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ARISTOTLE, *POSTERIOR ANALYTICS* 2.1, 89B25–6 ΕΙΣ ΑΡΙΘΜΟΝ ΘΕΝΤΕΣ*

In the opening sentences of Book 2 of *Posterior Analytics*, Aristotle defines the four types of question that one can pose within the demonstrative science. In the edition by William D. Ross, the text reads as follows (89b23–31):[1]

τὰ ζητούμενά ἐστιν ἴσα τὸν ἀριθμὸν ὅσαπερ ἐπιστάμεθα. ζητοῦμεν δὲ τέτταρα, τὸ ὅτι, τὸ διότι, εἰ ἔστι, τί ἐστιν. ὅταν μὲν γὰρ πότερον τόδε ἢ τόδε ζητῶμεν, *εἰς ἀριθμὸν θέντες*, οἷον πότερον ἐκλείπει ὁ ἥλιος ἢ οὔ, τὸ ὅτι ζητοῦμεν. σημεῖον δὲ τούτου· εὑρόντες γὰρ ὅτι ἐκλείπει πεπαύμεθα· καὶ ἐὰν ἐξ ἀρχῆς εἰδῶμεν ὅτι ἐκλείπει, οὐ ζητοῦμεν πότερον. ὅταν δὲ εἰδῶμεν τὸ ὅτι, τὸ διότι ζητοῦμεν, οἷον εἰδότες ὅτι ἐκλείπει καὶ ὅτι κινεῖται ἡ γῆ, τὸ διότι ἐκλείπει ἢ διότι κινεῖται ζητοῦμεν.

The things we seek are equal in number to those we understand. We seek four things: the fact, the reason why, if it is, what it is. For when we seek whether it is this or this, *putting it into a number* (e.g. whether the sun is eclipsed or not), we seek the fact. Evidence for this: on finding that it is eclipsed we stop; and if from the start we know that it is eclipsed, we do not seek whether it is. When we know the fact we seek the reason why (e.g. knowing that it is eclipsed and that the earth moves, we seek the reason why it is eclipsed or why it moves).[2]

Leaving aside the problems concerning the interpretation of this incipit within the whole treatise,[3] its general meaning seems to be clear: Aristotle begins this book by listing the four crucial enquiries and explaining them by means of examples. The phrase εἰς ἀριθμὸν θέντες puzzled many ancient and modern commentators in this context, however. In his commentary, Ross summarized the problems concerning the expression this way:[4] 'this curious phrase should probably be taken (as it is by P[hiloponus], E[ustratius], Zabarella, and Pacius) to mean "introducing a plurality of terms",

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[1] W.D. Ross, *Aristotle's Prior and Posterior Analytics* (Oxford, 1949) (my own emphasis).

[2] I quote the translation by J. Barnes, *Aristotle's Posterior Analytics* (Oxford, 1975), 53 (my own emphasis). In the second edition (see n. 3 below), he revised his translation: on this point, see below, page 155. The translation by W. Detel, *Aristoteles Analytica posteriora* (Berlin, 1993), 1.60 ('indem wir es in eine Zahl setzen') seems to take Barnes's version into account, but he does not comment on it.

[3] Among others, see Ross (n. 1), 609–10; Barnes (n. 2), 194–5; J. Barnes, *Aristotle Posterior Analytics* (Oxford, 1993^2), 203–4; Detel (n. 2), 2.542–52; O. Goldin, *Explaining an Eclipse. Aristotle's Posterior Analytics 2.1–10* (Ann Arbor, 1996), 17–18 along with n. 2; M. Mignucci, *Aristotele Analitici secondi* (Bari, 2007), 249–50 with further references.

[4] Ross (n. 1), 610.

