The Enunciation of "Metra" in Ancient Hellenic Tragedy Case in Point: Aischylos' *Agamemnōn*, ll. 40-46

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Resumo

Este artigo é uma tentativa de reconstrução de como seria a performance vocal na tragédia. Como exemplo modelar, escolheu-se trecho do párodo de Agamenon, de Ésquilo. A partir principalmente de dados sobre a prosódia antiga grega providenciada por Aristides Quintiliano, procede-se a exame passo a passo do trecho, até que uma completa "partitura prosódica" seja produzida: linhas de entoação, acentos musicais, acentos de tonicidade, duração das sílabas, pronúncia. A performance dessa "partitura" está disponível em DVD.

Palavras-chave: Tragédia. Prosódia. Recitação.

Abstract

*The present paper attempts to reproduce the sound of the reciting voice in tragic speech (metra). As a paradigm, an extract is taken from Aischylos' **Agamemnōn** (parodos, ll. 40-46). Based mainly on the information on ancient Hellenic (Attic) prosody given us by **Aristeidēs** Quintilianus, a step-by-step application to the chosen text is made, until a full prosodic 'score' is produced: intonation lines, musical accents, stress accents, syllabic durations, letter pronunciation. A performance of this 'score' is available on dvd.*

Keywords: *Tragedy. Prosody. Recitation*

The purpose of this study[1] is the revival of the sound of ancient measured speech in the poetic genre of tragedy (*tragōidia*), which, as is known[2], comprised both speech and song. Aristotelēs, in his *On poetry*[3], clearly distinguishes *metra* from **melē**, that is, "measured speech" (speech in

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1. The present article is a translation from neo-Hellenic of Psaroudakēs 1996, which was, in turn, part of a lecture entitled "Metra and melē in ancient Hellenic tragedy", given by the author during the "Seminar of Theatrical Education – July: Month of Theatrical Education at Chania", organised by the local cultural society "Notos" at Chania, Crete, on 30 July 1995. A performance in costume and mask of a longer excerpt, ll. 40-103, is now available on dvd, recorded in 2007, during the celebrations of the 170th anniversary of the University of Athens.
2. See, eg, Pickard-Cambridge 1991:156-67, where is collected and assessed all the relevant evidence.
3. See Else 1957 for text, English translation and useful comments; Δρομάζος 1982 for a neo-Hellenic translation with commentary; Fyfe & Roberts (Loeb) for text, English translation and comments. Ancient Hellenic terms are here written in italics throughout.

metre) from "song". He regards metre as a product of lexis, and song as a product of *melopoiia* (melodic composition)[4]. Thus, *lexis* and *melopoiia* are processes of composition, and, therefore, dynamic notions, while *metra* and **melē** are the final products of these compositional processes. For the present analysis the first six lines of the *parodos* of the *choros* of the **Agamemnōn** by Aischylos (ll. 40-46) are selected.

Right at the outset, it is necessary that a distinction be made between "composition style" and "performance style" of a work of art developing in time[5]: the composition style of a work remains unchanged, it is the text put down on paper (musical text, word text, dance text, that is, pitches, durations, words, movements), while the performance style of a work is its regeneration, the interpretation of the text. Therefore, in the performance style there are sound components which are absent in the composition style, like quality of voice, vocal timbre, vocal ornamentation, rises and falls in vocal intensity etc, the overall, that is, aesthetic of the execution of the work. These components are handed down from teacher to student in an aural way, that is, they are part of the oral tradition; they are not notated. The exponents of an artistic style become acquainted with these elements during their period of study of the style. This holds for every type of cultural expression, in all places and all periods of human life. Our information on Hellenic antiquity concerns only the composition style of works. The aim here, therefore, is to approach the composition style of measured speech, and, subsequently, to attempt a sound reproduction of the excerpt ("experimental archaeology"), inventing, by necessity, the performance style.

However, even if we succeed in reestablishing the original sound, our proposition will remain without proof, as the ancient audience, that is, our judge, is absent. Let us, however, press on with the analysis.

Metron (metre) means line of text[6]: line, however, of a certain rhythm and size, according to the definition of every metre[7]. A number of metres together, a system of metres, that is, make up a "poem"[8]. In our example from the *parodos* of the **Agamemnōn**, as the *choros* of the elders enters the **orchēstra**, the leader recites such a system of *metra*[9] (Fig. 1):

1.

