

The Orestes Papyrus: Some Thoughts on the Dubious Musical Signs

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ZUSAMMENFASSUNG

Der Papyrus Wien 2315 der Rainer Sammlung in der Österreichischen Nationalbibliothek wurde erstmals von Carl Wessely im Jahre 1892 veröffentlicht. In den 14 Textreihen erkannte Wessely das verstümmelte Fragment des Ersten Stasimon Melos von Euripides' Tragödie Orestes. Die sieben Textlinien wechseln mit musikalischen Zeichen (Notationen) ab und formieren sich auf diese Weise zu einer Teilpartitur eines tragischen Gesangs für eine Stimme und (?) ein Instrument. Seit der editio princeps des Papyrus haben sich eine Reihe von Forschern an der Entzifferung und Interpretation des Textes versucht. In vorliegenden Ausführungen werden diese Versuche erörtert, und es werden neue Ideen zu bestimmten musikalischen Symbolen dargelegt.

The 'Orestes Papyrus' (Fig. 1) is a small papyric scrap (9.2 cm x 8.5 cm)¹, from the cartonnage of a mummy coming from Hermoupolis Magna in Egypt². It is kept in the Österreichische Nationalbibliothek, Wien, number G 2315. The scribe's hand is dated to around 200 B.C.³.

The Papyrus was published for the first time in 1892 by Karl Wessely⁴. 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 words⁵ is interrupted by the insertion of a 'step'-like sign (approximate shape ž) and of a group of three signs 'hook-gamma-sigma' (approximate shapes כרד). Wessely identified the word text as belonging to Euripides' tragedy Orestes: a fragment of the *antistrophē* 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 In Wessely's transcript (Fig. 2) the ancient signs have been replaced by the proposed modern equivalents.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 E Z I I I C Φ, he identified as vocal notes in the *lydios enharmonios tropos* of Alypius (relative pitches in the Bellermand Standard: g a a# d' e' 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# e# a#).

A year later, Crusius⁶ 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 *dochmios*, 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*⁷). 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

¹ Wessely 1892, 66.

² Wessely et. al. 1892, 269.

³ Turner 1956.

⁴ Wessely 1892.

⁵ The words, metrically speaking, are scanned in *dochmioi* *podes* (feet). The 'canonical' form of this foot is the *oktase-mos pous* (eight-unit foot) [(v -)(- v -)], also appearing in this papyrus in the configuration (schema) [(v vv)(- v -)], or in larger sizes (*megethos*): as *eneasemos pous* (nine-unit foot) in the configurations [(- vv)(- v -)], [(v vv)(- - -)], [(v -)(- - -)].

⁶ Crusius 1893.

⁷ Crusius 1893, 185.

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

Monro⁸ 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*.

Williams⁹ 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 Jan¹⁰. 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, Barry¹¹ 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 words (as in Crusius, Fig. 3) but between the words.

Clements¹² put forth another novel idea (Fig. 8): the ‘step’ is an instrumental note from a trumpet (sic.), a sustained pedal note above the voice, beginning with the following *dochmios* and lasting almost till the end of it. As regards the triad, the ‘hook’ was equated to the sigma and the triad ‘sigma-gamma-sigma’ was accommodated in the rhythmical lattice in such a way as to ensure the continuity of the *dochmioi*, without any interruption.

Reinach¹³ (Fig. 9) suggested a rest of duple time¹⁴ in the place of the ‘step’. As regards the triad, Reinach threw his hands up in despair.

Mountford¹⁵ (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*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 (*thesis*), as had been believed till then, or was it a sign of upbeat (*arsis*)? He¹⁷ entertained the possibility of it being a mere indication of the onset of the constituent parts of the *dochmios*, that is the beginnings of the *metrikoi podēs* (metrical feet) *iambos* (υ -) and *paiōn* (- υ -), thus: (υ - / - 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’.

Reese¹⁸ only made a passing comment on “some symbols that may indicate the use of heterophony”, and left it at that. Sachs¹⁹, in his very brief treatment of the song, let the ‘step’ and the ‘triad’ be intermittent instrumental notes.

Martin²⁰ argued that the ‘dot’ should be regarded as the *stigmē*, indicating thesis²¹ (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 *-mai* in *katolophyromai* was rendered as triseme; the diseme *-teros* in *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 (♩, ♪, ♪) and second (♩, ♪, ♪) appearances, really quite an arbitrary solution.

Wagner²², 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 *diastolē* 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 later²³.

Düring²⁴ reproduced Mountford’s transcript²⁵ (including the mistake in line 1: the note over *ma-* in *materos* is P not C).

Del Grande²⁶ in his transcript allocated a blank bar to the place of the ‘step’ (τῷ ἀγνώστῳ θεῶ, so to

⁸ Monro 1894.

⁹ Williams 1894.

¹⁰ Jan 1895, 427–431 and Jan 1899, 4–7.

¹¹ Barry 1919.

¹² Clements 1922.

¹³ Reinach 1926 = Reinach 1999.

¹⁴ A prosthesis, in the jargon of Aristeides Quintilianus, *On Music* a.18/Winnington-Ingram 39, 1–2; Reinach 1999, 144 n. 9.

¹⁵ Mountford 1929.

¹⁶ Mountford 1929, 164.

¹⁷ Mountford 1929, 161 n. 1.

¹⁸ Reese 1941, 50.

¹⁹ Sachs 1943, 244.

²⁰ Martin 1953.

²¹ See criticism in Winnington-Ingram 1955, 83–84.

²² Wagner 1955, 214.

²³ Under West 1992.

²⁴ Düring 1956, 304.

²⁵ Mountford 1929, 169.

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 time²⁷.

Dale²⁸, 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*:

strophe	(μανιάδος φοιτα-)(λέου φεῦ μόχθων)	2 dochmioi
	υ υυ - - - υ - - - -	
antistrophe	(κατέκλυσεν δεινῶν)(πόνων ὡς πόντου)	2 dochmioi
	υ υ υ - - - υ - - - -	
strophe	(μανιάδος) ʔʔ (φοιτα λέου) ʔʔ (φεῦ μόχθων)	3 sync. iamboi
	υ υυ - - - υ - - - -	
antistrophe	(κατέκλυσεν) ʔʔ (δεινῶν πόνων) ʔʔ (ὡς πόντου)	3 syn. iamboi
	υ υ υ - - - υ - - - -	

And this, she says, whatever the “curious group of three signs”²⁹. 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”³⁰.