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i.e. ascribing a particular attribute to the subject, as against a proposition which says that a certain subject exists. Waitz takes the phrase to mean "stating more than one possibility". But that is not part of the essence of the inquiry as to the ὅτι.'[5]

When dealing with the same passage in the first edition of his annotated translation of *Posterior Analytics*, Jonathan Barnes took up the comment by Ross, stating that 'this bizarre phrase must, it seems, either refer to the fact that "whether it is this or this" mentions a number of alternatives, or else indicate that (1a) [*sc.* the question-type "if *S* is *P*", that is, the τὸ ὅτι question] contains more than one term.'[6] In the revised edition of this work, Barnes changed his previous translation of this phrase. It is now rendered as 'setting down a plurality of terms'.[7] Interestingly enough, he also deleted his comment on this difficult passage as it stood in the first edition.

Ross is right in stressing that the interpretation by some Byzantine commentators lies behind the modern ones. In fact, the idea that the phrase εἰς ἀριθμὸν θέντες refers to a composite question emerges at first in Themistius' paraphrase of the passage:[8]

ζητοῦμεν τοίνυν ἢ περὶ ἁπλοῦ τινος καὶ ἀσυνθέτου ἢ περὶ συνθέτου καὶ ἐν προτάσει. καλῶ δὲ ἁπλοῦν μὲν ὃ σημαίνεται ὑπὸ μιᾶς κατηγορίας, οἷον ἱπποκένταυρον ἢ θεόν, σύνθετον δὲ ἆρα ἡ σελήνη ἐκλείπει καὶ τὸ δίκαιον φύσει ἐστίν. εἰ μὲν οὖν περὶ ἁπλοῦ τινος ζητοίημεν, πρῶτον μὲν εἰ ἔστι ζητοῦμεν, ἔπειτα τί ἐστι· πρῶτον μὲν γὰρ ζητοῦμεν εἰ ἔστι θεός, ἔπειτα τί ἐστι θεός, εἰ δὲ ὑπὲρ συνθέτου καὶ ἐν προτάσει, πρῶτον μὲν εἰ ὑπάρχει τῷ ὑποκειμένῳ τὸ κατηγορούμενον ἐν τῇ προτάσει, ἔπειτα ὅταν τοῦτο μάθωμεν, διὰ τί οὖν ὑπάρχει καὶ πῶς ὑπάρχει· μαθόντες γὰρ ὅτι ἡ σελήνη ἐκλείπει, ἐφεξῆς διὰ τίνα αἰτίαν ἐκλείπει, ζητοῦμεν. τέσσαρα οὖν ἐστιν, εἰ ἔστι, τί ἐστιν, εἰ ὑπάρχει τόδε τῷδε, διὰ τί ὑπάρχει, δύο μὲν περὶ τῶν ἁπλῶν, δύο δὲ περὶ τῶν συγκειμένων.

Therefore, we investigate either on something simple and uncompounded or on something compounded, that is to say, within a proposition. I call simple what is indicated by only one category, such as horse-centaur or god; on the other hand, (the investigations) 'whether the moon suffers eclipse' and 'whether justice is by nature' (are) compound. Thus, if we would investigate on a simple matter, we investigate first if something exists, then what it is: in fact, we investigate first if god exists, then what god is. But if we inquire on something compounded, that is to say, within a proposition, we investigate first whether what is predicated in the proposition belongs to the subject, then, once we have learnt this, why and how (the predicate) belongs to (the subject): for, once we have learnt that the moon suffers eclipse, then we investigate the reason why it suffers eclipse. Thus, there are four kinds of investigation: 'if it is', 'what it is', 'if this belongs to that', 'why this belongs to that'. Two concern simple (terms), two compounded (terms).

