Classical Quarterly **38** (i) 215–227 (1988) *Printed in Great Britain*

EMENDATIONS OF [IAMBLICHUS], *THEOLOGOUMENA ARITHMETICAE* (DE FALCO)

The reputation *Theologoumena Arithmeticae* has acquired is largely that of being an odd, and frequently opaque, compilation of arithmological lore. As a sourcebook for this aspect of the Pythagorean tradition it is, of course, invaluable. However, its poor reputation is increased, and its historical value lessened, by the depredations time has wrought on the text. *ThA* was never great prose: it is a compilation, largely from the lost *Theologoumena Arithmeticae* of Nicomachus of Gerasa and from Anatolius' *Peri Dekados*; and the text which cannot be safely or conjecturally assigned to these two sources often reads like little more than the written-up notes of some student. However, the treatise contains passages of considerable lucidity, within the context of its peculiar framework.

The starting-point of this present textual investigation is that certain passages can be restored to their original clarity, or something like it.[1] I would even go so far as to claim that some of the emendations I will suggest are uncontentious and obvious. This claim is made not out of arrogance, but out of recognition of the simple fact that the text of the treatise has not been critically studied enough. There have been two useful editions[2] and a number of articles,[3] but anyone reading *ThA* cannot fail to be struck by the periodic opacity of the text, or to realize that while this opacity is sometimes due to the subject matter, it is also often due to textual errors – which may be corrigible.[4] However, some passages seem likely to remain irrecoverable in detail.

There are in fact many more places than those mentioned in this article where I would differ from de Falco's text (see the appendix to this article). Since there is no point in rehearsing the work of other scholars, however, I have confined myself to discussing those passages where I have an original emendation to propose. Both Dodds and Oppermann, in their reviews of de Falco's edition,[5] remarked on the conservative nature of his text, and Dodds added: 'A good many passages still invite the acumen of the ingenious reader.' It is in this spirit that I approach the text.

I. De Falco, 5.8

The context (from Nichomachus)[6] is a discussion of the rationale of calling the monad 'androgyne'. One reason (4.17–5.2) is that it alone is even and odd, and even number

[1] I am grateful to the anonymous referee, to Professor John Dillon, and to the Editors for help both general and particular.

[2] By F. Ast (Leipzig, 1817) and V. de Falco (Leipzig, 1922; Teubner series). De Falco's edition gained extra notes by U. Klein in 1975. The only edition prior to Ast's was C. Wechel's *editio princeps* (Paris, 1543), which de Falco dismisses as 'nullius pretii'. Ast's edition was based on the *editio princeps*, but has the saving grace of a number of judicious emendations. De Falco, however, was the first to undertake a thorough collation of the manuscripts.

[3] The bibliography is not extensive: the only substantial item to add to Klein's bibliography on pp. xviii–xxiii of the Teubner is L. Tarán, *Speusippus of Athens* (Leiden, 1981), 140–2, 257–98.

[4] Of course, the opacity of the subject matter means that in emending the text one has to beware of emendations which are suggested merely by one's own incomprehension.

[5] E. R. Dodds, *Classical Review* 37 (1923), 138; H. Oppermann, *Gnomon* 5 (1929), 545–58.

[6] Oppermann (see previous note) contains the best analysis of the structure of *ThA*, as consisting of excerpts from various sources. Note, however, that Oppermann overlooks the excerptor's ὅτι at 71.13.

is traditionally female, while odd number is male. At 5.2 Nicomachus turns to a second reason: '...but also because it [the monad] is taken to be both father and mother, since it contains the principles of both matter and form.' As so often in ancient arithmology, we are on the grounds of Greek embryology. The background here is clearly Aristotelian: it is stated at *De Generatione Animalium* 729a, for instance, that the father gives form to the embryo, while the mother gives matter.

Now, the point about the monad which is stressed throughout *ThA* is that it contains in potential everything actual. The Stoic/biological term σπερματικῶς is used to describe this (e.g. 1.10). Not surprisingly, the same point is stressed in the present embryological context (5.5–10):

τὸ δὲ σπέρμα καὶ θήλεων καὶ ἀρσένων ὅσον ἐπ' αὐτῷ παρεκτικὸν ἀποσπαρὲν ἀδιάκριτόν τε τὴν ἀμφοῖν φύσιν παρέχει κἀν τῇ μέχρι τινὸς κινήσει, βρεφοῦσθαι δὲ ἀρχόμενον ἤ φυτοῦσθαι διάλλαξιν λοιπὸν ἐπὶ θάτερον καὶ ἐνάλλαξιν ἐπιδέχεται, μετιὸν ἀπὸ δυνάμεως εἰς ἐνέργειαν.

This is de Falco's text. I have no doubt that in line 2 κινήσει, which I find incomprehensible, should be κυήσει. This is a simple corruption, and the passage can now make good sense:

The seed which is, as far as its own nature is concerned, capable of producing both females and males, when scattered not only produces the nature of both without distinction, but also does so during *pregnancy* up to a certain point; but when it begins to be formed into a foetus and to grow, it admits then of distinction one way or the other and of variation, as it passes from potentiality to actuality.

The tenet of ancient embryology which is being assumed is made clearer at 61.13–63.1 (see also 52.5–8 and 64.7–9): that the first few days of pregnancy (cf. 'up to a certain point') are somehow prior to the beginning of the formation of the embryo. Once the embryo is being formed, however, it is now either male or female, and certainly is by the time of articulation of limbs, which was supposed to be thirty days for male embryos, forty-two for females.[7]

II. De Falco, 10.7

This line occurs towards the end of a sustained image, which starts at 9.14, of a race-course.[8] The image is applied both to square numbers and heteromecic numbers.[9] In short, the race-course relevant to a square number n^2 is an *outward journey* (πρόοδος, 9.22) of $1+2+3...+n$, where n is the turning-point (καμπτήρ), and a *return journey* (ἐπάνοδος) of $(n-1)+(n-2)...+1$. Thus 1 is both the starting-point and finishing-post of the race, and the total of $(1+2+3...+n)+((n-1)+(n-2)...+1)$ is n^2.

It is rather more difficult to apply the same image to heteromecic numbers. The formula, according to Heath,[10] is that the heteromecic number $n(n-1)$ is formed of an outward journey of $1+2+3...+n$, where n is the longest side of the heteromecic figure, and a return journey of $((n-2)+(n-3)...+3+2)$.