40 *Δέκατον μὲν ἔτος τόδ' ἐπεὶ Πριάμῳ μέγας ἀντίδικος*

Μενέλαος ἄναξ ἠδ' Ἀγαμέμνων,

διθρόνου Διόθεν καὶ δισκήπτρου

τιμῆς ὀχυρὸν ζεῦγος Ἀτρειδᾶν,

45 *στόλον Ἀργείων χιλιοναύτην*

τῆσδ' ἀπὸ χώρας ἦραν, στρατιῶτιν ἀρωγήν,

μέγαν ἐκ θυμοῦ ...

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4. Aristotelēs *On poetry* a.6.6 / Fyfe & Roberts 22. Cf a.6.3 / Fyfe & Roberts 22.

5. Standard ethnomusicological terms: "composition style" and "performance style", respectively.

6. The word *metron* has other meanings, too, but for the present purposes the notion 'line' suffices.

7. For the clear distinction made by Aristotelēs between *metra* and *melē*, see the comment by Else 1957:62-63. The term metron is used by Aristotelēs to describe only three or four types of line only (obviously, the "trimeter", the "tetrameter", the "hexameter", and possibly the "elegeion"). Else 1957:57 with nn. 220-21, rightly disagrees with the wider use of the term metron by modern metricians; see also nn. 222-24.

8. Aristeidēs Quintilianus *On music* a.29 / Winnington-Ingram 52.8-23

9. Aischylos *Agamemnōn* 40-46 / West 193.

It is common knowledge amongst scholars that ancient Hellenic speech, in metre or in prose[10], did not have the modern, neo-Hellenic sound. Scholars disagree only on details: all linguists believe that the enunciation of ancient speech, that is, the prosody of ancient speech, differed at certain points from the prosody of neo-Hellenic speech. Linguists inform us that the pronunciation of certain letters, or of certain groups of letters was different from the modern one; also, that the duration of syllables changed according to phonetic rules – today all syllables are pronounced in equal time; also, that the accents ("acute", "grave", "circumflex") had a melodic nature, not a dynamic one, like in neo-Hellenic[11]. Let us see how one can reach that conclusion.

Aristeidēs Quintilianus in his treatise *On music*[12], in the chapter on metrics, defines as the smallest parts of the voice the "elements" or "letters" (Fig. 2). He classifies them as "vowels", "semi-vowels" and "voiceless": vowels are those which project a clear and fully heard sound (ε, ο, η, ω, α, ι, υ); semi-vowels those which reach the ear not very clearly (ζ, ξ, ψ, λ, μ, ν, ρ, σ); voiceless those which are heard little and without strength (κ, π, τ, θ, φ, χ, β, γ, δ). These three classes he divides further. Thus, vowels are subdivided into "short", "long", and 'bitemporal': short are those which are pronounced in the shortest time (ε, ο); long those which by necessity last longer (η, ω); bitemporal those which are sometimes short and sometimes long (α, ι, υ). The semivowels, now, he subdivides into "double", "liquid", and "idiosyncratic": double are those which are equivalent to two consonants (ζ, ξ, ψ); liquid those which have the value of one consonant when they combine with other consonants (λ, μ, ν, ρ), and idiosyncratic that which presents neither of the above two properties (σ). Finally, the voiceless he divides into "unaspirated", "aspirated", and "intermediate": the unaspirated are pronounced with a light breath (κ, π, τ); aspirated are those which are pronounced with a strong breath from within (θ, φ, χ); intermediate those which are pronounced with a breath of intermediate strength (β, γ, δ).

2.

elements (*stoicheia*)/letters (*grammata*):