[5] The relevant passages from secondary literature quoted by Ross are the following: I. Pacius, *Aristotelis Stagiritae Peripateticorum principis Organum* (Frankfurt, 1592; 1597[2], from which I quote), 503 (he translates 'plura complectentes') with n. *g*; J. Zabarella, *In duos Aristotelis libros Posteriores Analyticos commentarii* (Venice, 1582; 1587[3], from which I quote), 110r–v: he translates the phrase 'in numerum ponentes' and comments 'declarat eas omnes quaestiones Aristoteles sola ipsarum enumeratione per divisionem absque ulla probatione, & incipit a quaestionibus complexis dicens, quando quaerimus an hoc sit hoc, aut illud, quod quidem est in numerum ponere, qui non de una tantum re quaestio est, sed de inhaerentia huius in illa, haec dicitur quaestio ipsius quod complexa [etc.]'; T. Waitz, *Aristotelis Organon Graece* (Leipzig, 1846), 2.380: 'εἰς ἀριθμὸν θέντες, quum singulas propositae quaestionis partes, quippe quae se invicem excludant, enumeramus: debent enim numerari, quia, si quid praetermissum est, proposita quaestio non pertractatur.' On Eustratius and Philoponus, see below, page 156 and n. 15 respectively.

[6] Barnes (n. 2), 195.

[7] Barnes (n. 3), 48. The translation clearly takes Ross's commentary into account.

[8] M. Wallies (ed.), *Themistii Analyticorum posteriorium paraphrasis* (Berlin, 1900), 42.4–14.

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Even if Themistius does not explicitly mention the phrase εἰς ἀριθμὸν θέντες, the distinction between the two modes of investigation draws upon it. He considers an investigation of something simple (περὶ ἁπλοῦ τινος) to be the question of 'if it is' (εἰ ἔστιν) and 'what it is' (τί ἐστιν). In doing this, he elaborates upon a later passage in this very chapter of *Posterior Analytics*.[9] The other two questions are compounded, being in a proposition (πρότασις). As for Aristotle's first question (τὸ ὅτι), Themistius stresses that it is a compounded question because it investigates the relationship between a subject and a predicate (εἰ ὑπάρχει τῷ ὑποκειμένῳ τὸ κατηγορούμενον ἐν τῇ προτάσει). This operation should therefore be subsumed from the example he gives—that is to say, if the predicate ἐκλείπει belongs to the subject σελήνη.[10] Thus Themistius seems to interpret the phrase in this way. This becomes evident by considering a passage from the commentary by Eustratius of Nicaea (eleventh/twelfth century)[11] already mentioned by Ross. It reads:[12]

ὅταν μὲν γάρ, φησίν, τόδε ἢ τόδε ζητῶμεν 'εἰς ἀριθμὸν θέντες', τουτέστιν ὅταν τι σύνθετον προθῶμεν πρόβλημα ἤγουν ἄλλῳ ἄλλο ὑπάρχειν δηλοῦν, ταὐτὸν δὲ εἰπεῖν ὑποκείμενον καὶ κατηγορούμενον· τοῦτο γάρ ἐστι τὸ εἰς ἀριθμὸν θέντες. τὸ γὰρ ἁπλοῦν μοναδικόν ἐστιν, ἡ δὲ μονὰς οὐκ ἀριθμός· πλῆθος δὲ ἡ δυάς, διὰ τοῦτο καὶ ἀριθμός. ὅταν οὖν τὴν ζήτησιν ἐν πλήθει καὶ ἀριθμῷ θέμενοι, ταὐτὸν δὲ εἰπεῖν ἐν συνθέσει κατηγορουμένου καὶ ὑποκειμένου ταύτην ποιήσαντες, οὕτω προφέρωμεν, καὶ ἐπάγει εὐθὺς τὸ παράδειγμα 'οἷον πότερον ἐκλείπει ὁ ἥλιος ἢ οὔ;' ἄλλο γὰρ τῷ λόγῳ ἥλιος καὶ ἄλλο τὸ ἐκλείπειν·[13] ταῦτα τοίνυν δύο πράγματα ὄντα ἀλλήλων ἕτερα λαβόντες ἐν ἑνὶ συντίθεμεν προβλήματι καὶ ζητοῦμεν εἰ ὑπάρχει θατέρῳ θάτερον ἢ μή. ὅταν οὖν, φησίν, οὕτω ποιῶμεν, τὸ ὅτι ζητοῦμεν.

