The Orestes Papyrus: Some Thoughts on the Dubious Musical Signs

Stelios Psaroudakēs

The ‘Orestes Papyrus’ (Fig. 1) is a small papyric scrap (9.2 cm x 8.5 cm), from the cartonnage of a mummy coming from Hermopolis Magna in Egypt. It is kept in the Österreichische Nationalbibliothek, Wien, number G 2315. The scribe’s hand is dated to around 200 B.C.

The Papyrus was published for the first time in 1892 by Karl Wessely. Wessely observed that it contains two kinds of text: seven lines of word text, each having above it a line of music text. At several points the flow of the words is interrupted by the insertion of a ‘step’-like sign (approximate shape K) and of a group of three signs ‘hook-gamma-sigma’ (approximate shapes HIG). Wessely identified the word text as belonging to Euripides’ tragedy Orestes: a fragment of the antistrophe of the first stasimon melos (choral song; verses 338–344). He was thus able to safely reconstruct the missing word text. Unfortunately, the same could not be done with the lost music text. In Wessely’s transcript (Fig. 2) the ancient signs have been replaced by the proposed modern equivalents. The signs over the words, namely EZIΠΣΦ, he identified as vocal notes in the lydios enharmonios tropos of Alypios (relative pitches in the Bellermann Standard: g a♯ e♯). The isolated ‘step’ in lines 1–4 and 7 he interpreted as an instrumental note (g’), and the triad ‘hook-gamma-sigma’ in lines 5 and 6 as a sequence of three instrumental notes (a♯ eg e♯).

A year later, Crusius came up with a different interpretation of the intermittent symbols (Fig. 3). Bothered by the idea of having an interjection between the dochmioi of the words, Crusius interpreted the ‘step’ as an instrumental note, not following up at the end of the dochmioi, but concurrent with the last time unit of each dochmioi, creating thus harmonic intervals with the voice delayed by one time unit: either a minor seventh (bars 1 and 5), or a minor third (bar 3), or a minor-seventh-minus-a-quarter-tone (bar 5). Crusius treated the triad in a similar manner: striped the ‘hook’ (bars 9–10) of any temporal and tonal value and called it a sign of presentation (Vortragzeichen). The other two symbols he regarded as instrumental notes of unit duration each, the first creating a delayed harmonic interval with the preceding vocal note (a perfect fourth in bar 9), the second being an interjection of unit duration before the onset of the next word. Crusius did not seem to mind the interjection of an instrumental

---

Wessely 1892, 66.
Wessely et. al. 1892, 269.
Turner 1956.
Wessely 1892.

The words, metrically speaking, are scanned in dochmioi podes (feet). The ‘canonical’ form of this foot is the oktasemos pous (eight-unit foot) [(u -)(u -)], also appearing in this papyrus in the configuration (schema) [(u u)(u -)], or in larger sizes (megethos): as eneasemos pous (nine-unit foot) in the configurations [(- u)(- -)], [(u u)(- - -)], [(u -)(- - -)].

Crusius 1893.

Crusius 1893, 185.
note between the words here, as he did in the case of the ‘step’.

Monro\textsuperscript{8} was very sceptical about the so-called ‘instrumental’ notes (Fig. 4): he denied any temporal or tonal value to all four of them, leaving them out of his transcript altogether. The ‘step’ he took to be a mere mark indicating the borders of the dochmioi.

Williams\textsuperscript{9} adopted the idea of intermittent instrumentals (Fig. 5) but, rhythmically, he turned the piece into a waltz, without any justification.

The last scholar to offer a word of criticism to the papyrus before the end of the century was Carl Jan\textsuperscript{10}. In his definitive (1899) transcript (Fig. 6) Jan adopted the ‘break/division sign’ theory for both ‘step’ and ‘hook’, and the ‘injected instrumentals’ theory for gamma and sigma, to each of which he allocated, strangely enough, in contrast to previous interpretations, a quadruple duration.

Twenty years later, Barry\textsuperscript{11} came up with a new proposition as regards the triads: while ‘step’ and ‘hook’ he, again, regarded as mere transition signs (Fig. 7), gamma and sigma were thought of as forming a harmonic interval, a perfect fourth of duple duration, this time not sounding with the voice, beginning with the following dochmios and trumpet (sic.), a sustained pedal note above the (Fig. 8): the ‘step’ is an instrumental note from a duple duration, this time not sounding with the words here, as he did in the case of the ‘step’. As regards the triad, Reinach\textsuperscript{13} (Fig. 9) suggested a rest of duple time\textsuperscript{14} in the place of the ‘step’. As regards the triad, Reinach threw his hands up in despair.