Winnington-Ingram was not convinced that the symbols of the triad were instrumental notes. However, he felt that “we cannot assume that the dochmiac rhythm was carried straight through”³¹. He also strongly doubted that the ‘dot’ on the first, short element of the dochmios indicated thesis.

Pöhlmann³² (Fig. 17)³³ adopted Wagner’s identification of the ‘hook’ with the diastole, thus interpreting it as a signal of transition from voice to instrument, and regarded the ‘step’, the gamma and the sigma as melodic instrumental notes interjected between the words. But Pöhlmann was unwilling to allocate durations to the notes.

Richter³⁴ did not propose anything new: in his transcript bar lines are absent, indicating unwillingness to suggest a rhythm for the song, while the ‘step’ and the triad are completely ignored. A year later he adopted Pöhlmann’s interpretation³⁵.

Henderson and Wulstan³⁶ (Fig. 12) returned to the idea of the song being a waltz, and to ensure this rhythm they did not hesitate to alter the prosodic values of many syllables (*-mai* of *katolophyromai*; *ma-* of *materos*; *-cheu-* and *-ei* of

anabacheuei; *-as* in *thoas*; *po-* in *pontou*). They adopted the ‘dot’ = *stigma* = *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.

Marzi³⁷ (Fig. 13) appended a rest of unit time to the last note of each dochmios, and regarded the ‘step’ as an additional rest of triple duration. Obvi-

ously the idea was to regularize the rhythm to a $\frac{3}{8}$ metre (despite the absence of a signature and bars). He hesitated to transcribe the triad (it does not appear in his transcript) but made an interesting comment³⁸: if the triad were to be thought of as three intermittent notes, then three 8-unit feet would be formed, the first being a dochmios:

(κατέκλυσεν) ʔʔ (δεινῶν πόνων) ʔʔ (ὡς πόντου)
(υ υ υ - υ) (- - υ - υ)(υυ - - -)

8-unit dochmios 8-unit foot 8-unit foot

Solomon³⁹ adopted Wagner’s diastole for the ‘hook’ (“an unquestionable reading”⁴⁰), 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.

³² Pöhlmann 1970, 2001.

³³ Pöhlmann’s 1970 transcript is identical to Pöhlmann’s 2001 transcript, as regards the signs under consideration here.

³⁴ Richter 1971, 275.

³⁵ Richter 1972, 285.

³⁶ Henderson/Wulstan 1973.

³⁷ Marzi 1973.

³⁸ Marzi 1973, 319.

³⁹ Solomon 1977.

⁴⁰ Solomon 1977, 73 n. 5.

cant amount of time, especially if improvised notes were called for between the diastole (7) and the note τ⁴¹. He accepted the ‘step’ as being an interjected instrumental note⁴².

Neubecker⁴³ adopted the diastole and the interjected instrumental notes.

Chailley⁴⁴ (Fig. 14) reverted to a 3/4, waltz-like, rhythm, contracting long syllables (*ka-* in *katolophyromai*, *ma-* in *materos*, *-cheu-* in *anabakcheuei*, *dai-* in *daimōn*), or over-protracting them (*-mai* in *katolophyromai*, *sas*, *-ei* in *anabakcheuei*, *ou*, *-tois* in *brotois*, *hōs*, *-as* in *thoas*, *-mōn* in *daimōn*, *pon-* and *-tou* in *pontou*, *-oi-* in *olethriōisi*, *ku-* and *-ma-* and *-sin* in *kymasin*), in order to make them fit his regular, 3/4 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 conjectural⁴⁵.

Akkeren⁴⁶ (Fig. 15) treated the ‘step’ as an instrumental note of unit duration, giving the voice an equal rest at that moment. Arseis and the-seis are not supplied, so the rhythm is not completely defined. The ‘hook’ is the diastole, and the symbols following it, gamma and sigma, are instrumental notes of unit and duple duration, respectively; an arbitrary choice. Richter⁴⁷ reproduced Pöhlmann⁴⁸ in all respects.

Mathiesen⁴⁹ (Fig. 16) accepted the existence of intermittent instrumentals of unit duration (‘step’, gamma, sigma) and the diastole but, strangely enough, he proposed a rhythm that did not take into consideration the ‘dots’. Thus, syllables with ‘dots’, which are supposed to be on the upbeat, were marked either as downbeats (*-phy-* of *katolophyromai*, *em* before *brotois*, *-tou* of *akatou*, *-sen* of *kateklysen*, *hōs* of *hōs pontou*) or as upbeats (*a-* of *ana*, *ti-* of *tinaxas*, *hōs* of *hōs pontou*). To disregard the ‘dots’ in such a way is rather an act of despair, and most probably, as will be shown later, quite unnecessary. The prosodic value of the syllable *ma-* in *materos* was, also, not respected (a natural long contracted).

Comotti⁵⁰ used the evidence of the Papyrus to draw an incorrect conclusion about the duration of the syllable *hōōs*. (l. 6). He was of the opinion that although the manuscript tradition would give the following metrical scansion:

πόνων ὡς πόντου
(υ -) (- - -) iambos + molossos,

the papyrus suggests the following metre:

πόνων ὡς πόντου
(υ -) (- -) (- -) iambos + spondeios + spondeios.

Surely, this is not the case. The intention of doubling the ω 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 Hymns⁵¹ and elsewhere. There is no doubt the intended *metron* is the *dochmiakon*, used throughout the piece:

πόνων ὡς πόντου.
(υ -) (υυ - -)

West’s interpretation⁵² (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 instrument⁵⁴, 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’

1. The vertical intervals formed are the following: minor-sixth-plus-a-quarteritone at *ma-* in *materos*; perfect fourth at *ho* in *ho megas* and at *a-* in *ana*; octave at *ti-* in *tinaxas*; possibly minor seventh at *-sin* in *olethriōisin*. The *symphoniai* (consonances) *dia tessarōn* (perfect fourth) and *dia pasōn* (octave) are acceptable harmonic intervals but a harmonic minor-sixth-plus-a-quarteritone is neither encoun-

⁴¹ Solomon 1977, 76 n. 13.