'In fact', he says, 'when we investigate this or that putting it into a number', that is to say, when we pose a composite question, that is to say, one revealing that something belongs to another thing—or to put it in other words: [if we propose] a subject and a predicate. This is, in fact, 'putting it into a number'. For what is simple is monadic, but the monad is not a number. The dyad is a multitude, therefore it is also a number. So when we express ourselves in this way, putting the investigation in a multitude and in a number, that is to say, making this in a composition of subject and predicate,[14] then he [*sc.* Aristotle] immediately introduces the example 'whether the sun suffers eclipse or not'. In fact, 'sun' is one part in the sentence and the other is 'suffers eclipse'. Therefore, assuming these two parts that are different from each other we put them in a single question and investigate whether the one thing belongs to the other or not. So, he says, 'when we act in this way, we investigate the fact'.

Eustratius tries to stress that the plurality introduced by the phrase εἰς ἀριθμὸν θέντες refers to the fact that the question posed consists of a subject and a predicate.[15] Paul

[9] 89b31–3 ταῦτα μὲν οὖν οὕτως, ἔνια δ' ἄλλον τρόπον ζητοῦμεν, οἷον εἰ ἔστιν ἢ μὴ ἔστι κένταυρος ἢ θεός· τὸ δ' εἰ ἔστιν ἢ μὴ ἁπλῶς λέγω, ἀλλ' οὐκ εἰ λευκὸς ἢ μή.

[10] Not ἥλιος, as in Aristotle's text.

[11] On Philoponus' commentary, see n. 15 below.

[12] M. Hayduck (ed.), *Eustratii in Analyticorum posteriorum librum secundum commentarium* (Berlin, 1907), 12.22–33.

[13] The transmitted ἐκλείπειν should probably be ἐκλείπει.

[14] The syntax is difficult here and something may even be missing.

[15] A similar explanation also occurs in the commentary to *Posterior Analytics* Book 2, usually attributed to Philoponus of Alexandria—and so mentioned by Ross (see pages 154–5 above)—but likely composed by Leo Magentinus (twelfth century): [Phlp.] *in An. post.* 336.29–32 ἀντὶ δὲ τοῦ εἰπεῖν ὅτι εἰσὶ σύνθετα προβλήματα τὰ ζητούμενα εἶπε τὸ εἰς ἀριθμὸν θέντες· ὁ γὰρ ἀριθμὸς ἐκ συνθέσεως καὶ πλήθους μονάδων συνίσταται, ὡς ἡ δυὰς καὶ ἡ τριάς. ἡ δὲ μονὰς ἁπλῆ ἐστι· καὶ διὰ τοῦτο τὰ ἁπλᾶ προβλήματα λέγεται μοναδικὰ καὶ ἐνιαῖα. The annotation also occurs in the MS *Vat. gr.* 244 (end of the twelfth century), fol. 370v (no. α′), a manuscript that contains the treatises of the *Organon* introduced and surrounded by Magentinus's commentaries. See

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Moraux rightly noticed that Eustratius' interpretation of this phrase stems from Alexander of Aphrodisias' lost commentary on Aristotle's *Posterior Analytics*.[16] This interpretation takes the Aristotelian usage of ἀριθμός into account in the sense of 'a plurality of singularities', whereby the smallest number is two, or the dyad.[17]

These are the late antique and Byzantine interpretations we find in the printed editions. Furthermore, if we consider the unedited annotations preserved in some *codices uetustissimi* of the *Organon*, we will discover almost the same interpretation.[18] In the MS *Vat. Urb. gr.* 35 (**A**), fol. 239r, a secondary hand dating to the twelfth century added the following remark *supra lineam*, which stems from the commentary by Leo Magentinus: ὡς ἐπὶ συνθέτου τὴν ζήτησιν ποιοῦμεν.[19] In the MS *Marc. gr.* Z. 201 (**B**), fol. 102v, a later hand dating to the eleventh century wrote ἐν συνθέσει θεωρήσαντες above the line.[20] In the left margin corresponding to this sentence, the same hand also began to copy a longer note, but did not manage to finish it:[21]