Mountford\textsuperscript{15} (Fig. 10), as regards the ‘step’, sided with those who believed this to be a break mark. He found all explanations of the triad thus far proposed unsatisfactory, and was inclined to regard it as a code, condensing in three figures a whole instrumental phrase, a krouma\textsuperscript{16}. Mountford was the first to question the nature of the ‘dot’ over certain notes and always above the ‘step’: was it to be identified with the stigma of theory? And if so, should it indicate downbeat (\emph{thesis}), as had been believed till then, or was it a sign of upbeat (\emph{iambos})? He\textsuperscript{17} entertained the possibility of it being a mere indication of the onset of the constituent parts of the dochmioi, that is the beginnings of the \textit{metrikoi podes} (metrical feet) \textit{iambos} (\textit{υ} – ) and \textit{paion} (\textit{υ} – ), thus: (\textit{υ} / /\textit{υ} – ). The ‘dot’ was therefore interpreted as another break sign. But how are we then to explain the ‘dot’ over all the apparitions of the ‘step’? Mountford’s transcript is, in essence that of Monro’s without the bar lines, since he could not decide about the nature and function of the ‘dot’ and the ‘triad’.

Reese\textsuperscript{18} only made a passing comment on “some symbols that may indicate the use of heterophony”, and left it at that. Sachs\textsuperscript{19}, in his very brief treatment of the song, let the ‘step’ and the ‘triad’ be intermittent instrumental notes.

Martin\textsuperscript{20} argued that the ‘dot’ should be regarded as the \emph{stigme}, indicating \emph{thesis}\textsuperscript{22} (Fig. 11). He allowed the ‘step’ to be an interposed instrumental note but gave it a triple duration. In general, Martin felt free to allocate to the syllables durations, which would suit his choice of a 6/8 bar (e. g. the diseme -\textit{mai} in \textit{katalophyromai} was rendered as triseme; the diseme -\textit{teros} in \textit{materos} was treated as a monoseme, etc.). In a similar fashion, Martin forced the members of the ‘triad’, all intermittent instrumental notes, fit his metrical scheme of 6/8: he did not hesitate to give different durations to them in the first (\textit{û},\textit{û},\textit{û}) and second (\textit{ûûû}) appearances, really quite an arbitrary solution.

Wagner\textsuperscript{22}, in his critique of Martin’s publication, disagreed with the identification of the ‘hook’ as a note: he believed, like others before him, that the sign was an indication of transition from vocal to instrumental notes, and identified it with the diastole of theory. Reference to the \textit{dias-tolē} is made in the late treatises of Anonymus Bellermann (5th century A.D.) and Manuel Bryennios (14th century A.D.). Whether Wagner was right in making this claim will be discussed later\textsuperscript{23}.

Düring\textsuperscript{24} reproduced Mountford’s transcript\textsuperscript{25} (including the mistake in line 1: the note over \textit{materos} is \textit{P} not \textit{C}).

Del Grande\textsuperscript{26} in his transcript allocated a blank bar to the place of the ‘step’ (\textit{τὸ όνοστος θεός}, so to speak).

---

\textsuperscript{8} Monro 1894.
\textsuperscript{9} Williams 1894.
\textsuperscript{10} Jan 1895, 427–431 and Jan 1899, 4–7.
\textsuperscript{11} Barry 1919.
\textsuperscript{12} Clements 1922.
\textsuperscript{13} Reinach 1926 = Reinach 1999.
\textsuperscript{14} A prosthesis, in the jargon of Aristeides Quintilianus, \textit{On Music} a.18/Winnington-Ingram 39, 1–2; Reinach 1999, 144 n. 9.
\textsuperscript{15} Mountford 1929.
\textsuperscript{16} Mountford 1929, 164.
\textsuperscript{17} Mountford 1929, 161 n. 1.
\textsuperscript{18} Reese 1941, 50.
\textsuperscript{19} Sachs 1943, 244.
\textsuperscript{20} Martin 1953.
\textsuperscript{21} See criticism in Winnington-Ingram 1955, 83–84.
\textsuperscript{22} Wagner 1955, 214.
\textsuperscript{23} Under West 1992.
\textsuperscript{24} Düring 1956, 304.
\textsuperscript{25} Mountford 1929, 169.
\textsuperscript{26} Del Grande 1960, 439–440.
speak), and treated the ‘hook’ as a sign of separation. He read a T in the place of the gamma, and regarded the two signs as intermittent instrumental notes of quadruple time.