⁴² Solomon 1977, 74.

⁴³ Neubecker 1977 = Neubecker 1986, 158.

⁴⁴ Chailley 1979.

⁴⁵ Chailley 1979, 152.

⁴⁶ Akkeren 1983.

⁴⁷ Richter 1983, 118.

⁴⁸ Pöhlmann 1970, 79.

⁴⁹ Mathiesen 1985.

⁵⁰ Comotti 1988, 21.

⁵¹ See Pöhlmann/West 2001, 62–82.

⁵² West 1987, 1992, 2001.

⁵³ West 1992, 206.

⁵⁴ Crusius 1893; Barry 1919; Clements 1922; Chailley 1979.

⁵⁵ West 1992, 285.

tered nor mentioned anywhere. If we accept this proposition, then we must conclude that, since the aulos sustained the note throughout each dochmiac phrase (or, at least every other dochmios⁵⁶), 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 dochmios. 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 *deinōn ponōn* have perished. So, at *hōs 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, Gaudentios⁵⁷ refers to the *paraphōna diastēmata* and gives two examples: of the *tritonon* (three tones) and of the *ditonon* (two tones) (Fig. 19). He gives an instance of the ditonon that formed between the *diatonikos lichanos mesōn* and the *paramesē*, and an instance of the tritonon that formed between *parhypatē mesōn* and *paramesē*. Gaudentios gives his example of the tritonon in the *diatonikon* or *chrōmatikon genos* (since diatonic and chromatic parhypate have the same pitch). However, if we examine the *ametabolon systēma*, 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 paramese. However, it is the *dynamis* (degree) of the enharmonic *lichanos*, which is here involved, not the parhypate mentioned by 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 paramese and the parhypate 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 evidence⁵⁸ 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 *spondeiazōn tropos* attributed to Olympos⁵⁹. 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 *tritē* can form a *dia pente* with a lower vocal *parhypatē*; a auletic *netē diezeugmenōn* can form a *dia pente* with the lower vocal *mesē* or a *ditonon* with the lower vocal *paranetē*; an auletic *netē synēmmenōn* can form either a *dia tessarōn kai trihēmitonion* with the lower vocal *lichanos*, or a *trihēmitonion* with the lower vocal *paramesē*, or a *tonos* with the lower vocal *paranetē*. Whether a heterophonic practice of the 7th or of the 5th century B.C.⁶⁰, 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 Wagner⁶¹, 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 it⁶²? Of course, if the step were a vocal note (perhaps a non-sense syllable), no diastole would be

⁵⁶ So West 1992, 207.

⁵⁷ Gaudentios Harmonic Introduction 8/Jan 1895, 338, 3–7.

⁵⁸ Pseudo-Aristoteles Problems 19, 12; Pseudo-Ploutarchos On Music 1141b; Platon Laws 670a; Polykrates Lakonika Fragment = Athenaios Deipnosophistai 4, 17 = Jacoby (1950) FGrHist. 588 Teil 3B, 702–703; Ploutarchos Advice to Bride and Groom 139c. d.

⁵⁹ See Winnington-Ingram 1928 for an exhaustive treatment of the evidence.

⁶⁰ The *spondeiazōn 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 Wagner 1955.

⁶² 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 Bellermann⁶³ and the later Bryennios⁶⁴, the diastole is a sign used (παράλαμβάνεται) to indicate breaks (χωρίζουσα τὰ προάγοντα ἀπὸ τῶν ἐπιφερομένων ἔζης) in vocal as well as instrumental melodies (ἐπὶ τε τῶν ψῶδων καὶ τῆς κρουματογραφίας); 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 (ἀναπαύουσα), a rest of some length. It sounds, therefore, as if the diastole separated whole sections of music text, in other words it would signal the end of a section. It does not seem as if the ‘hook’ in our Papyrus had that function. All the more, the extant manuscripts of Bellermann’s Anonymus give a different sign for the diastole: not a hook-like symbol at all but either two dots and a bar (:-) or slash, two dots and a bar (/:-) or colon (:)⁶⁶. Admittedly, there is a sign called *diastolē* or *hypodiastolē* used in literary texts, which is similar in shape to the ‘hook’ of our papyrus, only much smaller, and is occasionally used in papyri to indicate word boundary (e.g. Pap. Oxy XXV 2436: ΗΛΘΟΝΩΣΤ’ΕΠΕΓΧΑΝΕΙΝ = ΗΛΘΟΝΩΣΤ ΕΠΕΓΧΑΝΕΙΝ). However, why should the literary sign of diastole be used, when musical notation possesses its own symbol?

The ‘hook’ appears on another three instances, in two fragments of Pap. Wien G 29825, namely, Fragments a and b verso and Fragment f⁶⁷. In Fr. a + b verso (Fig. 21) it is used to separate words – not notes – in line 7. Its use here, therefore, has another function. Perhaps, as it has been pointed out⁶⁸, it marks off the points at which a *metabolē* takes place, from *chrōmatikos lydios* to *chrōmatikos hypolydios* to *diatonikos hypophrygios*⁶⁹. In Fr. f (Fig. 23) the ‘hook’ is used in a manner similar to the ‘Orestes Papyrus’: it lies in the level of the words, between a word and a note⁷⁰. The piece is written in the lydios tropos, like the Orestes song. It could, therefore, be said, as it was said there, that the ‘hook’ is the vocal proslambanomenos and Γ the hypate hypaton. However, this would not be correct, since Γ is definitely an instrumental, not vocal, note. This is, admittedly, the only strong piece of evidence in favour of the ‘hook’ = diastole interpretation.

In Fr. c (Fig. 22) of the same papyrus intermittent instrumental notes are neither preceded (lines 1 and 8) nor succeeded (line 1) by the ‘hook’. Actually, note Γ in line 1 comes after a colon (:), which, according to Anonymus Bellermann as has already been said, is one of the three varieties of the musical diastole.