ἀριθμὸν ἐπωνόμασεν [*sc.* Ἀριστοτέλης] τὸ σύνθετον πρόβλημα τὸ ἐξ ὑποκειμένου καὶ κατηγορουμένου συγκείμενον, διότι ὁ ἀριθμὸς οὐκ ἄλλο τί ἐστιν ἀλλ' ἢ πλῆθος, τὸ δὲ πλῆθος οὐκ ἄλλο τί ἐστιν εἰ μὴ σύνθεσις καὶ συνδρομὴ μονάδων πολλῶν· ἐπεὶ δὲ καὶ τὸ σύνθετον πρόβλημα εἰς δύο διαιρεῖται ἐρ [*sic*].

Aristotle called number the composite question composed of a subject and predicate because number is nothing else than a multitude, multitude is nothing else than composition and combination of many monads. Since the composite question is also divided into two *er*…

Once again, this anonymous note elaborates upon the identity of ἀριθμός and an investigation of subject and predicate, that is, a plurality of terms, given that the number comes from the addition of more than one singularity. Even if the last sentence is incomplete because of the lack of the main clause, it is clear that the causal sentence

S. Ebbesen, *Commentators and Commentaries on Aristotle's Sophistici Elenchi* (Leiden, 1981), 1.302–13; id., 'The *Posterior Analytics* 1100–1400 in East and West', in J. Biard (ed.), *Raison et démonstration. Les commentaires médiévaux sur le Seconds analytiques* (Turnhout, 2015), 11–30, at 13 with n. 4; C. Brockmann, 'Helpful interactions between commentary and text: Aristotle's *Posterior Analytics* and important manuscripts of this treatise', in S. Boodts, P. De Leemans and S. Schorn (edd.), *Sicut dicit. Editing Ancient and Medieval Commentaries on Authoritative Texts* (Turnhout, 2020), 209–42, at 219–23. However, see also O. Goldin, *Philoponus(?) On Aristotle Posterior Analytics 2* (London, 2009), 1–4 (as well as 17–18 for a translation of the quoted passage from Ps.-Philoponus).

[16] P. Moraux, *Le Commentaire d'Alexandre d'Aphrodise aux «Seconds analytiques» d'Aristote* (Berlin and New York, 1979), 86–8 (fr. 38), 88–9 (fr. 39). He also observes that the explanation in the anonymous commentary on Book 2 edited by Wallies (n. 8), 548.23–549.7 depends on Alexander's commentary as well.

[17] See S. Herzberg, s.v. 'arithmos/Zahl', in O. Höffe (ed.), *Aristoteles-Lexikon* (Stuttgart, 2005), 83–4, at 83 ('das jeweilige Eine […] ist daher Prinzip der Z[ahl] […], nicht aber selbst Gezähltes, weshalb die Eins im eigentlichen Sinn keine Z[ahl] […] und die Zwei kleinste Z[ahl] ist [Phys. IV 12, 220a27]') and 84 ('eine Menge von Einheiten', on the basis of *Metaph.* X.1, 1053a30).

[18] On the marginalia in these manuscripts, see also N. Agiotis, 'Inventarisierung von Scholien, Glossen und Diagrammen der handschriftlichen Überlieferung zu Aristoteles' *De interpretatione* (c. 1–4) […]', *Working Paper des SFB 980 Episteme in Bewegung* 5 (2015) [http://www.sfb-episteme.de/Listen_Read_Watch/Working-Papers/No_5_Agiotis_Inventar/Working_Paper_Nr_5_Agiotis.pdf]; Brockmann (n. 15), 209–11; S. Valente, 'Reading and commenting Aristotle's *Posterior Analytics* over the centuries: (marginal) remarks on some *vetustissimi* of the *Organon* and the case of the *Ambrosianus* L 93 sup.', *Scripta* 11 (2018), 111–24, at 112–14, with further literature.