vowels (**phonēenta**)   ε   ο   η   ω   α   ι   υ

vemivowels (**hēmiphōna**)   ζ   ξ   ψ   λ   μ   ν   ρ   σ

voiceless (**aphōna**)   κ   π   τ   φ   θ   χ   β   γ   δ

vowels

short (*brachea*)   ε   ο

long (*makra*)   η   ω

bitemporal (*dichrona*)   α   ι   υ

semivowels

double (*dipla*)   ζ   ξ   ψ

liquid (*hygra*)   λ   μ   ν   ρ

idiosyncriatic (*idiazon*)   σ

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10. For a distinction between the measured speech of poetry and the metre-less speech of history, see Aristotelēs On poetry a.1 / 1447 B / Loeb 6 'naked' (psilos) speech-metra; a.9 / 1451 B 1-4 / Loeb 34 'speaking in metre' (emmetra legein) ~ 'speaking without metre' (ammetra [legein]); Dionysios Halikarnasseus On composition 1/ Loeb 18; 3/24; 4/34; 4/42; 9/64; 10/68; 11/72; 15/108; 16/112; 20/164; 25/208 'prose' (**pezē lexis**) / 'metre-less speech' (ammetros lexis) / 'flat speech' (pezos logos) ~ 'measured speech' (emmetros lexis) / 'speech in metre' (emmetros logos) / 'spoken lines in metre' (metra) / 'songs' (melē) / 'poem' (poiēma).

11. See Allen 1988, and Devine & Stephens 1994, with extensive bibliography.

12. Aristeidēs Quintilianus On music a.20 / Winnington-Ingram 41.3

voiceless

  unaspirated (*psila*)   κ   π   τ
  aspirated (*dasea*)   θ   φ   χ
  intermediate (*mesa*)   β   γ   δ

Based on these definitions of **Aristeidēs'**, but also on other descriptions of phonetic phenomena in works by Dionysios Halikarnasseus, **Aristotelēs**, **Hēphaistiōn** and others, and with the aid of comparative linguistics, linguists[13] propose the following pronunciation of letters and their combinations (for the Attic, at least, dialect of the 5th Ct BC)[14] (Fig. 3):

3.

ἀ	[a]	μ	[m]
ᾱ	[aa]	ν	[n]
α	[aa]	ξ	[x]
αι	[ai]	ο	[o]
αι-Φ	[ayy]	οι	[oi]
αυ	[au]	οι-Φ	[oyy]
αυ-Φ	[aww]	ου	[uu]
ᾱυ	[au]	π	[p]
β	[b]	ρ	[r]
γ	[g]	|ρ...|	[r']
γκ	[nk]/[ng]	|..ρρ..|	[n']
γχ		σ	[s]
γγ		σβ	[zb]
γμ	[ŋm]	σγ	[zg]
δ	[d]	σδ	[zd]
ε	[e]	σμ	[zm]
α	[ee]	σσ	[ss]
ευ	[eu]	τ	[t]
ζ	[zd]	ττ	[tt]
η	[ẹẹ]	υ	[ü]
ῃ	[ẹẹ]	ῡ	[üü]
ηυ	[eu]	υ	[üyy]
θ	[t']	φ	[p']
ι	[i]	χ	[k']
ῑ	[ii]	ψ	[ps]
κ	[k]	ω	[ọọ]
λ	[l]	ῳ	[ọọ]

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13. See Allen 1988:12-88 with Fig. 3 on p. 78.

14. Ancient letters (in their Byzantine small type form) are written in italics. The symbol Φ denotes a vowel, the − denotes an extended bitemporal vowel, the | signals end of a word, the/means "or", the brackets [...] enclose the pronunciation, the ' denotes aspiration. The dot below e ([e.]) denotes a "closed" variety of its sound, and the diacritic below o ([o.]) an "echoing" rendering of its sound. For more information on the pronunciation of the ancient Hellenic language, see Allen 1988. Let us note that the shift from ancient to modern prosody did not happen abruptly but in stages. Some elements began changing phonetic value as early as the 4th Ct BC. Round about the 3rd Ct AD the phonetic change had been completed.

Therefore, the first six lines of the parodos can be transcribed as follows (Fig.4):

4.

[Dekaton men etos tod' epẹẹ Priamọọ megas antidikos
Menelaaos anax ẹẹd' Agamemnọọn,
dit'ronuu Diot'en kai diskẹẹptruu
timẹẹs ok'üron zdeugos Atrẹẹdaan,
stolon Argẹẹọọn k'ilionautẹẹn
tẹẹsd' apo k'ọọraas ẹẹran, stratiọọtin arọọgẹẹn,]

After letters, **Aristeidēs** deals with "syllables" (Σ), which are composed of elements[15]. He introduces the notion of "dynamis" of a syllable, which he defines as the number of elements which combine in order to create it. Thus, a syllable may comprise one element or more than one. Of course, in a syllable made up of only one element, this element cannot be other than a vowel (Φ). In syllables of two or more letters, as **Aristeidēs** clearly states, two vowels can combine in order to form a diphthong (ΦΦ), or vowels and consonants may combine together.

