiai ir priegaidės doriečių poetų tekstuose buvo sužymėti Atikos dialektui skirtais ženklais pagal akustinį įspūdį, lyginant su Atikos dialektu. Jei doriečių fonologinis moros kirtis buvo realizuojamas *žemesniu* tonu, tai pokirtinė mora turėjo *aukštesnį* toną. Naujųjų laikų mokslininkai aukštesnį moros ar skiemens toną, papirusuose pažymėtą atitinkamais kirčio ženklais, laiko fonologiniu kirčiu, ir tai sukuria įspūdį, tarsi doriečių kirčio vieta, lyginant su Atikos dialektu, būtų pasislinkusi į dešinę. Jei priimame straipsnyje keliamą hipotezę, tai doriečių *fonologinis* kirtis pasirodo esąs *identiškas* (su negausiomis išimtimis) Atikos dialekto kirčiui, o skiriasi tik jo *fonetinė realizacija*. Tai gali būti naudingas tipologinis pavyzdys ir kitų indoeuropiečių kalbų, tarp jų ir baltų, kirčio istorijos tyrimams.

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Mindaugas STROCKIS
 Digital Philology Centre
 Vilnius University
 Universiteto 5
 LT-01513 Vilnius
 Lithuania
 [mindaugas.strockis@ff.vu.lt]