Landels⁷¹ (Fig. 24) expresses scepticism: the ‘step’ and the ‘hook’ are division marks⁷². Gamma

and sigma are problematic since “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 player⁷⁵. The ‘dot’ is dismissed as not helping in the overall rhythm⁷⁶. No bar lines are provided, for Landels⁷⁷ is convinced that the large, *dekasēmoi* (10-unit) dochmioi, of the type [(: -) (: - -)] and [(- : υυ) (- - -)] should be executed as *oktasēmoi* (in eight chronoi/counts), like the ‘canonical’ form [(υ : -) (: : υ -)], and not as *dekasēmoi* (in ten chronoi/counts). And this can be done only if the quantities are grouped in the following way: [(: - -) (: : υ -)] = $\frac{3+5}{8}$ ($\frac{4}{4}$ $\frac{4}{6}$) and [(: : υυ) (: - - -)] = $\frac{3+5}{8}$ ($\frac{4}{4}$ $\frac{4}{6}$), respectively, that is, a quadruplet 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 moirai. In other words, dochmioi of ten (metrical) moirai should be executed in ten (rhythmical) *chronoi*. The variety of dochmiac size (*megethos*) enhances the expression of meaning, as we shall see later.

Mathiesen⁷⁸ (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 diastole⁸⁰,

⁶³ Anonymus Bellermann On Music 1, 11, 7–10/Najock 1975, 4 and 3, 93, 1–4/Najock 1975, 30.

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, γ, whose shape resembles Vincent’s (1847) conjecture (Ϸ) and Ruelle’s (1908) conjecture (Ϸ).

⁶⁷ Pöhlmann/West 2001, Nos. 10 and 14, respectively.

⁶⁸ Pöhlmann/West 2001, 50.

⁶⁹ However, the final *metabole* (line 11), from *diatonikos hypophrygios* to *diatonikos lydios*, is not marked by the ‘hook’, but by the word [...]ιστι, presumably λυδιστι (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 dochmios”: (κατέκλυσεν 77) = (♩♩♩♩♩♩)⁸¹, a repercussion of Marzi’s⁸² 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 time⁸³. The ‘dot’ embarrasses Mathiesen: he returns to the idea of the ‘dots’ being markers of the “beginning of each rhythmic part” of the dochmios⁸⁴. As for the ‘dot’ over each ‘step’ it is intended “to mark off ... the articulation provided by the instrumental injection”⁸⁵. No bar lines are supplied (the system of vertical strokes indicating downbeats in his 1975 transcript has here being 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 stigmaton, indicating upbeat. 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 notes⁸⁶.

2. The ‘hook’s’ identification with the diastole has not really been adequately proven. Could it have duration? If it had, it would, as has already been pointed out⁸⁷, 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 (Ϛ)? 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 proslam-

banomenos, 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 ὀλεθροῖσιν ἐν κύμασιν, with its sudden leap up (PZ) and consequent abrupt drop (ZΠ) 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 Π (however, not an unequivocal reading⁸⁸), 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, *mimēsis* 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”⁸⁹ or “not acceptable”⁹⁰, 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 chorus 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.

sign of the diastole as 7, without pointing out that this is Jonker’s emendation. As has already been said above none of the surviving manuscripts of Anonymus Bellermand gives this sign (see West 1992, 269).

⁸¹ Mathiesen 1999, 119.

⁸² Marzi 1973, 319.

⁸³ Gamma is here, rightly, changed to f# 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 Marzi 1973; Mathiesen 1999.

⁸⁸ See Pöhlmann/West 2001, 12.

⁸⁹ West 1992, 206.

⁹⁰ Landels 1999, 252.

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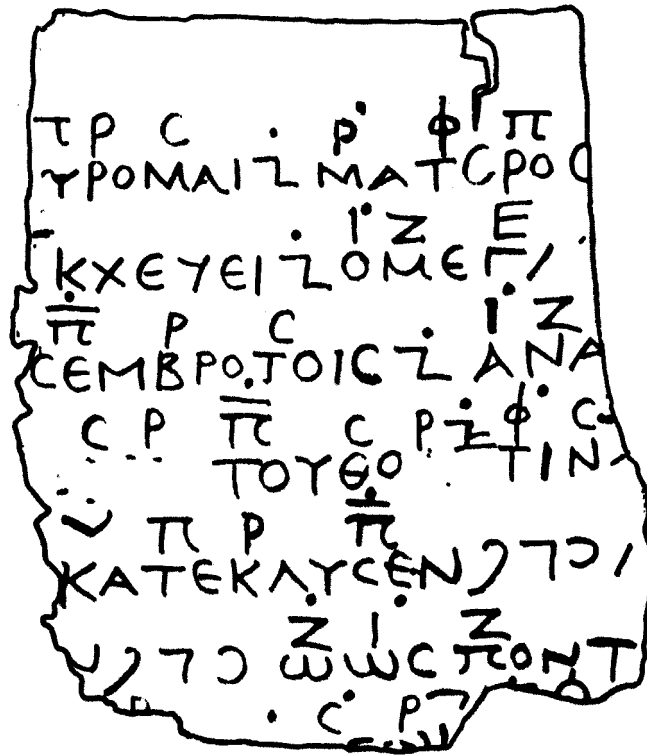


Fig. 1 The ‘Orestes Papyrus’ (trace by the present writer from a photograph in Akkeren 1983, 262 fig. 1A).

aīs a a a* g aīs*

κατολο]φυρομαι G' ματερος [αιμα κας ο c

*ε' d' ε' ε**

ανα]βακχευει G' ο μετας [ολβος ου μονι

āīs a a d' ε'*

μο]c ει: βροτοιc G' ανα [δε λαιφος ως

a a āīs a a* g a*

τι]c ακατου θοας G' τινα[ξας δαιμων

y aīs a āīs*

κατεκλυceν A* *Eīs Aīs*

ε' d' ε'

A* *Eīs Aīs* ω ως ποντ[ου

a . a a* e?*

4 Buchstaben Instrumentalnote όων

Fig. 2 Wessely’s transcript (from Wessely 1892, 68).

1. Κατ - ο - λο - φύ - ρο - μαι

2. μα - τέ - ρος αἰ - μα σᾶς

3. ὁ σ' ἀ - να - βακχεύει.