It is not unimportant to see that Heath has inverted the outward and return journeys, at least as far as *ThA* is concerned. What is of relevance to Nicomachus (the author of the present excerpt) is that the source of squares is the monad and the

[7] See also [Hippocrates], *On the Nature of the Child* 18.

[8] On this image, see T. L. Heath, *A History of Greek Mathematics* (Oxford, 1921), i.114; and M. L. D'Ooge, F. E. Robbins and L. C. Karpinski, *Nicomachus of Gerasa: Introduction to Arithmetic* (Macmillan, 1926), p. 247.

[9] Heteromecic numbers are oblong numbers whose sides differ by a factor of 1. These were the type of oblong numbers with which the Pythagoreans were most impressed, because any heteromecic number is the sum of two equal triangular numbers, and is also the sum of successive even numbers.

[10] Loc. cit.

source of heteromecics is the dyad (9.14–17, 9.23–10.1), since the gnomons consisting of the successive odd numbers surround the monad and form squares, while the gnomons consisting of the successive even numbers surround the dyad and form heteromecics. Translated into the 'race-course' image, the 'source' is the starting-point of the race. It follows that the formula for heteromecics should be $n(n-1) = (2+3\ldots+n)+((n-2)+(n-3)\ldots+1)$, so that the dyad, the source of heteromecics, *begins* the formula. The importance of this inversion of Heath's formula will become clear in a moment.

Nicomachus' use here of the race-course image concludes in a puzzling fashion. 'The dyad is the cause of things which are altogether dissimilar' (9.23–10.1) because (10.4–8):

ἐν τῇ αὐτῇ τοῦ καμπτῆρός τε καὶ νύσσης καὶ ὕσπληγος εἰκόνι τὴν μὲν γένναν ὁμοίως ἡ μονὰς παρέχειν φαίνεται, ὡς τοῦ ταὐτοῦ καὶ ἁπλῶς διαμονῆς αἰτία, τὴν δὲ φθορὰν καὶ ἐπάνοδον παρηλλαγμένως πρὸς τοὺς προτέρους ἡ δυὰς ἀναδέχεσθαι, ὡς ὑλική τις ὑπόστασις καὶ φθορᾶς πάσης ἀναδεκτική.

To take the same image of turning-point, finishing-post and starting-point, whereas the monad...seems to give rise to generation, the dyad seems to admit destruction and to admit a return journey (*ἐπάνοδον*) which is different from the former ones (*τοὺς προτέρους*), since it is a material substance and capable of admitting every kind of destruction.

The slight emendations which I propose will now seem quite straightforward, but they needed this much background context. There are two puzzles in the sentence just translated: (1) What is the reference of *τοὺς προτέρους*? (2) Why does Nicomachus think he has proved that the dyad 'admits destruction'?

As the text stands, it is hard to find a reference for *τοὺς προτέρους*. They could be the journeyings of the monad, but there is no need for this to be mentioned: it goes without saying that the two race-courses are different. Moreover, this reference still fails to explain why the dyad has been shown to admit destruction.

Alternatively, 'the former ones' could be the outward journeys of the dyad; but at the very least *τοὺς προτέρους* should then be made singular to provide a proper comparison with the singular *ἐπάνοδον*. Something along these lines is, I believe, correct. But since Nicomachus has explicitly recalled the race-track image, I suggest we read *τοὺς προόδους*. We should then also pluralize *ἐπάνοδον* to *ἐπανόδους*. It is easy to see how *ἐπανόδους* could have become singular, since it so closely follows *φθοράν*. The change from *προτέρους* to *προόδους* does not seem extreme.

The text now claims that the dyad 'admits return journeys which are different from its outward journeys'. Not only have we restored the text to clarity, but we can also understand why the dyad is said to admit destruction. It is standard Neoplatonic doctrine that destruction is severance from one's source, while existence requires continual linking with the source.[11] On my revised version of Heath's formula, it is clear that whereas heteromecics start from their source, the dyad, they do not return there: they are liable to severance from their source.

III. De Falco, 11.4

The emendation that is required here seems straightforward. It is being explained that the dyad gives the nature of equality, which is the dyad's property primarily, to 'everything which directly relates to it' (*τοῖς προσήκουσιν αὐτῇ πᾶσι*, 11.2). The unknown author from whom this passage is excerpted then goes on to give two chief

[11] See e.g. Proclus, *Elements of Theology*, Proposition 46: *πᾶν τὸ φθειρόμενον ἀποστὰν τῆς ἑαυτοῦ αἰτίας φθείρεται.*

reasons for this (*οὐ μόνον...ἀλλὰ καί*, 11.3 and 11.6). But after *οὐ μόνον* and before the first reason is given, an unwieldy parenthetical clause is inserted (11.3–5):

ἐξ ὧν ἐνεργείᾳ ἰσότητος πρώτη ἔμφασιν παρέσχεν ἐπιπέδως τε καὶ στερεῶς ἔν τε τῷ δύο μήκους τε καὶ πλάτους καὶ ἐν τῷ ὀκτὼ πρὸς τούτοις βάθους τε καὶ ὕψους.

This would translate: 'And this is why it [the dyad] is the first to express actual equality in a plane and solid fashion – equality, in the two, of length and breadth, and in the eight, of depth and height as well.' Clearly, instead of *δύο* in line 1, we must read *δ′*: 'equality of length and breadth in the ⟨plane number⟩ 4, and equality of depth and height as well in the ⟨solid number⟩ eight'. Two is not considered to be a plane number by these Neopythagoreans (see 53.21–2), but rather as a source of number (see e.g. 23.9–11). What is being talked of here is the dimensional equality which the dyad 'causes' when it is raised to a plane figure (its square, 4) and to a solid figure (its cube, 8).

IV. De Falco, 11.15–16

Shortly after the passage discussed in the previous section, the treatise goes on (11.13–16): 'This is apparently why Plato in *Theaetetus* went up to 16, but stopped "for some reason" at the square whose area is 17 feet, when he was faced with (*πρός*) the manifestation of the specific property of 17 and the manifestation of a certain shared equality.'[12]

Immediately before this sentence, we have a clear discussion of the number 16, which is the context of the 'This is why' at 11.13. I translate 11.9–13:

And this number [16; reading *οὗτος* with E] is evidently in a sense a sort of mean between greater and lesser in the same way that 2 is. For the squares before it have perimeters which are greater than their surface areas, while the squares after it, on the other hand, have perimeters which are less than their surface areas, but this square alone has perimeter equal to surface area.