Syllables, with respect to their duration, **Aristeidēs** classifies into three categories (Fig. 5): "short" (Συ), "long by nature" (Σ-), and "long by position" (Σ~). Short are those which have in them a short vowel (Φυ) or a shortened bitemporal – either on its own (Δυ), or together with a simple consonant (ΔυC); long by nature are those which have a long element (Φ-), or a long bitemporal (Δ-), or a short element combined with a bitemporal (ΦυΔ), or two bitemporals together (ΔΔ); Long by position are those which end in two consonants (...CC), or in a double consonant (...€), or those which have after them either two consonants (...)(CC...), or a double consonant (...)(€...), and those ending in a single consonant and the next syllable begins with a consonant (...C)(C...).

5.

syllables (*syllabai*):

short (*bracheiai*)	(Συ)	(Φυ)
		(Δυ)
		(ΔυC)
long by nature (*makrai physei*)	(Σ-)	(Φ-)
		(Δ-)
		(ΦυΔ)
		(ΔΔ)
long by position (*makrai thesei*)	(Σ~)	(...CC)
		(...€)
		(...)(CC...)
		(...)(€...)
		(...C)(C...)

Aristeidēs[16] makes an important point. He says that a short syllable is half a long, and that a simple consonant is equivalent to half a short syllable (Fig. 6):

6.

Σ- = 2Συ   Συ = 2C

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15. Aristeidēs Quintilianus *On music* a.21/Winnington-Ingram 41.18.

16. Aristeidēs Quintilianus *On music* a.21/Winnington-Ingram 42.12-13.

This observation is significant, for it is possible in this way to fix the relative temporal sizes of syllables, that is, to allocate durations to syllables. Since syllables are either short or long, this means that the rhythm of measured speech consists solely of short and long durations, that is, a sequence of long and short durations, in which the long ones last twice the time of the short ones – in "composition", not, of course, in "performance".

According to **Aristeidēs**[17], there are instances where a syllable long by nature may assume either a short or a long duration, according to the (metrical) needs. This means that a purely long syllable, which would naturally last a long beat (-), could be given a short duration (υ). However, this does not hold for every type of long by nature syllables. It is true in the case of a long by nature syllable which ends in a long vowel and the next syllable begins with a vowel (...Φ-)(Φ...) (Fig. 7a):

7.

common (*koinai*) / intermediate (*mesai*) syllables:

$$(\Sigma\text{-}) \rightarrow \quad (...\Phi\text{-})(\Phi...) \quad = \Sigma\upsilon/\Sigma\text{-} \quad \text{a}$$
$$(\Sigma\upsilon) \rightarrow \quad (\Sigma\upsilon)|(...) \quad = \Sigma\upsilon/\Sigma\text{-} \quad \text{b}$$
$$(\Sigma\sim) \rightarrow \quad (...)(C\text{vl}Cl...) \quad = \Sigma\upsilon/\Sigma\text{-} \quad \text{c}$$

This shortening of a long syllable, says **Aristeidēs**, is due to the absence of an intervening consonant: our effort to maintain continuity of speech impels us to shorten the first, long, syllable. The opposite is, however, possible, too: a syllable short by nature to be extended to a long one. This can happen when the last syllable of a word is short $(\Sigma\upsilon)|(...)$. This extension of a short by nature syllable to a long, says **Aristeidēs**, is due to the break ("vacuum") between the end of a word and the beginning of the next one (Fig. 7b). Finally, a syllable long by position can be rendered as a short syllable when the next syllable begins with two consonants, the first of which is a voiceless and the next a liquid (...)(CC...) → (...)(CvlCl). And this because the finer ("thinner") sound of the liquid is compressed and crushed by the 'thicker' voiceless (Fig. 7c). These syllables, which some times are taken as short and sometimes as long, according to the rhythmic needs of the poet obviously, **Aristeidēs** calls "intermediate" or "common"[18]. Recapitulating, therefore, Fig. 5 transforms into Fig. 8:

8.