[19] See n. 15 above for the Greek text and bibliographic references.

[20] Above the previous τόδε ἢ τόδε, this hand wrote ἤτοι τὸ ἐκλείπειν τὸν ἥλιον· ἢ τὸ σφαιροειδές ἐστιν.

[21] The exact source still needs to be identified.

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refers to the division of the question into its constituent parts (ὑποκείμενον and κατηγορούμενον).

Similarly, in the MS *Vat. Barb. gr.* 87 (**V**), fol. 149v, the main scribe wrote εἰς ὑποκείμενον θέντες *supra lineam* in distinctive script.[22] In the MS *Vat. gr.* 1024 (**c**), fol. 110v, a later hand added the following note between the lines: ἀντὶ τοῦ ποιήσαντες ὑποκείμενον καὶ κατηγορούμενον. All these short comments refer to the same exegetic pattern.[23] Thus it seems to have been a sort of *uulgata* concerning the interpretation of this phrase, extending from late antique and Byzantine scholars up to modern interpreters.[24] Anyway, the usage of ἀριθμός in this sense causes some problems, not only because it assumes a meaning that is radically different to the meaning in the previous (opening) sentence, but also because Aristotle apparently never used it in the sense assumed by the commentators;[25] these seem to have introduced the idea of a complex investigation based on the combination of subject and predicate within a proposition to explain the phrase εἰς ἀριθμὸν θέντες.

A different approach will probably help to clarify the exact meaning of the puzzling phrase. Since it is not unparalleled, its use by other authors may offer some clues regarding a different interpretation of it in the Aristotelian context. Let us take a passage in Plutarch's biography of Solon, for example. Croesus, angry with the Athenian because he did not acknowledge the king as being the happiest man on earth, exclaims his surprise as follows (*Sol.* 27.7):

'ἡμᾶς δ'' εἶπεν ἤδη πρὸς ὀργὴν ὁ Κροῖσος 'εἰς οὐδένα τίθης εὐδαιμόνων ἀριθμὸν ἀνθρώπων;'

'"What!" said Croesus, who by this time was angry, "do you not count us among happy men at all?"'[26]

In this passage, the use of τίθημι with an accusative and εἰς ἀριθμόν plus genitive, literally meaning 'put somebody into the number of', is expanded by a genitive plural specifying the typology of the number in question.[27] Similar constructions of εἰς ἀριθμόν with a genitive governed by a verb are also recorded in Stephanus's

[22] A later hand added εἰς σύνθεσιν ὡς μερικόν after this note.

[23] Only the interlinear annotation in the MS *Par. Coisl.* 330 (**C**), fol. 181v is different, and probably autoschediastic: ἄρα πολλὰ πράγματα ποιήσαντες.

[24] See G.R.G. Mure in W.D. Ross (ed.), *The Works of Aristotle Translated into English* (London, 1928): 'when our question concerns a complex of thing and attribute', as well as the Loeb edition by H. Tredennick (Cambridge, MA and London, 1960), 175: 'introducing a plurality of terms' together with the relevant footnote *a* '*i.e.*, a predicate as well as a subject'. See also E. Rolfes, *Aristoteles. Lehre vom Beweis des Organon. 4. Teil oder Zweite Analytik* (Leipzig, 1922), 69 ('denn wenn man so fragt, ob das oder das ist, daß man der Frage Zahlcharakter gibt [etc.]'), 139 n. 2 ('man gibt einem Prädikat Zahlcharakter, wenn es nicht bloß die Existenz aussagt, wenn ich z.B. nicht sage: Gott ist, sondern Gott ist gut'); H. Seidl, *Aristoteles Zweite Analytik* (Würzburg, 1984), 139 ('wobei wir [die Frage] in eine Anzahl [von Termen] bringen'), 279; P. Pellegrin (ed.), *Seconds analytiques* (Paris, 2005), 241 ('posant <les termes> en nombre'), 396 (after rephrasing the comment by Ross, he adds that the customary interpretation 'semble confirmée par le οὕτως de 89b31', on which see n. 9 above).