Dale, who was a metrician, did not find the idea of inserting extra notes between the metrical feet of speech intolerable. All that this insertion would, to her judgement, produce was a modification of the metrical scansion. Thus the appearance of the triad would turn the two dochmioi into three syncopated iamboi:

<table>
<thead>
<tr>
<th>Strophe</th>
<th>(μανιάδος φοίτα-)(λέον φεῦ μόχθων)</th>
<th>2 dochmioi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antistrophe</td>
<td>(κατέκλυσεν δεινών)(πόνων ώς πόντου)</td>
<td>2 dochmioi</td>
</tr>
<tr>
<td>Strophe</td>
<td>(μανιάδος) θῶ (φοίτα λέου) θῶ (φεῦ μόχθων)</td>
<td>3 sync. iamboi</td>
</tr>
<tr>
<td>Antistrophe</td>
<td>(κατέκλυσεν) θῶ (δεινών πόνων) θῶ (ώς πόντου)</td>
<td>3 syn. iamboi</td>
</tr>
</tbody>
</table>

And this, she says, whatever the “curious group of three signs”. This segmentation of speech may not be in the classical tradition of tragic lyrics but Dale was contented that “the Orestes belongs to an era of musical experiment, and Euripides notoriously departed from the classical tradition of dramatic lyric”.

Winnington-Ingram was not convinced that the symbols of the triad were instrumental notes. However, he felt that “we cannot assume that the dochmioac rhythm was carried straight through”. He also strongly doubted that the ‘dot’ on the first, short element of the dochmioi indicated the anabacheuei, as in thos; po-in pontou). They adopted the ‘dot’ = stigme = arsis theory, ostracized the ‘step’, presumably regarded the ‘hook’ as a division mark (they made no reference to it), and accepted gamma and sigma as being instrumental notes of unit duration set between the words. Note that the triads do not fall in the same parts of the bars.

Marzi appended a rest of unit time to the last note of each dochmioi, and regarded the ‘step’ as an additional rest of triple duration. Obvi-

<table>
<thead>
<tr>
<th>Strophe</th>
<th>(κατέκλυσεν) θῶ (δεινών πόνων) θῶ (ώς πόντου)</th>
<th>8-unit dochmios 8-unit foot 8-unit foot</th>
</tr>
</thead>
</table>

Solomon adopted Wagner’s diastole for the ‘hook’ (“an unquestionable reading”), and Mountford’s idea of an “instrumental interlude, which would probably have consumed a signifi-

27 So Jan 1899, 7.
28 Dale 1968, 207.
29 Dale 1968, 207.
30 Dale 1968, 3.
31 Winnington-Ingram 1955, 74.
33 Pöhlmann’s 1970 transcript is identical to Pöhlmann’s 2001 transcript, as regards the signs under consideration here.
34 Richter 1971, 275.
38 Marzi 1973, 319.
40 Solomon 1977, 73 n. 5.
cant amount of time, especially if improvised notes were called for between the diastole (?) and the note ταυτα. He accepted the ‘step’ as being an interjected instrumental note.

Neubecker adopted the diastole and the interjected instrumental notes.

Chailley (Fig. 14) reverted to a 3/4, waltz-like, rhythm, contracting long syllables (κατολοφορμαι, μα- in materos, -σε- in anabakeheuei, δαι- in daimôn), or over-protracting them (-σαι in katolophoarmai, σα- in anabakeheuei, ου- in brotois, ὅς, -ας in tbaos, -μόν in daimôn, pon- and -του in pontou, -οί in oletbroioisi, κυ- and -μα- and -σιν in kymasin), in order to make them fit his regular, ¾ rhythm. The ‘step’ became a percussion sound, coming in on the second beat of the bar, thus creating a syncopation effect, while gamma and sigma remained interjected instrumental notes, ushered by the diastole. As Chailley himself admitted, the interpretation was conjectural.