syllables:
short $(\Sigma\upsilon)$ $(\Phi\upsilon)$
                 $(\Delta\upsilon)$
                 $(\Delta\upsilon C)$
                 $(\Sigma\upsilon)|(...)$ $= \Sigma\upsilon/\Sigma\text{-}$

long by nature $(\Sigma\text{-})(\Phi\text{-})$
                 $(\Delta\text{-})$
                 $(\Phi\upsilon\Delta)$
                 $(\Delta\Delta)$
                 $(...\Phi\text{-})(\Phi...)$ $= \Sigma\upsilon/\Sigma\text{-}$

long by position   (...CC)
                   (...€)
                   (...)(CC...)
                   (...)(€...)
                   (...C)(C...)
                   (...)(CvlCl...) $= \Sigma\upsilon/\Sigma\text{-}$

Our extract (Fig. 4), therefore, develops as follows[19] (Fig. 9):

9.

In this way, the durations of all syllables have been established, and thus the durations of the rhythm. Before we move to a complete description of the rhythm, however, we will deal with the (linguistic) accents of the words.

The accent signs were invented, as it is known, by Hellene grammarians in Alexandria round about 200 BC. Till then, the accents were of course pronounced, but were not written down. From references in **Platōn**'s *Phaidros* and *Kratylos*, **Aristotelēs**' *Art of rhetoric*, Dionysios Hallikarnasseus' *On composition*, and the work of grammarians like **Diomedēs**, the melodic nature of the accents is deduced[20]. It is obvious that the acute, the circumflex and the grave concerned the height (pitch) of the voice and not its intensity, as they do today[21]. **Aristotelēs**, when he refers to the intensity of the voice, uses the terms *mega* (large) and *mikron* (small) *megethos* (size) of voice. Also, the term

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17. **Aristeidēs** Quintilianus *On music* a.21/Winnington-Ingram 42.21–43.8.

18. **Aristeidēs** further mentions another two types of syllable, the "less common" (*hētton koinē*) and the "indiferent" (*adiaphoros*). There is no need to include them in our discussion here.

19. The symbol υ denotes unit duration, the **prōtos** *chronos* or **sēmeion**, while – denotes a duration twice as long, the "double long" (*makra* **disēmos**).

20. **Platōn** *Phaidros*/268 D; **Aristotelēs** *Art of rhetoric* 3.1.25/1403 B; **Diomedēs** in Keil (ed.) *Grammatici Latini* I:431. See Allen 1988:116f.

21. See Allen 1988:116-30.

prosōidia points towards a melodic rather than a dynamic nature of the accents: "*the accents are sung along with the syllables*" (**Diomedēs**).

[24] The researches of linguists lead to the conclusion that during the enunciation of the acute, the voice rose in height, during the circumflex rose in order to fall immediately after, that is to "break about the middle", while during the grave it probably stayed at a low level (Fig. 10):

10.
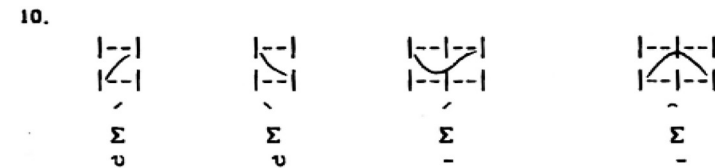
The grave, of course, occurs only on the ultimate syllable of a word, in a position where an acute would normally appear; it replaced the acute when no punctuation sign or an enclitic followed. If a long syllable received the acute, then the voice rose at the second half of the syllable (its second "mora"). If a long syllable received the circumflex, then the voice rose during the first half of the syllable and dropped during its second half. This tonal motion of the voice is described by Dionysios Hallikarnasseus'[22]:

> Not every part of speech ... is pronounced at the same pitch, but some higher (at the acute), some lower (at the grave), and some at both high and low.