[25] See e.g. H. Bonitz, *Index Aristotelicus* (Graz, 1870), 94; Herzberg (n. 17), 83–4.

[26] Loeb translation (adapted) by B. Perrin, *Plutarch's Lives* (Cambridge, MA, 1914), 483.

[27] A similar usage can also be discovered in Plut. *Num.* 18.7 (also quoted by Stob. *Flor.* 1.8.44.18–21) διὸ καὶ οἱ ταύτην τὴν χώραν οἰκοῦντες [*sc.* οἱ Αἰγύπτιοι] ἀρχαιότατοι δοκοῦσιν εἶναι, καὶ πλῆθος ἀμήχανον ἐτῶν ἐπὶ ταῖς γενεαλογίαις καταφέρουσιν, ἅτε δὴ τοὺς μῆνας εἰς ἐτῶν ἀριθμὸν τιθέμενοι.

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Thesaurus Graecae Linguae (1.2, 1947a–b), such as 'Εἰς ἀριθμὸν τελεῖν, Censeri in numero, Annumerari'.[28] Furthermore, within the Aristotelian tradition, a similar usage occurs much later in a passage of the commentary on the *Sophistical Refutations* by the eleventh/twelfth-century commentator Michael of Ephesus:[29]

παρ' ὅσα δὲ ἀληθῶς 'ἐλέγχονται οἱ ἐλεγχόμενοι', οὐδεὶς ἀριθμῆσαι ἢ παραδοῦναι δύναται οὐδὲ εἰς ἀριθμόν τινα θεῖναι ὡρισμένον τοὺς τρόπους δι' ὧν ἐλέγχονται οἱ ἀληθῶς ἐλεγχόμενοι κτλ.

Michael affirms that 'nobody can count or reckon or even put into a definite number the ways in which those who are truly refuted are refuted'. Once again, the meaning of 'to enumerate, to count among, to give a (definite) account of' emerges clearly.[30] We can therefore assume that the expression 'τίθημι εἰς ἀριθμόν' means 'to put or count somebody/something among something', 'classifying somebody/something as being a member of a group'.

Now, it may be worth considering the incipit in Book 2 of *Posterior Analytics* again here. In the very first sentence, Aristotle stresses that the things that are the object of our investigation (τὰ ζητούμενα) are as many in number as those we understand (ἴσα τὸν ἀριθμὸν ὅσαπερ ἐπιστάμεθα). They fall into four basic questions: τὸ ὅτι, τὸ διότι, εἰ ἔστι, τί ἐστι. These are briefly explained by examples in the same sequence.[31] The first enquiry deals with the assessment of a fact (τὸ ὅτι): to use Aristotle's words, it concerns the question of πότερον τόδε ἢ τόδε, that is to say, 'whether this or that is the case',[32] as in 'whether the sun suffers eclipse or not', according to the example given.[33] Thus the ὅτι question concerns the problem of the relationship between a subject and a predicate within a proposition only *lato sensu*, because its main focus seemingly relies upon ascertaining that *this or that* (τόδε ἢ τόδε) is the case. Here, the first τόδε stands for the statement ἐκλείπει ὁ ἥλιος, whereas the second τόδε refers to the negation οὔ, that is, οὐκ ἐκλείπει ὁ ἥλιος. Thus the ὅτι question aims to determine which statement happens to be the case.[34] Aristotle adduces the following remark as proof (σημεῖον δὲ τούτου): if we are seeking this, we conclude our investigation (πεπαύμεθα) as soon as we can answer this question with a 'yes' or a 'no'. And if we knew the answer to this question from the very beginning (ἐξ ἀρχῆς), we would pose not the πότερον question (οὐ ζητοῦμεν πότερον) but the question that follows, viz. the διότι question.