Akkeren (Fig. 15) treated the ‘step’ as an instrumental note of unit duration, giving the voice an equal rest at that moment. Arseis and theses are not supplied, so the rhythm is not completely defined. The ‘hook’ is the diastole, and the symbols following it, gamma and sigma, are completely defined. The ‘hook’ he takes to be the diastole, and the ‘dot’ on the first and third elements of each dochmios to be the stigme, indicating arsis (upbeat)55. West tries to prove two points: a) that the harmonic intervals formed between the voice and instrument, and b) that the ‘hook’, also met in another two contemporary fragments, is the diastole of theory. West’s argument will be here discussed in all significant detail:

1. The ‘step’

   a. The ‘step’

   The vertical intervals formed are the following: minor-sixth-plus-a-quartertone at μα- in ματερος; perfect fourth at ho in ho μεγας and at α- in ανα; octave at ti- in tinaxas; possibly minor seventh at σιν in oletbroioisi. The symphonias (consonances) dia tessaı́ron (perfect fourth) and dia pası́on (octave) are acceptable harmonic intervals but a harmonic minor-sixth-plus-a-quartertone is neither encoun-

Surely, this is not the case. The intention of doubling the δοχμιακον is not to indicate a quadruple duration but to make space on the papyrus for the two signs written above the syllable, a practice well known from the Delphic Hymns and elsewhere. There is no doubt the intended metron is the dochmiakon, used throughout the piece:

πόνων ὡς πόντου. 
(u -) (uu - -)

West’s interpretation (Fig. 17) is based on the belief that the placement of instrumental notes between the words “would disrupt the rhythm intolerably”. He declares: “I have no doubt they were intended to sound simultaneously with the following word, possibly continuing as a drone throughout the phrase. There was nowhere else for the copyist to fit them in conveniently but before the word at which they sounded”53. So, West picks up on an earlier suggestion, that of harmonic intervals between voice and instrument, but unlike previous scholars, he ventures to support his points. The ‘hook’ he takes to be the diastole, and the ‘dot’ on the first and third elements of each dochmios to be the stigme, indicating arsis (upbeat).55 West tries to prove two points: a) that the harmonic intervals formed between the voice and the instrument are legitimate, that is they are either met with elsewhere or mentioned in the theory, and b) that the ‘hook’, also met in another two contemporary fragments, is the diastole of theory. West’s argument will be here discussed in all significant detail:

   a. The ‘step’
tered nor mentioned anywhere. If we accept this proposition, then we must conclude that, since the aulos sustained the note throughout each dochmiacic phrase (or, at least every other dochmiios), the instrumental accompaniment was throughout nothing more than a continuous drone (above the tonal level of the vocal melody) renewed at the beginning of every dochmiios. There is, however, no evidence for a drone in ancient Hellenic music, let alone at a higher tonal level than the voice. Whether one pipe is envisaged as duplicating the voice while the other is producing the drone it is not said.

2. Gamma and sigma. The vertical intervals formed between gamma, sigma and the voice can only be assessed in the second appearance of the triad, for the notes (if there were any) over deinon ponon have perished. So, at bôs pontou (Fig. 18), the intervals formed are below the tonal level of the voice: a major seventh between gamma and voice (Z), and a tritonon (augmented fourth) between sigma and voice (Z). For the first interval we have no evidence for its harmonic use. As regards the tritonon, West points to Gaudentios as evidence for its use in a harmonic fashion. Indeed, Gaudentios refers to the paramesê and the parhypane (or, at least every other dochmiios), the trihemitonion, West points to Gaudentios as evidence for its use in a harmonic fashion. Indeed, Gaudentios refers to the paramesê and the parhypane (or, at least every other dochmiios), the trihemitonion, West points to Gaudentios as evidence for its use in a harmonic fashion. Indeed, Gaudentios refers to the paramesê and the parhypane (or, at least every other dochmiios), the trihemitonion, West points to Gaudentios as evidence for its use in a harmonic fashion. Indeed, Gaudentios refers to the paramesê and the parhypane (or, at least every other dochmiios), the trihemitonion, West points to Gaudentios as evidence for its use in a harmonic fashion. Indeed, Gaudentios refers to the paramesê and the parhypane (or, at least every other dochmiios), the trihemitonion, West points to Gaudentios as evidence for its use in a harmonic fashion. Indeed, Gaudentios refers to the paramesê and the parhypane (or, at least every other dochmiios), the trihemitonion, West points to Gaudentios as evidence for its use in a harmonic fashion. Indeed, Gaudentios refers to the paramesê and the parhygrave. Gaudentios gives his example of the tritonon in the diatonikon or chromatikon genos (since diatonic and chromatic parhype are the same pitch). However, if we examine the ametabolon systêma, we shall see that the tritonon is formed five times in the diatonikon genos and nine times in the chromatikon. In the enharmonion genos five tritona are possible, two of which involve the parhypane. However, it is the dynamis (degree) of the enharmonic lichanos, which is here involved, not the parhype mentioned be Gaudentios. The question therefore arises: are we to suppose that all the vertical tritona in the three gene (5 + 9 + 5 = 19) could be used in heterophony, or are we to imagine that the use of the tritonon was limited between the dynamis (degrees) mentioned by Gaudentios, namely the paramesê and the parhypane meson? If we accept this, then we must conclude that a vertical tritonon could not occur in the enharmonion, which, according to West, was the genos of the Orestes song.