4. δ μέ - γας ὕλ - βος οἶ

5. μό - νι - μος ἐμ βροτοῖς,

6. ἀ - νὰ δὲ λαῖφος ἄς

7. τις ἀ - κά - τον θο - ἄς

8. τι - νὰ ξας δαίμων

9. κατ - ἔ - κλυ - σεν, δει - νῶν

10. πό - νων, ὡς πόν - του

11. λά - βροις δ - λε - θροί - οι.

12. σιν ἐν κύμασιν.

Fig. 3 Crusius' transcript (adapted from Crusius 1893, 189-190).

(κατολο)φύ - ρο - μαι' μα - τέ - ρος (αίμα σᾶς ἔσ' ἀνα)βακ - χεύ - ει'
 ὁ μέ - γαι (δλβος οὐ μόνιμο)ι ἐν βρο - τοῖς'
 ἀ - νὰ (δὲ λαῖφος ὡς τι)ι ἀ - κά - του θο - ᾶς τι - νά(ξας δαίμων)
 κατ) - ἔ - κλυ - σεν (δεινῶν πόνων) ὡς πόν - (του λαβροῦ κ.τ.λ.

Fig. 4 Monro's transcript (from Monro 1894, 92).

κα-το-λο-φύ-ρο-μαι μα-τέ-ρος αι-μα σας
 κα-τε-κλυ-σεν δει-νων πο-νων

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

κα-το-λο-φύ-ρο-μαι μα-τέ-ρος αι-μα σας,
 κα-τέ-κλυ-σεν δει-νῶν πό-νων, ὡς πό-ντου

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

κα-τέ κλυ-σεν δεινῶν πόνων ὡς πόντου

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).

ka - to - lo - phy - to - mai ma - te - nos hai - ma - sis

(instrumental) (instr.)

ka - te - ly sen dei - non po - non ho - ou pon - tou

Fig. 12 Transcript by Henderson/Wulstan (excerpts from Henderson/Wulstan 1973, 51).

κατολοφύρομαι ματέρος αίμα σᾶς

κατέλυσεν δεινῶν πόνων

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

... τὸν υἱὸν αἰθέρ' ἄμφ' ἄλλεθ' αἰματός' κατολοφύρομαι

... τὸν υἱὸν αἰθέρ' ἄμφ' ἄλλεθ' αἰματός' κατέλυσεν

... τὸν υἱὸν αἰθέρ' ἄμφ' ἄλλεθ' αἰματός' κατέλυσεν

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

Fig. 15 Akkeren's transcript (excerpt from Akkeren 1983, 260).

Fig. 16 Mathiesen's transcript (adapted from Mathiesen 1985, 171–172).

a

322 ... τα - να - ὄν αἰ - θερ' ἀμ - πάλ - λεςθ', αἰ - μα - τος
 339 κα - το - λο - φύ - ρο - μαι, κα - το - λο - φύ - ρο - μαι

323 τι - νύ - με - ναι δί - καν, τι - νύ - με - ναι φό - νον,
 338 μα - τέ - ρος αἰ - μα εἰς, ὃ ε' ἀ - να - βακ - χεύ - ει'

324 κα - θι - κε - τεύ - ο - μαι κα - θι - κε - τεύ - ο - μαι,
 340 ὁ μέ - γας ὄλ - βος οὐ μό - νι - μος ἐμ - βρο - τοῖς

325 τὸν Ἄ - γα - μέμ - νο - νοος
 341 ἀ - νὰ δὲ λαί - φος ὡς

326 γό - νον ἐ - ἀ - κατ' ἐκ - λα - θέσ - θαι λύσ - σασ
 342 τις ἀ - κά - του θε - ᾶς τι - νὰ - ξας δαι - μων

327 μα - νι - ᾶ - δος φοι - τα - λέ - σου. φεῦε μόν - θων,
 343 κα - τέ - κλυ - σεν δει - νῶν πό - νων ὡς πόν - τουου

328 οἴ - ων, ὦ τά - λας ὁ - ρεχ - θεῖς ἔρ - ρεις ...
 344 λά - βροῖς ὁ - λε - θρί - οἱ - σιν ἐν κύ - μα - σιν.

b

κα - το - λο - φύ - ρο - μαι μα - τέ - ρος αἰ - μα εἰς,
 ὃ ε' ἀ - να - βακ - χεύ - ει. ὁ μέ - γας ὄλ - βος οὐ
 μό - νι - μος ἐμ - βρο - τοῖς ἀ - νὰ δὲ λαί - φος ὡς
 τις ἀ - κά - του θε - ᾶς τι - νὰ - ξας δαι - μων
 κα - τέ - κλυ - σεν δει - νῶν πό - νων ὡς πόν - τουου
 λά - βροῖς ὁ - λε - θρί - οἱ - σιν ἐν κύ - μα - σιν

Fig. 17 Transcripts by Pöhlmann and West. a. Pöhlmann – b. West (from Pöhlmann/West 2001, 13).