This is true. The square whose area is 16 has four sides each of which is 4 in length, so the sum of the sides is equal to the area, whereas larger and smaller squares differ in the respects in which our treatise claims that they differ. So when the text goes on to talk about 'a certain shared equality', this can only refer to the equality between the area of this square and the sum of its sides. The mention of 17 is then nonsensical. Whether or not 'shared' is precisely the correct word here (some of the manuscripts give illiterate alternatives for *μεθεκτοῦ*, such as *μυθεκτικοῦ*), the very talk of equality shows that the author is referring to 16, since he has just been at pains to demonstrate that 16 has equality (as 2 does). It follows that we should read *ἑκκαίδεκα* instead of *ἑπτακαίδεκα* in lines 15–16: 'when he was faced with the manifestation of the specific property of 16 and of a certain shared equality.'

V. De Falco 14.21

Another simple emendation is required here. The text at present reads (14.20–15.5):

τέλειός γε μὴν ἰδιαίτερον τῶν ἄλλων ἐστίν, ὅτι οἱ ἀπὸ μονάδος ἐφεξῆς ἴσοι εὑρίσκονται μέχρι τετράδος· λέγω δὲ οἷον μονάδος, τριάδος, ἑξάδος, δεκάδος· ἡ μὲν γὰρ μονὰς ὡς πυθμὴν μονάδι ἴση, ἡ δὲ τριὰς μονάδι καὶ δυάδι, ⟨ἡ δὲ ἑξὰς μονάδι δυάδι τριάδι⟩, δεκὰς δὲ μονάδι δυάδι τριάδι τετράδι. πλέον οὖν τι ἡ τριὰς ἔχειν φαίνεται τῷ συνεχὴς εἶναι τούτοις, οἷς καὶ ἴση ὑπάρχει·

[12] On the failure of this, as of all similar ancient and modern explanations of *Theaetetus* 147d, see M. F. Burnyeat, 'The Philosophical Sense of Theaetetus' Mathematics', *Isis* 69 (1978), 489–513.

Moreover it [the triad] is perfect in a more particular way than the other numbers, because [ὅτι] consecutive numbers starting from 1 and going up to 4 are found to be equal. I mean, that is, 1, 3, 6, 10. 1, as the basic number of this series, is equal to 1; 3 is equal to 1+2; 6 is equal to 1+2+3; 10 is equal to 1+2+3+4. So 3 seems to have something extra in being successive to those numbers to which it is also equal.

The start of this passage is muddled. Why should 'consecutive numbers from 1 to 4' be glossed as 1, 3, 6, 10? All is solved if instead of ὅτι we read οἷς or, perhaps better, ὅτοις: 'Moreover 3 is perfect in a more particular way than the other numbers *to which* consecutive numbers starting from 1 and going up to 4 are equal. I mean, that is, 1, 3, 6, 10.' Then indeed 3 is the only number which is successive to those numbers to which it is also equal (see also 18.3–5, 26.15–27.16).

VI. De Falco, 24.11

De Falco correctly marks a lacuna in the text (24.8–12):

αἵ τε ἐν ἀλλήλαις καὶ δι' ἀλλήλων ἐξαιρέτως μόνῳ συμβεβηκυῖαι οὐρανῷ κινήσεις τέσσαρες αἱ γενικαί, πρόσω μὲν διὰ τοῦ καθ' ἕκαστον κλίμα μεσουρανήματος,... ἄνω δὲ διὰ τοῦ ἀναφερομένου ὑπὲρ τὸν ὁρίζοντα, κάτω δὲ διὰ τοῦ δυομένου.

In his *apparatus criticus*, de Falco suggests that the lacuna would have started ὀπίσω δέ, but goes no further. Obviously, in a situation like this, one can make no pretence at certainty, but the following text is plausible: ὀπίσω δὲ διὰ τοῦ μεσουρανήματος ὑπὸ γῆν. The whole sentence printed above would translate: 'And heaven has four characteristic movements, which are interrelated and mutually dependent, and are special to it alone: forward through the mid-heaven in each latitude, ⟨backward through the nadir,⟩ upward through something rising above the horizon, and downward through something setting.' If I stand facing east, then this is an adequate description of the apparent movement of the heavenly bodies, as they appear to circle around the Earth.

VII. De Falco, 26.20–1

In strict mathematical terms, 6 is the only number within the decad which is perfect: it is equal to the sum of its factors (1, 2 and 3). However, there are looser senses of 'perfect' according to which not only 6, but also 1, 3 and 10 are perfect numbers too. The triad is perfect because it contains beginning, middle and end and because it is successive to the numbers to which it is also equal (14.21–15.1, 27.5–7, 44.15–22); the decad is perfect because it is the limit of natural number (27.10–15, 83.6ff. – the latter passage is from Speusippus, fr. 4 Lang, fr. 28 Tarán).

What about the monad? Basically, it is perfect because 'it contains everything in potential and lacks nothing' (26.21–27.1), but there is also an argument that it is perfect in the strict mathematical sense of the word: 'For if any kind of thing is perfect when it is equal to its parts, then even though the monad has no parts, still as a whole it is equal to itself, so it would be perfect' (27.3–5). The tension, and hence the need for justification, in calling the monad perfect in the mathematical sense of the word is obvious: if a perfect number is defined as a number which is equal to the sum of its parts, then since the monad has no parts, it should not strictly be called perfect.

This tension is also present at the beginning of the section justifying calling the monad perfect. The text, however, is acknowledged to be corrupt. De Falco, following a conjecture of Ast's, reads (26.20–27.1):

πρῶτον μὲν γὰρ ἀσύνθετον αὐτὴ ἡ μονὰς τελειότητος τρόπον τινὰ ἔχουσα ἐν τῷ πάντ' ἔχειν δυνάμει ἐν ἑαυτῇ καὶ μηδενὸς προσδεῖσθαι.

The chief difficulty here is *ἀσύνθετον*, which is isolated, as the text stands, and hard to explain. The best explanation is to understand *ὄν* and translate with concessive force: 'Firstly, although the monad itself is incomposite, it has a kind of perfection in containing everything in potential and in lacking nothing.'