Thus, our Aeschylean extract (Fig. 9) develops as in Fig. 11:

11.
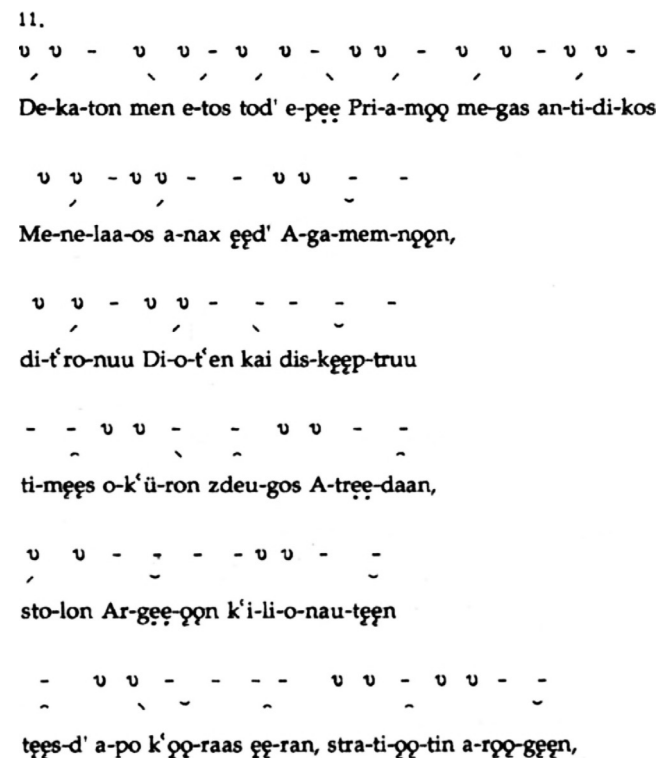
Next comes the issue of vocal intensity, the so-called dynamic accent (stress). Was it present in ancient speech, as it is in modern speech, or was it absent? Recent studies by linguists[23] have shown that the melodic accent can co-exist with the dynamic accent[24]. Indeed, that the two systems are independent, not interfering with each other. All languages studied by linguists exhibit dynamic relief. It is, therefore, rather improbable that ancient Hellenic did not possess some kind of dynamic accent. There has also been proven that the two accents do not by necessity coincide upon the same syllable. Thus the question arises: can we discover the rules of stress in ancient Hellenic; to specify, that is, the position of the dynamic accent in the words? Ancient grammarians are silent on this. This, however, the linguists tell us, dos not mean that this type of accent did not exist: rather, it did not play a significant role in conveying meaning (it was not a "phoneme") – in opposition to the melodic accent, whose position was paramount to meaning: its absence or its dislocation to another position could create semantic ambiguity. A statistic analysis of the Homeric epics and the spoken parts of tragedy (*metra*) has lead to the conclusion that dynamic predominance occurred at the last long syllable of a word: at the ultimate, if it were long, or at the penultimate, if the ultimate were short. However, because the duration of the ultimate syllable depends on the "strength" (*dynamis* = number of letters) of the first syllable of the next word, the position of the dynamic accent was not always the same; it changed with the context; Fig. 12[25] provides an example:

12.
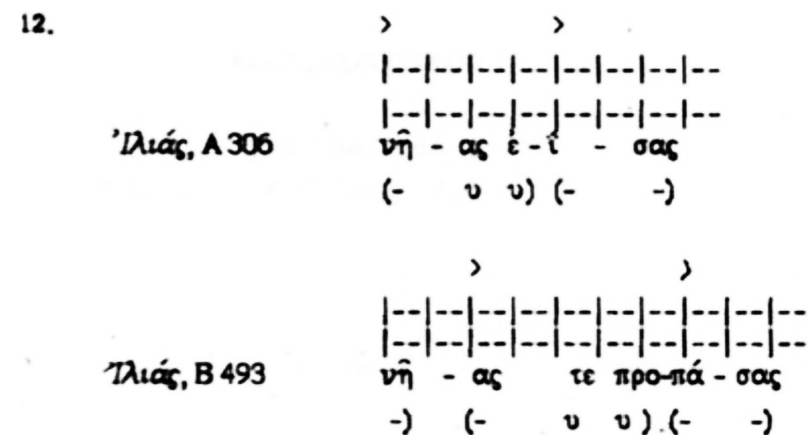
Our extract (Fig. 11), thus, develops as follows (Fig. 13):

22. Dionysios Halikarnasseus On composition 11 / Usher (Loeb) 76f.

23. See Allen 1988:131-39.
24. See Allen 1988:130-39.
25. Given by Allen 1988:138.

13.