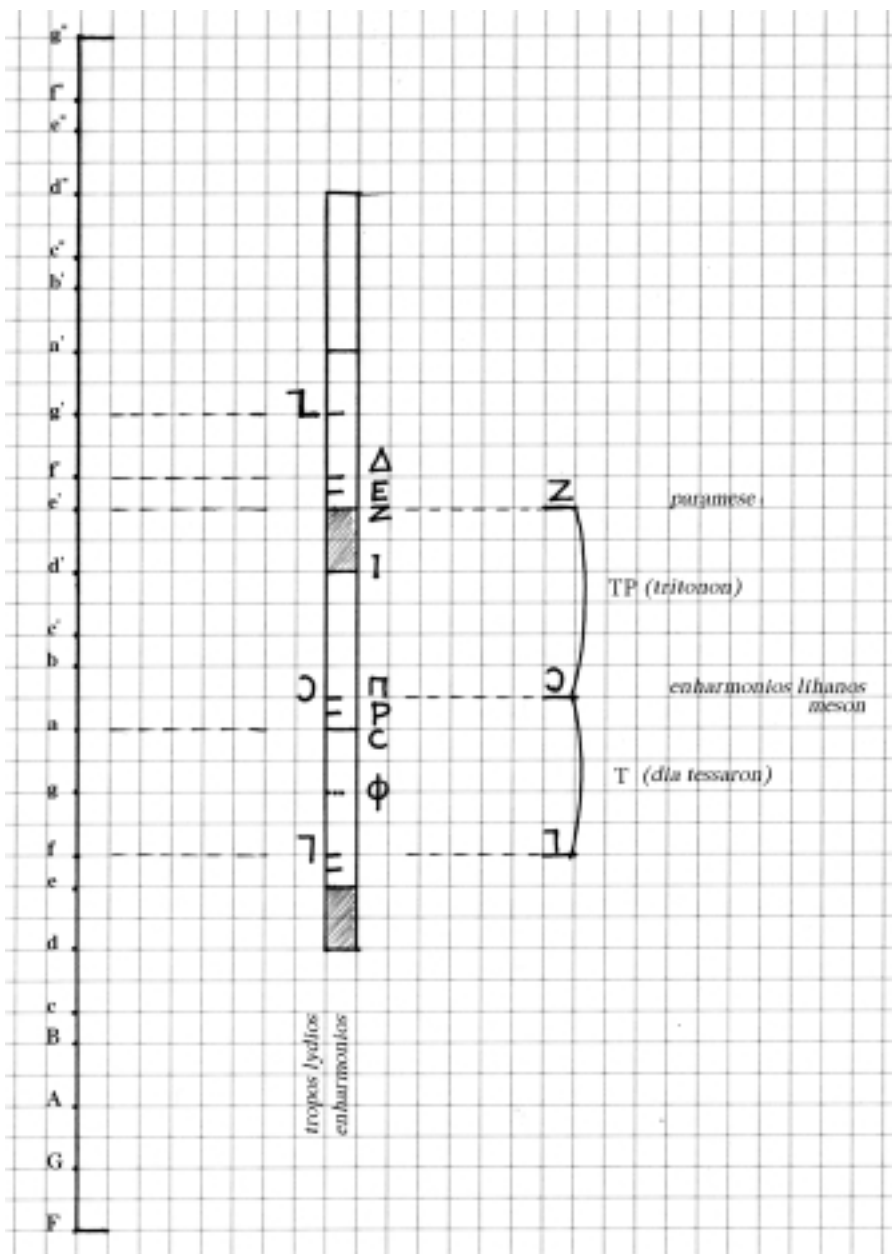


Fig. 18 West's harmonic intervals (graph based on West 1992, 284 and fig. 17b).

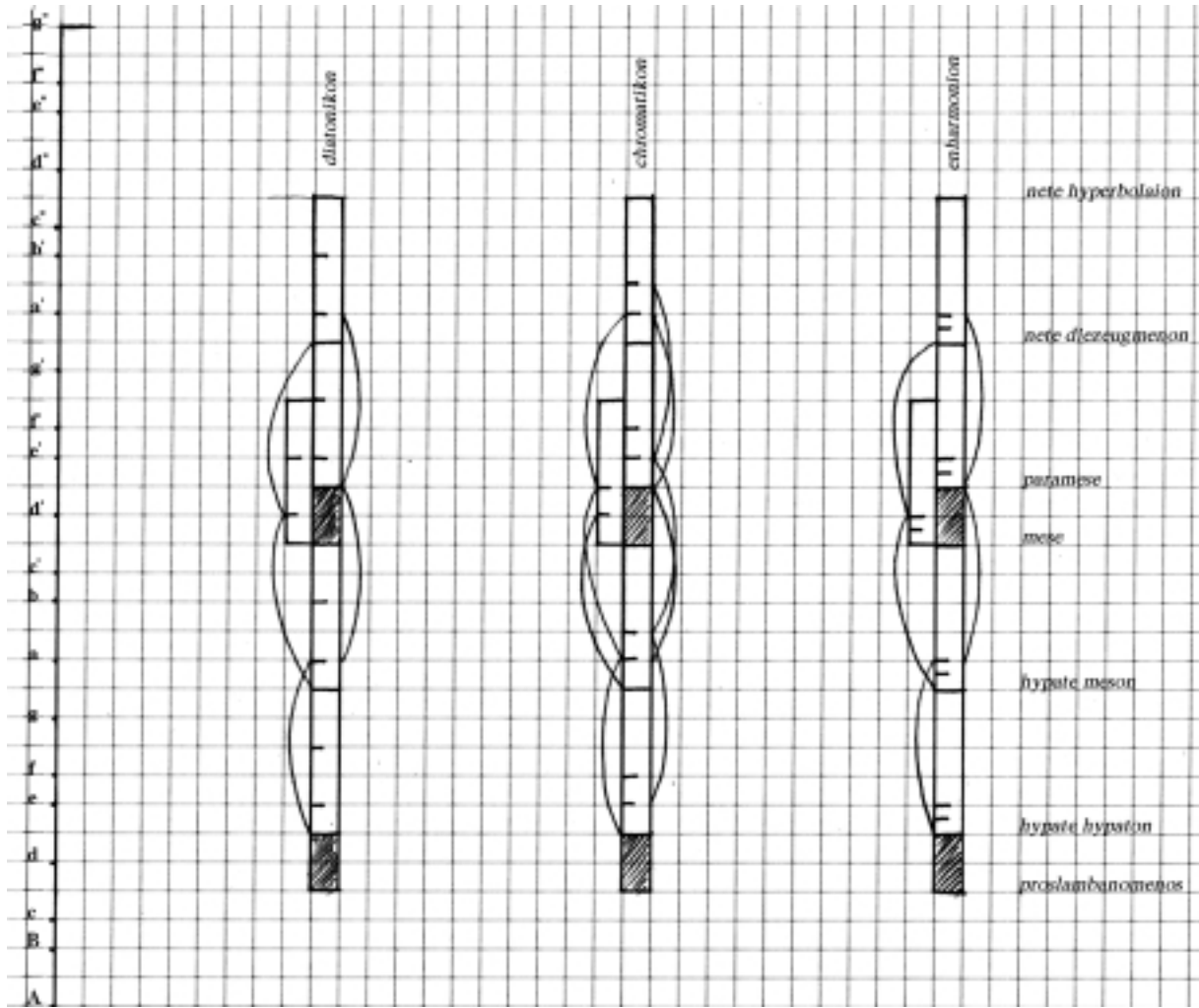


Fig. 19 The paraphona diastemata ditonon and tritonon in the three gene (graph based on Gaudentios' Harmonic Introduction 8/Jan 1895, 338, 3-7).