I have no doubt that this is the sense required, but we can find it more easily in the following text: *πρῶτον μὲν γὰρ ἀσύνθετον ὄν τι αὐτὴ ἡ μονάς...* In the first place, it is easier to give a participle concessive force if it is explicit in the text than if it is merely understood. In the second place, this suggestion does less violence to the manuscript readings, which vary between *εὐσυνθέτω μονάδι*, *ἀσυνθέτω μονάδι* and *ἄνευ συνθέτω μονάδι*, all of which are followed by *ἡ αὐτὴ μονάς*. It is quite conceivable that the final *-ν* of *ἀσύνθετον*, followed by *ὄν τι*, could have been corrupted to *μονάδι*.

VIII. De Falco, 28.10

Here is the context (28.4–10):

ἐπεὶ δὲ μονάδος ἀνὰ μέσον καὶ ἑβδομάδος κυβικῶν χωρίων κυβικὸς ὁ δ', εἰκότως, κρισίμου μάλιστα τῆς ἑβδομάδος ἐν τοῖς ἀρρωστήμασιν οὔσης, ἐπιδηλότερον οἱ ἰατροί, καθάπερ Ἱπποκράτης, τὴν τετράδα λέγουσι κοινωνοῦσαν ὁλοσχερέστερόν πως τῇ ἑβδομάδι ἐν τῇ διὰ πάντων ἐνεργείᾳ, εἴτε καὶ ἄλλως συναπτομένη τῇ ἑβδομάδι δεκάδα ἀποτελεῖ τετάρτην κυβικῆς τετάρτης χώρας παρεκτικήν.

This sentence is typical of many in *ThA*: it seems to defy comprehension at first (and second) sight. It translates as follows:

Since 4 is cubic and lies mid-way between the cubic places of the monad and the hebdomad, it is not surprising to find doctors like Hippocrates (for the hebdomad is particularly critical in illnesses) manifestly saying that, in the real world in general, the tetrad has broad links with the hebdomad;[13] and besides, the joining of the tetrad with the hebdomad makes the decad fourth and gives rise to a fourth cubic place.

Clearly, the sentence takes something for granted, and if we do not know what it is that is being assumed, the sentence is opaque in the extreme. More to the point, it seems that some scribe also failed to understand it, and introduced a slight error.

The immediate context provides no clues at all as to what is being assumed: the sentence is an isolated paragraph among other similarly isolated sentences, each making a new point about the tetrad. However, once we see what is being assumed, things start to fall into place.

The Neopythagoreans were fascinated by the fact that in the series which start with 1 and proceed by doubling or trebling, etc., square and cube numbers fall at regular intervals.[14] The double series is 1, 2, 4, 8, 16, 32, 64, 128, 256, 512; the treble series is 1, 3, 9, 27, 81, 243, 729, 2187, 6561, 19683. In these series (both taken up to ten 'places'), squares fall at the first, third, fifth, seventh and ninth places, while cubes fall in the first, fourth, seventh and tenth places.

This is obviously the missing context of our puzzling sentence. The medical application of these series, which our sentence mentions in passing, is also given in *ThA* (68.11–70.22); but since that is a passage with its own textual problems, I reserve discussion for later.

[13] See e.g. *Aphorisms* 3.24: 'In the progress of a disease, the fourth day in every seven-day period is significant.'

[14] In our treatise, see 54.13–55.1 and 68.11–70.22. Otherwise see e.g. Theon of Smyrna 34.16ff. (Hiller), and Nicomachus of Gerasa, *Introduction to Arithmetic* 2.20.5.

To annotate our sentence in this context, the first part refers to the fact that the first, fourth and seventh places in such series are 'cubic places' (i.e. places where cubes fall). The last bit is somewhat more obscure, but certainly refers to the fact that the cubic number which occupies the tenth place is always the product of multiplying ('joining') the cubic numbers which occupy the fourth and seventh places.

All is now clear – almost. The τετάρτην in the last clause is nonsensical. To say that the combination of the fourth and seventh cubic places 'makes the decad fourth' at best refers to the fact that the tenth place contains the fourth cube in the series, but that both strains comprehension and is adequately covered by κυβικῆς τετάρτης χώρας παρεκτικήν. The τετάρτην must be excised, or (perhaps slightly better) changed to τετάρτης while the second τετάρτης is excised. In either case, it looks as though a careless scribe has allowed a word to be repeated.

IX. De Falco, 32.20

In the course of discussion of the pentad, the five regular solids (pyramid, cube, octahedron, dodecahedron and eicosahedron) are inevitably quite often mentioned. At the point with which we are concerned, they have just been listed, and then the text goes on: ὧν ἡ συγκορύφωσις πάλιν τῶν βάσεων εἰς τὸν πεντάδος διπλασιάζεται λόγον, 'the sum of whose bases, moreover, is doubled up to the principle of the pentad'. I can make no sense of this at all. The sum of the bases or faces of the five regular solids is 50 (4+6+8+12+20), so one can see intuitively that there might be something here relevant to the concerns of our author (who is here embellishing on Anatolius 33.10 [Heiberg]). But why should 50 be said to be doubled 'up to the principle of the pentad'? I suggest that we read [εἰς] τὸν πεντάδος δεκαπλασιάζει λόγον, 'is ten times the principle of the pentad'. This at least makes sense, and the periphrastic use of λόγος is familiar from elsewhere in *ThA* (e.g. 2.20, 30.9, 66.22; the middle reference is again from Anatolius).

X. De Falco, 35.8

This is close to the beginning of a lengthy excerpt from Nicomachus on the relation between the pentad and justice. He begins here by defining justice in general as 'that which gives what is appropriate ἑκάστῃ and governs equality in the soul'. There is no reference for the feminine ἑκάστῃ. The virtues have just been mentioned in the previous line, but the notion of justice giving what is appropriate to each virtue (including itself?) is difficult to make sense of. One's suspicion that the neuter ἑκάστῳ is required is corroborated when we find, at 37.1, that throughout this passage Nicomachus has been bearing in mind the 'Pythagorean' definition of justice as 'the power of repaying what is equal and appropriate, being encompassed by the mean of a square odd number'. The formula is general; the neuter ἑκάστῳ in 35.8 retains the generality.

XI. De Falco, 41.3

The pentad is called 'Nemesis', Nicomachus informs us (40.19), and to back up this attribution he explains how things are distributed (νέμειν) in five-fold ways. There are five elements (40.20–1), and the heavenly bodies have five movements (40.21–41.2). A different set of five movements among the heavenly bodies is supposed to be given in 41.2–3:

εἶτα τὰ κατ' ἐπίκυκλον στηριγμοῖς δυσὶν ἢ προποδισμῷ ἢ ἀναποδισμῷ, ὁμαλότητι μιᾷ τῇ κατὰ φύσιν·

This would translate: 'Further, ⟨it distributes (*νέμει*, 40.19)⟩ those heavenly bodies which are on epicycles to two stationary modes, or to progression, or to retrogression, in one natural regularity.'