De-ka-ton men e-tos tod' e-peę Pri-a-mǫǫ me-gas an-ti-di-kos

Me-ne-laa-os a-nax ęęd' A-ga-mem-nǫǫn,

di-t'ro-nuu Di-o-t'en kai dis-kęęp-truu

ti-męęs o-k'ü-ron zdeu-gos A-tręę-daan,

sto-lon Ar-gęę-ǫǫn k'i-li-o-nau-tęęn

tęęs-d' a-po k'ǫǫ-raas ęę-ran, stra-ti-ǫǫ-tin a-rǫǫ-gęęn,

Let us now deal with rhythm. We have already fixed the durations of the syllables, which, as has already been said, are identical with the durations of rhythm. We know from Aristoxenos' *Rhythmic elements* that[26], in order for rhythm to be fully described, besides durations, arseis and theseis must be located (X and X´), the two parts, that is, which make up the rhythmic feet (X:X´):

14.

    Durations (*chronoi*)   xxxxxxxxxxxxxxx...

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26. Aristoxenos *Rhythmic elements* 16 / Pearson 10. Compare Anonymus "*Fragmenta Neapolitana*" 9 & 12/Pearson 28; Aristeidēs Quintilianus *On music* a.14/Winnington-Ingram 33.12-13 & 33.13-14; Psellos *Introduction to the study of rhythm* 8/Pearson 23.

upbeats-downbeats (*arseis-theseis*)	UDUDUDUD ...
feet (*podes*)	(X:X´)(X:X´)(X:X´)(X:X´)(X:X´)...
anapaestic foot (*pous*)	(ǔǔ:-)
anapaestic dipody (*dipodia*)	(ǔǔ:-)(ǔǔ:-)
anapaestic dimeter (*dimetron*)	(ǔǔ:-)(ǔǔ:-) (ǔǔ:-)(ǔǔ:-)

Because we know that, on the one hand, the lines (*metra*) of our extract are "anapaestic dimeters", and on the other, that the anapaestic foot has the form (ǔǔ:-) and the anapaestic metre (*metron*) has the form (ǔǔ:-)(ǔǔ:-), the rhythm is identifiable: (ǔǔ:-)(ǔǔ:-) (ǔǔ:-)(ǔǔ:-). We only have to replace the durations by the syllables, and the rhythm of speech will have fully been realized. In this way, our extract (Fig. 13) develops as follows (Fig. 15):

15.

(ǔ ǔ -) (ǔ ǔ -)(ǔ ǔ -)(ǔ ǔ -) (ǔ ǔ -)(ǔ ǔ -)
De-ka-ton men e-tos tod' e-peę Pri-a-mǫǫ me-gas an-ti-di-kos

(ǔ ǔ -)(ǔ ǔ -) (- ǔ ǔ)(- -)
Me-ne-laa-os a-nax ęęd' A-ga-mem-nǫǫn,

(ǔ ǔ -) (ǔ ǔ -)(- -)(- -)
di-t'ro-nuu Di-o-t'en kai dis-kęęp-truu

(- -)(ǔ ǔ -) (- ǔ ǔ)(- -)
ti-męęs o-k'ü-ron zdeu-gos A-tręę-daan,

(ǔ ǔ -)(- -) (- ǔ ǔ)(- -)
sto-lon Ar-gęę-ǫǫn k'i-li-o-nau-tęęn

(- ǔ ǔ)(- -)(- -) (ǔ ǔ -)(ǔ ǔ -) (- Λ)
tęęs-d' a-po k'ǫǫ-raas ęę-ran, stra-ti-ǫǫ-tin a-rǫǫ-gęęn,

Earlier, we spoke about the melodic accents, and showed that these were tonal movements of the voice either to a higher or to a lower pitch level, depending on the kind of accent. We did not, however, specify the magnitude of this movement: how high and how low the voice traveled; what interval size was formed during the rise (*epitasis*) and the fall (*anesis*) of the voice? Were these intervals always the same? Things, here, are getting a little difficult, for the grammarians are silent, as in the case, also, of the dynamic accent (stress), with one exception: the evidence of Dionysios Halikarnasseus, according to which[27]:

> The intervallic size of the vocal contour in speech (**logōdes** melos) is one; about a fifth (dia pente): the melody neither rises more than three tones plus a semitone, nor falls more than this measure about this level.

This piece of evidence has been interpreted in two different ways (Fig. 16a): according to the first, the "fifth" refers to the total excursion of the voice from its highest point to the lowest.