It has been a common belief amongst students of ancient Hellenic music that the instrumental accompaniment to the voice was in a tonal level higher than the voice, above the voice. The harmonic intervals in the Orestes song, however, are below the voice. West, therefore, feels he has to defend their appearance at a low level. His interpretation of the selected evidence and his reasoning are, indeed, persuasive: on these grounds, there seems to be no support to the claim that the accompaniment was always above the voice. However, there is one important instance of heterophonic practice, which West does not take into consideration (Fig. 20): the use of harmonic intervals between the voice and the accompanying aulos in the spoudieazon tropos attributed to Olympos. There, it is explicitly stated that three notes exclusive to the aulos scale (krousis), and absent from the vocal scale (melos), can sound together with lower notes of the voice: an auletic triê can form a dia pente with a lower vocal parhype; a auletic netê diezeugmenon can form a dia pente with the lower vocal mesê or a ditonon with the lower vocal paranê; an auletic netê synêmenon can form either a dia tesseracton kai tribêmitonion with the lower vocal lichanos, or a tribêmitonion with the lower vocal paramesê, or a tonos with the lower vocal paranê. Whether a heterophonic practice of the 7th or of the 5th century B.C., at least these six vertical intervals have the aulos at the top and the voice below. West’s claim, therefore, that the available ancient evidence in toto points to an instrumental heterophony of unspecified tonal level (above or below the voice) cannot be sustained.

b. The ‘hook’

The identification of the ‘hook’ with the diastole of theory by Wagner, adopted by almost every student of the Papyrus ever since, finds another adherent in West. Let us look at the merits of this proposition. First of all, if the ‘hook’-diastole announces the transition from lexis (words) to krousis (instrumental interludes) why is it not there when a return is made to lexis? Also, is we accept that the ‘step’ is also an instrumental note, why is not the diastole present before and after it? Of course, if the step were a vocal note (perhaps a non-sense syllable), no diastole would be

60 The spondeiazon tropos was traditionally attributed to Olympos, of the 7th century B.C. However, Barker (1984, 257) believes that the described heterophony between voice and aulos is a much later practice of the 5th century B.C.

61 So Landels 1999, 251.
needed, for there would be no transition occurring. However, is it true, as is generally held, that the diastole of theory is a sign separating vocal from instrumental notes? According to the definition given by Anonymus Bellermann and the later Bryennios, the diastole is a sign used (παραλομβόντας) to indicate breaks (χωρίζοσα τὰ προ-/άγοντα ἀπὸ τῶν ἐπιφρομένων) in vocal as well as instrumental melodies (ἐπὶ τῶν ὀφέων καὶ τῆς κρομματογραφίας); it does not emerge from the definition that the sign was used in transitions from one kind of notation to the other. In addition, the sign is said to introduce a “Pause”\(^{65}\) and a bar (:-) or slash, two dots and a bar (/:-) or colon (:). Admittedly, there is a sign called dias- tole or hypodias tole in musical notation, which is similar in shape to the ‘hook’ of our papyrus, only another function. Perhaps, as it has been pointed out, perhaps the mesaulion …”\(^{79}\). He is also in two minds about the ‘hook’: on the one hand in his transcript it functions as the dividing diastole\(^{80}\), and sigma are problematic because “if played at the points where the signs appear in the score, the intrusions seem to interrupt the flow of the words very dramatically”\(^{73}\). To have an instrumental note played in between the dochmioi and for so many times is deemed as “intolerably clumsy and confusing”\(^{74}\) and “not a challenging task” for the aulos player.\(^{75}\) The ‘dot’ is dismissed as not helping in the overall rhythm.\(^{76}\) No bar lines are provided, for Landels is convinced that the large, dekas e m o i (10-unit) dochm i o i, of the type \([(-: -)\cdots (-: -)]\) and \([(-: vu)(-: - -)]\) should be executed as oktas e m o i (in eight chronoi/counts), like the ‘canonical’ form \([(-: -)\cdots (-: -)]\), and not as dekas e m o i (in ten chronoi/counts). And this can be done only if the quantities are grouped in the following way: \([(-: -)\cdots (-: -)]\) should be executed as \([(-: - -)(-: - -)]\) and \([(-: vu)(-: - -)]\) respectively, that is, a quadruple in three counts and a sextuple in five counts. This proposition is, perhaps, a little far-fetched and unnecessary. There is no reason why we should count ten instead of eight when we come across dochmioi larger than eight moi rai. In other words, dochmioi of ten (metrical) moi rai should be executed in ten (rhythmical) chronoi. The variety of dochmiac size (megethos) enhances the expression of meaning, as we shall see later.