There cannot be the slightest doubt that there is something wrong with this text. It is not just that it is difficult to derive a five-ness from it; more to the point is that the Greeks were well aware,[15] and developed the theory of epicycles to explain, that some of the 'planets' appear to move irregularly: they go forward for a while, but then appear to loop back on their trail (go retrograde); the two stationary modes are those between progression and retrogression, and vice versa. However, the sun and moon, as the Greeks were by the same token equally well aware, do not have irregular motion: they proceed smoothly, and the standard word for their smooth procession is *ὁμαλότης*. I therefore think that it is necessary to read ⟨*τὰ δὲ μὴ*⟩ *ὁμαλότητι*: the planetary movements are five-fold because those on epicycles have four movements, while those which are not on epicycles have a single regular movement.

XII. De Falco, 46.4

The sequence of thought of the surrounding passage is, as the text stands, hard to follow. Nicomachus is trying to link the hexad with the soul, so that he can argue that just as the soul informs matter, so does the hexad. His basic tactic in this passage is to argue that the soul is 'harmonic', and so is the hexad. Thus, at 45.16–46.4, he claims that the soul unifies and makes harmonious the warring components of the physical body. Next he argues that the hexad is intrinsically concerned with 'the elementary principles of harmony', the sesquialter (3:2) and sesquitertian (4:3), or musical fifth and fourth, because they require respectively a half and a third, and 6 is the first number to contain and bring into harmonious association its half (3) and its third (2).

As the text stands, these two stages of the argument – the bit about the soul and the bit about the hexad – are connected by a comma followed by *εἰ δέ γε* at 46.4. There is certainly something wrong with the *δέ*, as de Falco notes in his *apparatus criticus*, because in what follows there is no conceivable apodosis to a conditional clause. But by suggesting that the *δέ* be omitted, de Falco is making the argument about the harmony of the hexad part proof of the argument about the soul, which is highly illogical: the fact that the sesquialter and sesquitertian entail a half and a third is no conceivable proof of the soul's making bodily components harmonious.

I suggest that the two stages of the argument need to be kept more distinct. Since something is wrong with *εἰ δέ γε* anyway, these are the words which attract emendation, and *ἔτι δέ* does the trick. We then get a passage with a clear train of thought: the soul makes harmonious the physical components of the body (45.13–46.4); *moreover*, harmony is based on the sesquialter and the sesquitertian, which are subsumed under the hexad (46.4–13); therefore, the hexad is the number of the soul (Q.E.D.).

XIII. De Falco, 51.6

51.4–25 contains a most methodical and careful argument:

ἀπὸ γὰρ μονάδος συνεχὴς μέχρις ἑξάδος ἡ πρόοδος, ἀπὸ δὲ ἑξάδος ἐπὶ τῶν διπλασίων ἡ μουσική, ἀπὸ δὲ τούτων ἡ εἰς πάντα τὰ ὅλα διατείνουσα καθάρμοσις, ἐπὶ δὲ γονιμότητος ἑπταμήνων καὶ ἐννεαμήνων καὶ μᾶλλον· ἐάν τε γὰρ (κατὰ τὰ ψυχικὰ δύο ἀποχετεύματα

[15] See e.g. T. L. Heath, *Aristarchus of Samos* (Oxford, 1913), G. E. R. Lloyd, *Greek Science After Aristotle* (London, 1973).

διπλάσια καὶ τριπλάσια) ἡ πρόβασις ἀπὸ ἑξάδος διὰ δωδεκάδος χωρῇ διπλασίως, ἐάν τε δι' ὀκτωκαιδεκάδος τριπλασίως, συμπεπλήρωται ἕκαστον διάστημα, ὥστε δύο λαβεῖν μεσότητας, τὴν μὲν ταὐτῷ μέρει τῶν ἄκρων αὐτῶν ὑπερέχουσάν τε καὶ ὑπερεχομένην, τὴν δὲ ἴσῳ μὲν κατ' ἀριθμὸν ὑπερέχουσαν, ἴσῳ δὲ ὑπερεχομένην, ἡμιολίων τε καὶ ἐπιτρίτων διαστημάτων λόγους ἀναδέξασθαι, ⟨καὶ⟩ καθ' ἑκάτερον πάντως ἡ δηλουμένη φύσεται ζωογονία· ἐν μὲν γὰρ τῷ διπλασίῳ τῷ ς′ καὶ τῷ ιβ′ μεσασθέντων τοῦ η′ καὶ θ′, (καὶ τὰ λεχθέντα τρανῶς ἀποτελεσάντων), τὸ ὁμοῦ πάντων σύστημα ὁ λε′ ἑξάδι αὐξηθὲν ἑπτάμηνον χρόνον ἀποτελεῖ τὸν τῶν σι′ ἡμερῶν, ἐν δὲ τῷ ς′ καὶ ιη′ τὰ θ′ καὶ τὰ ιβ′ μεσεμβοληθέντα καὶ τὴν αὐτὴν ἐναλλὰξ ἁρμονικὴν σχέσιν ἀποδόντα, συγκεφαλαιωθέντα τὸν με′ ἀποτελεῖ, ὃς τῇ αὐτῇ ἑξάδι αὐξηθεὶς τὸν τῶν θ′ μηνῶν ἀποδώσει ἀριθμόν, ἡμερῶν ὄντα σο′, ὥστε ἀμφοτέρους τοὺς ζωογονικοὺς τούτους χρόνους ἠρτῆσθαι τῆς ἑξάδος, ὡς ἂν ψυχοειδοῦς.

The emendation, or rather addition, that I want to suggest is predicated simply on the methodical nature of the argument here. What is said in lines 1–3, where the argument is announced, does not fully capture what actually occurs in the subsequent lines. The subsequent argument is that when 6 is doubled or trebled, the harmonic and arithmetic proportions gained in the series 6, 8, 9, 12 and 6, 9, 12, 18 yield, when their sums are multiplied by 6, respectively the total of days of seven-month and nine-month children.