16α.
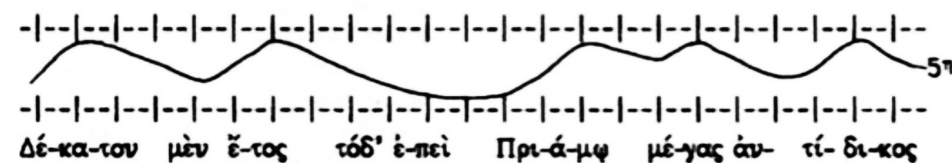
According to the other interpretation (Fig. 16b), the "fifth" refers to the maximum excursion of the voice above an intermediate tonal level on the one hand, and on the other, the maximum drop of the voice below this same intermediate level.

16β.
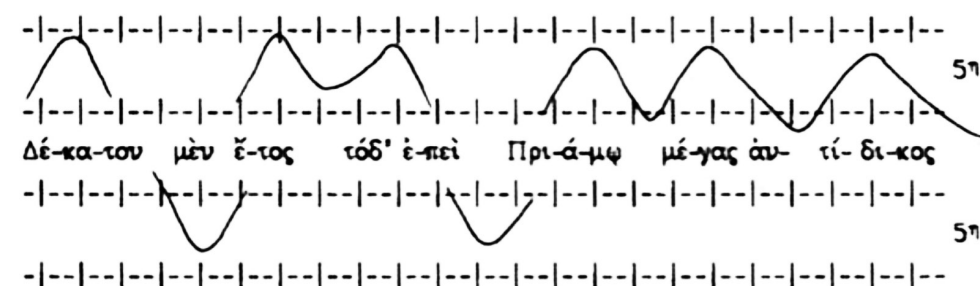
If we adopt the second interpretation, then we have to accept that the overall maximum amplitude of the voice is a ninth. In this case, the vocal range is doubled. It is not however clear whether Dionysios refers to the melodic accents of individual words or to the overall range of the vocal contour. In Norwegian, for example, a language with melodic accents, the range of vocal intonation is usually a sixth, but at instances of emphatic or emotional utterance, the range of intonation reaches the octave. Hence, the comparative method cannot be of help.

Whatever the case, however, one thing is certain: that, apart from the melodic accents ancient Hellenic must have exhibited a curve of intonation (Fig. 17): in no language does speech develop in a straight line (Fig. 17α); it always follows a (tonal) curve (Fig. 17β), and this because in the tonal

curve of the voice the semantic units are reflected and its emotional content surfaces. Therefore, between the two possibilities, the second seems more realistic. No doubt, we must think of the melodic accents as superimposed on the intonation curve (Fig. 17γ), where the rising portions represent the acutes and the falling portions the graves.

How are we, therefore, to render the intonation curve of our Aeschylean extract? Apparently, no definite answer to the question is possible, for the time being. However, if we adopt an intonation curve of neo-Hellenic type, taking into account its formation the semantic phrases of the ancient text and the development of emotion in them, raising or lowering by personal choice the voice at the acutes and the graves respectively, then the final result might be close to the ancient mode of delivery.

17.

27. Dionysios Halikarnasseus On composition 11 / Usher (Loeb) 76.
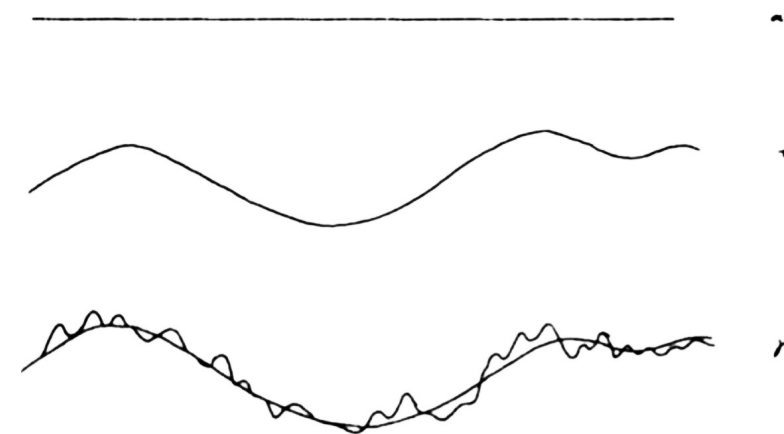
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