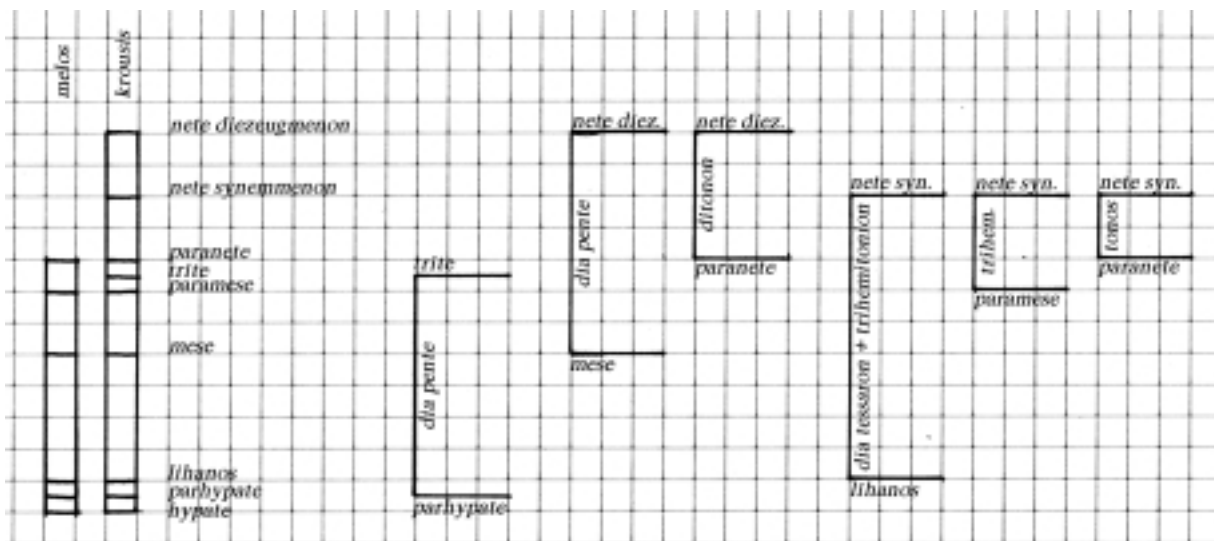


Fig. 20 The spondeiazōn tropos (graph based on Winnington-Ingram's conclusions, Winnington-Ingram 1928).

1] C Π C P
] , σεναγκαλιςμα

2] Ϙ Φ C P
] ρισυμετάναρι

3] Π Φ
] ..[.....] ποθωνκορειιτις)

4] C N Σ
] , ωγ[...] κορακασοκοικαισε

5] C Φ O Z O C
] πολυεπαν[...] ρθοιεαχαιων

6] Ϙ I M I
] , υγμελι[.(.)η...]

7] []
] ρομιδος)α[...].]

8] M []
] αταωιθ....[

9] ? Φ Γ []
] , αματας[...].]

10] C M Θ []
] , νθεν[...].]

11 ...ιστι I M []
] ταν κοραγ[.]...]

12] C P M I []
] εριχαρειει[...].]

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

1	I [] : Γ υο[6	I O [] : αιρε[
2	O [] : ωνε[7	C Z [] ηφιλ[
3	C [] τεκ[8	[] τις Γ []
4	[] ωρτφ[9	N O [] : γιν[
5	C [] → πορφ[

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

1] ρ τ α ι ε δ α [

2] κ ο ι λ ο ρ ι [

3 ε] φ η μ ε ρ ο [

4] ρ ο υ α γ γ [

5] α ν η [

6] ρ ε ν α [

7 [C I]

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

One octave lower than written

kat - ð - lō -] phŷr - o - mai ῥ ma - ter - òs [hai - ma sās

kat - ek - lŷsen ῥ ρ δ[ei - non pono]n ῥ ρ ho - os pont[oo

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

κατολοϑ]ύ - ρο - μαι ῥ μα - τέ - ρος [αῖμα σās

τις ἀ - κά - του θο - ᾶς τι - νά[-ξας δαίμων

κατ - ἐκ - λυ - σεν ῥ ρ δ[εινῶν κόνω]ν ῥ ρ ω - ᾶς πόντ[ου

Fig. 25 Mathiesen's transcript (excerpts from Mathiesen 1999, 117–118).