On de Falco's text the *τούτων* in line 2 must refer to the doubling of six; but the argument in fact goes on to talk about both the doubling and the tripling of six. Accordingly, I suggest inserting *καὶ τριπλασίων* after *διπλασίων* in line 1, so that the introductory announcement of the argument is fulfilled by the argument itself. The omission through homoioteleuton is, of course, a common scribal error.

XIV. De Falco, 53.24–54.6

It is worth printing the whole argument (53.7–54.6) which provides the context of these difficult lines:[16]

τῆς οὖν τοῦ ς′ ἀριθμοῦ φύσεως διατεινούσης πως εἰς ψυχῆς συγγένειαν καὶ εἰδοποίησιν, συλληπτικὰ ἂν καὶ τὰ ὑπὸ Πλάτωνος λεγόμενα εἰς τοῦτον τὸν τρόπον εὑρεθείη· τὸ γὰρ σύγκριμα, ἀφ' οὗ ἡ τῆς ψυχογονίας διανομὴ καὶ τῶν μέχρις ἑπτακαιεικοσαπλασίων μοιρῶν ἀπόστασις, ἑξαδικὸν καὶ κατ' αὐτὸν ὑπάρχει εἰς οὐδὲν ἄλλο ἀπιδόντα ἢ εἰς αὐτὴν τὴν περὶ ἑξάδος ὑφ' ἡμῶν λεχθεῖσαν ἰδιότητα. ἐπεὶ γὰρ αὖτη οὐ μόνον ἀρτιοπερίσσου τῆς μονάδος ἐναργές ἐστι πρὸ τῶν ἄλλων ὁμοίωμα, πρωτίστη ἐναντιωνυμούμενα καὶ ἀντωνυμοῦντα ἔχουσα τὰ μόρια (τρίτον μὲν β′, ἥμισυ δὲ γ′, ἕκτον α′, ὅλον δὲ ς′), ἀλλὰ καὶ τοῦ πρώτου κατ' ἐνέργειαν περισσοῦ καὶ τοῦ ὁμοίως ἀρτίου σύγκριμά ἐστιν ἅμα καὶ ἥμισυ διὰ τοῦτο μόνη ἀπὸ πάντων τῶν ἐντὸς δεκάδος, ὥστε ὑπάρχειν τρανὲς τῆς ἀμερίστου οὐσίας καὶ τῆς μεριστῆς μίγμα, ἑτερομήκης δὲ ἄντικρυς πρὸ τῶν ἄλλων, δυάδος τοῦτο οὐκ εὐλόγως ἔχειν νομιζομένης, καὶ πρὸς τούτοις στερεὸς πρῶτος ἀριθμῶν πεφώραται, καὶ εἰ σκαληνός, ἀλλ' οὖν τριχῇ διαστατὸς διὰ τὰς μεσότητας ἡ ἐλαχίστη συμπασῶν κατ' αὐτὴν τοῖς τε ἰδίοις μέρεσι τελείως ἐξεταζομένων, εἰκότως διὰ πάντα ταῦτα τὸ κέρασμα ὁ Πλάτων συνεκεράσατο, πρῶτον μὲν τῆς τοῦ ἀμερίστου οὐσίας, δεύτερον δὲ τῆς μεριστῆς, τρίτον δὲ τῆς ἐξ ἀμφοῖν, ἵνα δύο ὄντα τρίτα καθ' ἑκάτερον ὑπάρχῃ ἢ τρία κατὰ ἀντιδιαστολὴν διττά, ἴσον τῷ δὶς τρία ἢ τρὶς δύο, περισσὸν καὶ ἄρτιον καὶ ἀρτιοπέρισσον, τετράγωνος, ἑτερομήκης.

The textual difficulties of this passage lie in the last 5 lines, on which de Falco's comment, with a dryness which only an *apparatus criticus* permits, is simply 'vix intelligenda'.

The unknown author of this argument is trying to support his association of the hexad with *ψυχογονία*, which has been running for several pages, by reference to Plato (*Timaeus* 35a–b). This is done at both a particular and a general level. In particular, since Plato's psychic mixture is composed of divisible and indivisible being, and the hexad is composed of divisible even number and invisible odd number,

[16] I have changed *τοῦ* at line 54.3 to *τῆς*, as de Falco himself suggested in his *apparatus criticus*.

then the association between the two is claimed to be reasonable. In general, the hexad is the first heteromecic number, the first solid number (it is called 'scalene', which is one of the varieties of solid number, at 48.5–6), and the first perfect number. As the *πυθμήν* of all these series, it is an especially venerable number and worthy to be associated with *ψυχογονία*.

That this is what is going on in this argument is clear enough from a glance at the text. But we must face up to the problems which make the concluding clauses at best murky and at worst incomprehensible. I have three emendations to propose.

The problems start with the attribution of solidity to the hexad (lines 11ff.). Down to *μεσότητας*, we are all right, though some interpretation is needed: 'And in addition it has been discovered to be the first solid number (even if scalene, nevertheless it is three-dimensional because of its means).' This is presumably an obscure reference to the idea, familiar from *Timaeus* 32a–b onwards, that a solid requires two means.

The next clause presumably refers to the fact that 6 is the smallest perfect number – 'the smallest of all the numbers which fall under it and are completely counted by their own parts'. But in order for this to be clear, we have already taken this as a separate clause. The easiest emendation to effect this is to assume that a connective *δέ* has dropped out between *ἡ* and *ἐλαχίστη*. In this way, we get sense out of the words, and provide a clause which is on a par with the other clauses which make up the argument: the list of attributes of the hexad is contained in a long subordinate clause introduced by *ἐπεί* in line 5 and proceeding by a variety of conjunctions – *οὐ μόνον* (line 5)... *ἀλλὰ καί* (line 7)... *δέ* (line 10)... *καὶ πρὸς τούτοις* (line 11), and now also *δ'* (line 12).

Immediately following this passage, the argument continues: 'For all these reasons, Plato blended the mixture in a reasonable way (the first ingredient being indivisible being, the second divisible being, and the third the being which consists of both together, so that two things may each be third (*τρίτα*) or, conversely, three things two-fold (*διττά*)), as being equal to 2×3 or 3×2.' The whole sentence, and especially the mention of multiplying 2 and 3, surely make it clear that *τριττά*, 'three-fold', must be required in line 15, not *τρίτα*.