Mathiesen (Fig. 25) is in two minds about the ‘steps’: on the one hand he gives them in his transcript as single intermittent instrumental notes, while on the other he finds it “reasonable to consider them as indications of an instrumental flourish, perhaps the mesaulion ...”\(^{79}\). He is also in two minds about the ‘hook’: on the one hand in his transcript it functions as the dividing diastole\(^{80}\),

64 Manouel Bryennios Harmonics 3.3.15–16/Jonker 1970, 312.
65 So Mathiesen 1999, 118.
66 So West 1992, 269. Mathiesen 1999, 119 n. 192 quotes Najock’s emendation, 7, whose shape resembles Vincent’s (1847) conjecture (\(\text{,}\)) and Ruelle’s (1908) conjecture (\(\text{,}\)).
67 Pöhlmann/West 2001, Nos. 10 and 14, respectively.
68 Pöhlmann/West 2001, 50.
69 However, the final metabole (line 1), from diatonikos hypophrygios to diatonikos lydios, is not marked by the ‘hook’, but by the word […]ιστη, presumably λύδιστη (Pöhlmann/West 2001, 50). The question arises: why was not the ‘hook’ also used in this, fourth, metabole?
70 However, Kannicht 1981, 266 gives a verbal γ instead of a musical Γ, while in Fr. c line 8 (Fig. 22), he accepts Γ as a “nota musica”.
71 Landels 1999.
72 Landels 1999, 250, 251, respectively.
73 Landels 1999, 252.
74 Landels 1999, 250.
75 Landels 1999, 251.
76 Landels 1999, 251 n. 27.
77 Following West 1992, 142–144.
78 Mathiesen 1999.
79 Mathiesen 1999, 119.
80 Mathiesen 1999, 118. Mathiesen 1999, 119 n. 192 gives the
while on the other it is felt that it would be more probable if the diastole were a rest of one unit time, “thereby producing the value of a complete dochmius” (κοτέκτων θεον) = (μυόμαι), a repercussion of Marzii’s idea of a monoseme value for the ‘hook’, in order to complete the dochmios. Gamma and sigma are left as intermittent instrumental notes of unit time. The ‘dot’ embarrasses Mathiesen: he returns to the idea of the ‘dots’ being markers of the “beginning of each rhythmic part” of the dochmios. As for the ‘dot’ over each ‘step’ it is intended “to mark off … the articulation provided by the instrumental injection.” No bar lines are supplied (the system of vertical strokes indicating downbeats in his 1975 transcript has here been withdrawn, leaving the rhythm largely unidentified. The vertical strokes in his 1999 transcript serve a different purpose: to mark off the constituent parts of the dochmioi).

Lastly, here are some thoughts by the present writer about the Orestes score (Fig. 26).

1. The ‘step’ always carries the ‘dot’. The ‘dot’ elsewhere in the Papyrus is undoubtedly used as a stige, indicating upbeats. Therefore the ‘step’ is on the upbeat, and as a result it possesses duration. Also, as has been pointed out above, the sign always lies next to another dotted sign, suggesting that it is part of the overall upbeat at the places where it occurs. It can therefore only be either a rest or a note, possibly not only an instrumental but a vocal note as well, even though the shape of the sign is certainly different from the vocal Z. The fact that the two Zs are different does not necessarily mean that the ‘step’ in an instrumental note. There is, actually, very good evidence that the ‘step’ served as a vocal note: in Papyrus Wien G 29825 Fr. c line 7 (Fig. 22), a document contemporary to the ‘Orestes’ Papyrus, the sign appears over a syllable, amongst the vocal notes.