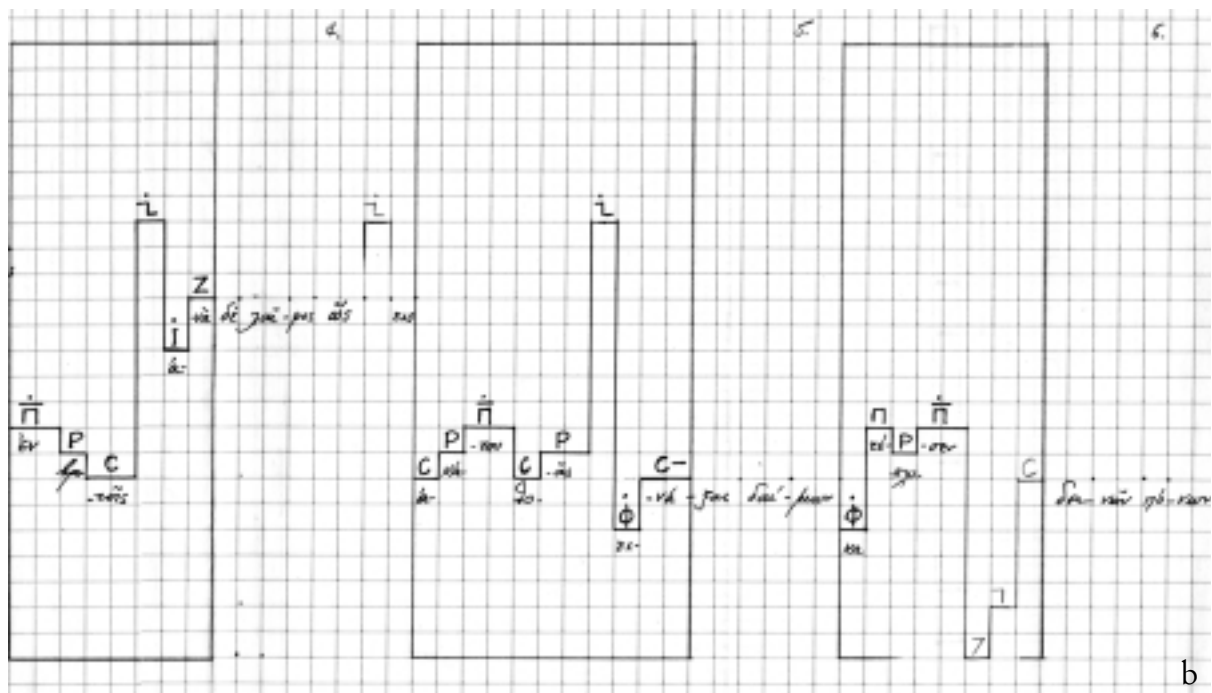
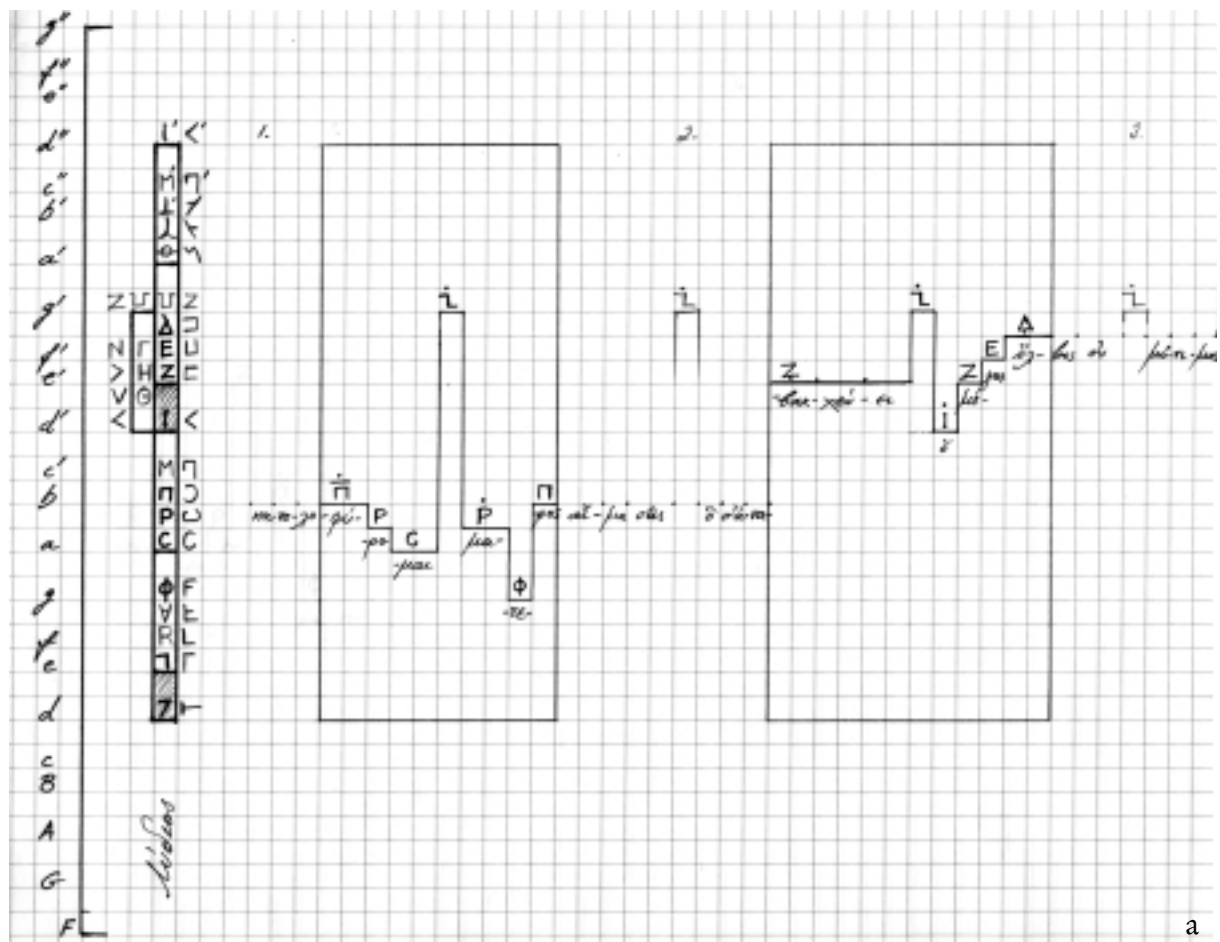


Fig. 26a-c Graphic transcript by present writer.

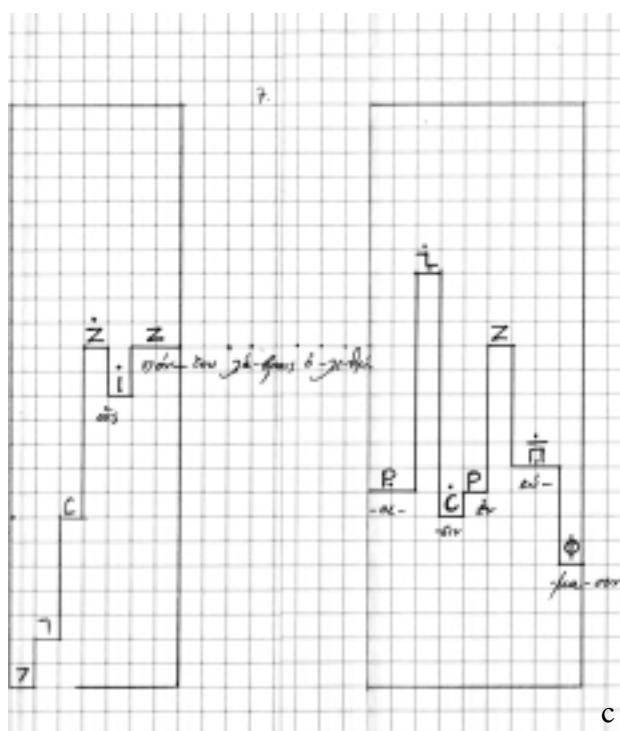


Fig. 26c Graphic transcript by present writer.