Finally, I can make no sense of *τετράγωνος, ἑτερομήκης* in line 16. It has just been claimed that the hexad is *ἑτερομήκης par excellence* (line 10), but it is nowhere claimed (how could it be?) that it is a square number. Moreover, there is no masculine noun around with which these two adjectives could possibly agree; we have just had a string of neuters agreeing with *κέρασμα* in line 13. I suggest that *τετράγωνος, ἑτερομήκης* be excised. They are presumably a gloss which has crept into the text, though it is hard to see how *τετράγωνος* arose even as a gloss.

XV. De Falco, 57.5–6

Nicomachus is suggesting a number of reasons for the hebdomad having Athena's epithet of 'forager' (*ἀγελεία*). The final reason, which is said to be 'more Pythagorean' (56.13–14), is that holy men like Zoroaster called the stars 'flocks' (*ἀγέλας*, 56.15; *ἀγέλους*, 57.4), there being, of course, seven primary 'stars' – the five visible planets, the sun and the moon. This in turn led these holy men, 'by the insertion of the "g", to call the stars "angels" (*κατὰ παρέμπτωσιν δὲ τοῦ γάμμα ἐφθαρμένως ἀγγέλους*)'.

As the text stands, Nicomachus is somewhat scathing about this move from *ἀγέλους* to *ἀγγέλους*: he says that they 'corruptly' (*ἐφθαρμένως*) call the stars

'angels'. But this scathing tone cannot be correct. Apart from the general consideration that Nicomachus was a Pythagorean, and that he himself says that this is an attribution of which the Pythagoreans approve, he also goes on to *agree* that 'the hebdomad is in this respect most truly ἀγγελία' (57.8–9). Accordingly, I suggest that we change ἐφθαρμένως to ἐφθαρμένου: 'By insertion of the lost "g", they call the stars "angels".'

XVI. De Falco, 68.9

The excerpt is from Nicomachus; the context is a list of seven-fold things (e.g. the seven 'black' internal organs, the seven channels in the face). At 68.7, he turns to geometrical research (68.7–11):

καὶ ἐν γεωμετρικαῖς σκέψεσιν ἑπτὰ εἴδη τῶν παρ' αὐτοῖς ἀρχῶν, σημεῖον γραμμὴ ἐπιφάνεια γωνία σχῆμα στερεὸν ἐπίπεδον, καὶ ἑπτὰ ⟨τὰ⟩ τῶν στοιχειωτῶν ἐξετάσεις ἐπιδεχομένων πληροῦνται· τριγώνου γὰρ γωνίαι τρεῖς καὶ πλευραὶ ἴσαι καὶ αὐτὸ τὸ ἐμβαδὸν ἕν.

Editors recognize that there is something wrong with στοιχειωτῶν in line 2: reference to 'writers of *Elements*', which is what the word means, seems entirely out of place. Ast suggested στοιχειώδεις, according to de Falco's *apparatus criticus*; but de Falco omits to mention Ast's other suggestion, στοιχειωδῶν, which is, I believe, far closer to the correct reading.

Whatever the clause καὶ ἑπτὰ...πληροῦνται means, it is supposed to be explained by what follows, as the introductory γάρ shows: 'For a triangle has three angles, an equal number of sides, and its area is single.' Now the triangle is frequently called, not quite στοιχείωδες, but στοιχειωδέστατον, the most elementary plane figure: compare, for instance, 18.20 and 22.7–8. Neither of these two passages is definitely excerpted from Nicomachus, but if a Nicomachean parallel is required, *Introduction to Arithmetic* 2.7.4 may be cited. It makes sense, therefore, to suggest στοιχειωδεστάτων as the probable reading. All we need now is a sense of πληροῦσθαι which fits, and it is surely not too far-fetched to think that it can mean 'be the πλήρωμα (sum) of'. The clause as a whole now reads: καὶ ἑπτὰ τῶν στοιχειωδεστάτων ἐξετάσεις ἐπιδεχομένων πληροῦνται (omitting ⟨τά⟩, which was de Falco's attempt to solve the problems of the clause). This means: 'And seven is the sum of the most elementary to admit investigation.' Geometrical investigation has just been mentioned in the previous line, and the author goes on to provide the sum – three sides plus three angles plus one area makes seven.

XVII. De Falco, 68.20–69.3

This is a most difficult passage (witness de Falco's 'corrupta videntur' and 'vix intelligenda'), and it would be foolish to claim to have written the last word on it.

The anonymous author is relating tertian and quartan fevers to the 'proportionate series' which start with the monad and either double or treble into the successive stages. We have already noted (Section VIII above) the regular spacing of squares and cubes in these series. Our text mentions this fact (68.17–19)[17] and relates it to tertian and quartan fevers. Tertian fevers occur every other day, and so fall in the equivalent places to those occupied by squares in the series; quartan fevers are likewise analogous to cubes.

The author wants to make this analogy even tighter by claiming that somehow tertian fever is like squares, and quartan fever is like cubes. Quartan fever is related

[17] I suspect that we should add κύβων δὲ μόνων δ′, in 68.19.

to cubes in 69.6–8: cubes are stable, and so is quartan fever (see 27.16–28.1 and, for instance, [Hippocrates], *On the Nature of Man* 15). It is worth noticing how quartan fever is related to cubes before turning to the troublesome passage where tertians are related to squares, not only because it at least is clear, but also because it shows the vagueness and speciousness of the type of connection the author is trying to establish.

The indubitably corrupt Greek of the sentence where tertian fever is related to squares is as follows (68.20–69.3; note that the genitive is governed by *μετέχουσιν* in 69.4):

ἰδοὺ γὰρ τοῦ μὲν λεγομένου τριταίου τετραγώνῳ μάλιστα ὁμοιουμένου διὰ τὸ ἐπιπέδων τριγώνων κατάρχειν, ὧν τὸ συμμετρότατον τετράγωνον ἰσότητα ὀρθογωνίου καὶ πλευρῶν ἔχει, καὶ πρὸς αὐτὸ εὐθύνεται.

If it is worth attempting a translation of such garbled Greek, it would be somewhat as follows: 'Tertian fever is particularly like a square because a square [or the fever] is the source of plane triangles whose most symmetrical [or commensurate] square has equality of rectangle and sides, and is made regular in relation to itself...' Alternatively, the last bit could be '...whose equality of rectangle and sides the most symmetrical square contains, and is made regular in relation to itself'.