2. The ‘hook’ identification with the diastole has not really been adequately proven. Could it have duration? If it had, it would, as has already been pointed out, together with the other two notes, complete the dochmios pous, at least in the first occurrence of the triad. In fact, the lydios vocal proslambanomenos looks like the ‘hook’, and above it lays the hypate hypaton, whose vocal sign is the reversed gamma. The third sign poses a problem: the vocal sigma in the lydios tropos is not reversed. Has the scribe made a mistake here? Did he mean to write sigma (σ) instead of reversed sigma (σ)? For if he did make a mistake, then we have a third vocal note, hypate meson. Of course, allocation of errors to scribes is not an attractive way out. What is attractive, however, is the fact that the three notes are placed in an ascending order of pitch, starting very low, with the proslambanomenos, and continuing up to paramese, creating a melody that resembles the surge and swell of waves: the destructive, greedy waves of the sea, which rip aloft the sail of the swift craft, relentlessly toss it about, swamp it, and finally swallow it up, just as Klytemnestra’s motherly blood tortures Orestes and destroys his prosperity. This is a very powerful image of a small boat fighting to stay afloat in rough sea, and finally doomed to annihilation. The rise and fall of the melodic curves, especially in the last two lines seem to paint in sound the image created by the words. The last melodic section, over the words ὄλοσθριότεν ἐν κόμψων, with its sudden leap up (PZ) and consequent abrupt drop (ZII) portrays very expressively the last, fatal blow. Interestingly, from a musical point of view, it is not the high Z which is placed on the upbeat but the following it, lower Η (however, not an unequivocal reading), creating an even stronger sensation of the undulating motion of the waves, and the inescapable fate of destruction. As is well known from written evidence as well as other extant pieces of music, μίμησις was a much sought after effect in ancient Hellenic music (pythikos nomos, ‘Delphic Hymns’ etc.).

3. The resulting rhythm does not seem to the present writer “intolerable” or “not acceptable”, simply because the regular flow of dochmioi is here and there diverted by extra notes. On the contrary, it is this variety in the rhythm, which generates unexpected rhythmic patterns, and, as a result, enhances dramatic expression. How appropriate in this vivid, turbulent image of the fight between waves and boat, and how fitting it is to Euripides’ fame, as being ‘the most tragic of poets’. I can imagine the choros lamenting for the unduly fate of Orestes, exclaiming woes and groans in between the words, sliding their voices up to a high pitch (‘step’) together with the aulos, and dancing accordingly, beating their chests and limbs in mourning, and swaying, in imitation of the movement of the waves.

---

81 Mathiesen 1999, 119.
82 Marzii, 1973, 319.
83 Gamma is here, rightly, changed to ε from e in Mathiesen 1985.
84 See Mountford 1929.
85 Mathiesen 1999, 120.
86 Pöhlmann/West (2001, 51 and 2001, 15) are aware of the appearance of the ‘step’ as a vocal note in this papyrus. They do not, however, use it as evidence for a possible vocal function of the sign.
87 Marzii, 1973; Mathiesen 1999.
88 See Pöhlmann/West 2001, 12.
89 West 1992, 206.
90 Landels 1999, 252.
BIBLIOGRAPHY

AKKEREN, A. VAN 1983

BARKER, A. 1984
Greek Musical Writings I. The Musician and His Art. Cambridge.

BARRY, P. 1919

CHAILEY, J. 1979

CLEMENTS, E. 1922

CLEMENTS, E. 1919

COMOTTI, G. 1988

CRUSIUS, O. 1893

DALE, A. M. 1968

DEL GRANDE, C. 1960

DURING, I. 1956

HENDERSON, I./WULSTAN, D. 1973

JAN, C. 1895

JAN, C. 1899

JONKER, G. H. 1970

KANNICHT, R. 1981

LANDELS, J. G. 1999

MARTIN, E. 1953

MARZI, G. 1973

MATHIESEN, T. J. 1999

MATHIESEN, T. J. 1985

MATHIESEN, T. J. 1984

MONRO, D. B. 1894

MOUNTFORD, J. F. 1929

NAJOCK, D. 1975
Anonyma de musica scripta Bellermanniana. Leipzig.