[28] This phrase is also recorded in LSJ s.v. τελέω (II.3): 'to belong to a group, a class'.

[29] M. Wallies (ed.), *Alexandri quod fertur in Aristotelis Sophisticos elenchos commentarium* (Berlin, 1898), 75.17–19.

[30] See also C. Walz, *Rhetores Graeci* (Stuttgart, 1834), 6.184.19–20 (Iohannes Siceliotes) … προϋπόσχεσις δὲ διὰ τὸ εἰς ἀριθμὸν τὰ ζητηθησόμενα τίθεσθαι κτλ. (the preceding promise consists of numbering the points that will be investigated by the orator). A slightly different meaning emerges in Plotinus, *Enn.* 6.3.1 … ὥσπερ ἂν εἰ τὴν φωνὴν διηρούμεθα ἄπειρον οὖσαν εἰς ὡρισμένα ἀνάγοντες τὸ ἐν πολλοῖς ταὐτὸν εἰς ἕν, εἶτα πάλιν ἄλλο καὶ ἕτερον αὖ, ἕως εἰς ἀριθμόν τινα θέντες ἕκαστον αὐτῶν, τὸ μὲν ἐπὶ τοῖς ἀτόμοις εἶδος λέγοντες, τὸ δ' ἐπὶ τοῖς εἴδεσι γένος. Here, Plotinus elaborates upon Pl. *Phlb.* 18a7–d2: the division of vocal sounds into their elements (viz. letters) causes one 'to put each of them into a certain number', that is, in a singular category.

[31] Notably, the discussion is introduced by the particle γάρ.

[32] Transl. by Barnes (n. 3), 48.

[33] This is the only mention of a solar eclipse in the *Analytica Posteriora*; the usual example is a lunar eclipse (see also page 156 above with n. 10).

[34] As quoted above (page 155), Barnes (n. 2), 195 suspected that this question 'mentions a number of alternatives'.

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When one poses this first question, literally, one 'puts it into a number', viz. one of the four questions that can be posed (ζητοῦμεν δὲ τέτταρα). By doing this, one recognizes that it belongs to the first question, that is to say, that it concerns 'the fact'—'if this or that is the case' (τὸ ὅτι). So, the phrase εἰς ἀριθμὸν θέντες may be implicitly completed by the genitive τῶν ζητουμένων, taken up from the opening sentence (τὰ ζητούμενα).[35] Since the things that can be investigated are equal in number to those that can be understood, each enquiry must be associated with one of the four questions. Thus posing a question also implies recognizing which kind of question we are seeking among those we can investigate. In conclusion, I would propose changing Barnes's translation as follows:

ὅταν μὲν γὰρ πότερον τόδε ἢ τόδε ζητῶμεν, *εἰς ἀριθμὸν θέντες*, οἷον πότερον ἐκλείπει ὁ ἥλιος ἢ οὔ, τὸ ὅτι ζητοῦμεν.

For when we seek whether this or that is the case, *counting it among one of the four types of investigation* (e.g. whether the sun is eclipsed or not), we seek the fact.[36]

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[35] The phrase may possibly be grammatically more correct with the article (i.e. εἰς τὸν ἀριθμόν): however, it may be implicitly assumed, if it is not to be supplemented.

[36] I have taken both translations by Barnes (nn. 2 and 3) into account here. Furthermore, Christian Brockmann (8/2/2018, email) has also suggested to consider *An. post.* 2.2, 89b36–7 ἃ μὲν οὖν ζητοῦμεν καὶ ἃ εὑρόντες ἴσμεν, ταῦτα καὶ τοσαῦτά ἐστιν, 'now what we seek and what on finding we know are these and thus many' (transl. Barnes [n. 2], 53). This sentence proves that Aristotle is keen in assessing the number of questions that can be investigated.

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