There are several questions raised by the passage. The first oddity is the claim that a square is the source of triangles. Could *ἐπιπέδων τριγώνων* mean 'the areas of triangles'? It does make some sense to say that a square is the source of the areas of triangles, in so far as a common method for determining the area of a triangle is to extend it into a rectangle and halve the area of the rectangle. But I defy anyone to find this consideration helpful towards making sense of the passage. Therefore, *ἐπιπέδων τριγώνων* does mean 'plane triangles', as it appears to, and an emendation is suggested by the fact that no Pythagorean would say that squares were the source of triangles, but rather the other way round: triangles were taken to be the source of squares because the addition of any two successive triangular numbers makes a square number. This is standard Pythagorean doctrine (see, for example, Theon 41.3–8, Nicomachus, *Introduction to Arithmetic* 2.12.1). Alternatively, and equally Pythagorean, triangles were taken to be the source of squares on the authority of Plato's *Timaeus*, where the squares which form the faces of the cube of the element earth are formed from four isosceles triangles (55b). I therefore tentatively propose the reading *⟨ἐξ⟩ ἐπιπέδων τριγώνων* – 'tertian fever is particularly like a square because a square originates out of plane triangles.' The omission of *ἐξ* before *ἐπ-* by haplography is easy to understand, given the close resemblance of *Ξ* to *Π*.

Questions still remain, but one further simple emendation will help a great deal. If instead of *ὀρθογωνίου* we read *ὀρθῆς γωνίας*, then the rest arguably falls into place. The text would now translate: 'Tertian fever is particularly like a square because a square originates out of plane triangles, whose equality of right angle and sides the perfectly commensurate square contains, and is made regular in relation to itself.'

A little earlier, I mentioned two possible ways in which triangles are the elements of squares. It now rather looks as if the *Timaeus* model is the more relevant, since it forms squares out of equal right-angled triangles, rather than out of two unequal triangular numbers.

The final question, of course, is what on earth all this has to do with tertian fever. If we now recall the loose reasoning in the sentence where quartan fever was related to cubes, the answer is that it need have very little directly to do with tertian fever. In short, it seems that tertian fever is related to squares only because squares are formed of triangles and both triangles and tertian fever are three-fold.

XVIII. De Falco, 76.8–9

Nicomachus is giving two reasons for calling the ennead a limit. The grammatical construction of the second reason (76.9–11) is clear: it is διὰ τό with the infinitive (ἀναστρέφειν). The construction of the first (76.7–9) is currently far from clear: we have both ἐπὶ τοῦ with an infinitive (εἶναι) and a perfect indicative (συμβέβηκε):

οὐ γὰρ μόνον ἐπὶ τοῦ ἐπ' ἐννάτου τόνου μηκέτι εἶναι συμβέβηκε λόγον περαιτέρω μουσικὸν ἐπιμορίως.

It is tempting to delete ἐπὶ τοῦ as reduplicating ἐπ' ἐννάτου. Ast chose this solution, in conjunction with the addition of a necessary ὅτι or the like after μόνον. But the manuscript P (as reported by Ast, but not in de Falco's *apparatus criticus*) reads συμβέβηκεν; and I am more tempted to read συμβεβηκέναι, as the infinitive governed by ἐπὶ τοῦ, and in turn governing εἶναι. The only alternative idea which occurs to me is to read ἐπειδή instead of ἐπὶ τοῦ.

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APPENDIX

I list here, for the sake of completeness, those places where I prefer the reading of some other scholar, or of some manuscript, to that of de Falco's Teubner text. For these and other suggestions made since the original publication of the Teubner, see Klein's notes in the second edition of the Teubner (1975), pp. xxvi–xxviii.

2.19 τῇ (de Falco); **3.9** αὐτά (Ast); **4.3** τῇ καθ' ἕκαστον ὕλῃ (de Falco); **5.22** ἀρχῆς (older MSS.); **7.3** ὅτι (Oppermann); **7.16–17** τὸ αὐτό (Dodds); **9.3** συστήματι (Ast); **9.12** ἀρχή (Ast); **9.13** ἐπιμονῇ (Ast); **9.17** γνώμονες (Becker); **10.2** γνωμόνων (Becker); **11.9** οὗτος (MS. E); **11.19** πρώτῃ (Oppermann); **19.17** ὅτι αὐτήν (Oppermann); **20.23** [καί] (de Falco); **22.11** ἐπιπέδων (some MSS.); **25.19** κεφαλή (Wechel); **31.7** ἔτι (Oppermann); **38.2** τὰ ἀπὸ τῶν (de Falco); **38.14** πρὸς τὴν πλάστιγγα (Delatte); **40.4–5** [καθὰ καὶ τὸ τοῦ ο'] (Oppermann); **42.9** πρόνοια, (cf. J. Dillon, *The Middle Platonists* [London, 1977], p. 360); **44.4** ἐπιτελοῦς (Ast); **44.10–11** τρανότητος (de Falco); **45.8–9** εἰ διαρθρωτική (Dodds); **47.7** τὸ η' (Ast); **47.14** τριχῇ (Dodds); **54.3** τῆς ἐξ (de Falco); **58.9** πρὸς αὐτάς (Dodds); **58.21** κατὰ ταὐτό (de Falco); **60.18–19** ἐχίνων ἐνάλων καὶ μυῶν (Roscher); **67.2** εἰ (de Falco); **69.24** τύπων (Ast); **72.9–13** τὴν δὲ ἐκ δύο πρώτων ἀρτιοπερίσσων, τῆς μὲν δυνάμει,τῆς δὲ ἐνεργείᾳ, τὴν ἐκ τοῦ β' καὶ ς'· τὴν δὲ ἐκ δύο πρώτων περισσῶν, ἥπερ στοιχειώδης εἰς γέννησιν κύβων σύνθεσις καὶ πρώτη συλλαβή, τὴν ἐκ τοῦ γ' καὶ ε' τοῦ μὲν πρὸ αὐτοῦ...(Oppermann); **73.9** [παρ' ὅσον] (de Falco); **76.12–13** διαγράμματι (Ast); **81.14–15** ἀπὸ τοῦ καὶ τῶν μέχρι τετράδος εἶναι σύστημα (Ast); **81.17** καταλαμβανομένων (Becker *ap.* Burkert); **82.19** om. ⟨περί⟩ (MSS.); **85.14** τὴν ⟨δε⟩ (Lang); **86.19** ἑξῆς τούς (Ast); **87.3–4** γίνονται μέρη μὲν ἑπτά, ἀριθμὸς δέ, ὁ νε' (MSS.).