NEUBECKER, A. J. 1986

NEUBECKER, A. J. 1977

POHLMANN, E. 1970

POHLMANN, E./WEST, M. L. 2001
Pap. Vienna G 2315. Euripides, Orestes 338–

REESE, G. 1941
Music in the Middle Ages. London.

REINACH, T. 1999

REINACH, T. 1926

RICHTER, L. 1983

RICHTER, L. 1973
Das Musikfragment aus dem Euripidischen Orestes. Deutsches Jahrbuch der Musikwissenschaft 16, 111–149.

RICHTER, L. 1972

RICHTER, L. 1971

RUELLE, C.-E./WESSEL Y, C. 1892

RUELLE, C.-E. 1908

SACHS, C. 1943

SOLOMON, J. D. 1977

SOLOMON, J. D. 1976

TURNER, E. G. 1971

TURNER, E. G. 1956

VINCENT, A. J. H. 1847

WAGNER, R. 1955
Review of E. Martin 1953.

WAGNER, R. 1921

WESSEL Y, K. 1892

WESSEL Y, K/RUELLE, C. E./WEIL, H. 1892

WEST, M. L. 1992

WEST, M. L. 1987

WILLIAMS, C. F. A. 1894

WINNINGTON-INGRAM, R. P. 1963
Aristides Quintilianus De Musica. Leipzig.

WINNINGTON-INGRAM, R. P. 1955

WINNINGTON-INGRAM, R. P. 1928
Fig. 1 The ‘Orestes Papyrus’ (trace by the present writer from a photograph in Akkeren 1983, 262 fig. 1A).

Fig. 2 Wessely’s transcript (from Wessely 1892, 68).
Fig. 3 Crusius' transcript (adapted from Crusius 1893, 189–190).
Fig. 4 Monro’s transcript (from Monro 1894, 92).

Fig. 5 Williams’ transcript (excerpts from Williams 1894, 314).

Fig. 6 Jan’s transcript (excerpts from Jan 1899, 7).

Fig. 7 Barry’s transcript (excerpt from Barry 1919, 583–584).
Fig. 8 Clements’ transcript (excerpts from Clements 1922, 162).

Fig. 9 Reinach’s transcript (excerpts from Reinach 1999, 205).

Fig. 10 Mountford’s transcript (excerpts from Mountford 1929, 169).

Fig. 11 Martin’s transcript (excerpts from Martin 1953, 14).
Fig. 12 Transcript by Henderson/Wulstan (excerpts from Henderson/Wulstan 1973, 51).

Fig. 13 Marzi’s transcript (excerpts from Marzi 1973, 328).

Fig. 14 Chailley’s transcript (excerpts from Chailley 1979, 152–153).
Fig. 15 Akkeren’s transcript (excerpts from Akkeren 1983, 260).

Fig. 16 Mathiesen’s transcript (adapted from Mathiesen 1985, 171–172).
Fig. 17 Transcripts by Pöhlmann and West. a. Pöhlmann – b. West (from Pöhlmann/West 2001, 13).
Fig. 18 West’s harmonic intervals (graph based on West 1992, 284 and fig. 17b).
Fig. 19 The paraphona diastemata ditonon and tritonon in the three gene (graph based on Gaudentios’ Harmonic Introduction 8/Jan 1895, 338, 3–7).

Fig. 20 The spondeiazôn tropos (graph based on Winnington-Ingram’s conclusions, Winnington-Ingram 1928).
The Orestes Papyrus: Some Thoughts on the Dubious Musical Signs 491

Fig. 21 Pap. Wien G 29825 Fragments a and b, verso. Transcript by Pöhlmann and West (from Pöhlmann/West 2001, 48).

Fig. 22 Pap. Wien G 29825 Fragment c. Transcript by Pöhlmann and West (from Pöhlmann/West 2001, 51).
Fig. 23 Pap. Wien G 29825 Fragment f. Transcript by Pöhlmann and West (from Pöhlmann/West 2001, 52).

Fig. 24 Landels’ transcript (excerpts from Landels 1999, 251).

Fig. 25 Mathiesen’s transcript (excerpts from Mathiesen 1999, 117–118).
Fig. 26a–c Graphic transcript by present writer.
Fig. 26c  Graphic transcript by present writer.