Iβ4: The question of separation

Iβ4a: Separation, the insufficiency of Plato's test, and existence καθ᾽ αὑτό
Iβ4b: Τόδε vs. τοιόνδε, τί ἐστι vs. ποῖόν ἐστι
Iβ4c: Sophistic and the question of τόδε τι

Iβ4a: Separation, the insufficiency of Plato's test, and existence καθ᾽ αὑτό

The disputes about the ἀρχαί in the "substantive" aporiai of B often turn on questions of separation. Especially in challenging a Platonist claim that some object X is an ἀρχή, Aristotle will argue that X cannot be an ἀρχή because it does not exist separately. In B#7 he challenges the dialecticians' claim that the genera are ἀρχαί by questioning whether the genera exist separately, since "the ἀρχή and cause must exist beside [παρά] the things of which it is an ἀρχή, and must be able to exist when it is separated from them" (999a17-19). Likewise in B#11 he challenges the Platonic and Pythagorean claim that unity and being are ἀρχαί by asking whether unity and being are "separate and καθ᾽ αὑτάς" (from the K parallel, K2 1060b1-2). In the same manner, Aristotle argues against the claim that mathematical boundaries are ἀρχαί of natural things by denying that mathematicals exist separately: as K puts it, "the science we are now seeking is not about the mathematicals, since none of them is separate" (K1 1059b12-13, cf. E1 1026a13-16).[1] "The science we are now seeking" cannot be about inseparable things, because what we are seeking is a science of ἀρχαί, and inseparable things cannot be ἀρχαί: thus "if someone posits the ἀρχαί that seem most of all to be unmoved, being and the one, then, first, if these do not signify a this and an οὐσία, how will they be separate and καθ᾽ αὑτάς? But we expect the first and eternal ἀρχαί to be of this kind [i.e. separate and καθ᾽ αὑτάς]" (K2 1060a36-b3). Indeed, all parties to the debate agree that the ἀρχαί (i.e., whatever is prior to everything else) must both be eternal and exist separately; but there is a dispute about which things exist separately and which do not.[2] (This was not the only dispute, since existing separately is not sufficient for being an ἀρχή--ordinary natural bodies are separate but not eternal[3]--but it was one crucial dispute.) The question whether X exists separately is an ontological question, that is, a

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[1] for the structure of the E1 argument that the science we are seeking is neither physics (whose objects are not unmoved) nor mathematics (whose objects are not separate), see Iγ1a below

[2] As noted in Iα3 above, there is a loose sense of "ἀρχή" in which it is coextensive with "cause," and in this sense not all ἀρχαί are eternal or exist separately, but in this sense all sciences are sciences of ἀρχαί. In the strict sense in which only wisdom is the science of the ἀρχαί, Aristotle and all the other claimants to wisdom (pre-Socratic physicists, Pythagorizing mathematicians, Platonist dialecticians) agree that the ἀρχαί must be eternal and separately existing, whether they are Forms, νοῦς or love and strife, being, the one, earth and air and water and fire, atoms, or even the void. Or so Aristotle consistently claims (there is a problem about how many of the pre-Socratics explicitly used the concept of ἀρχή, but Aristotle interprets them all in this way); this has nothing to do with the allegedly Platonizing character of Metaphysics K.

[3] an ordinary form-matter composite is χωριστὸν ἁπλῶς (H1 1042a29-31); "physics deals with things that are χωριστά but not unmoved" (E1 1026a13-14 with Schwegler's emendation); fuller list of uses of χωριστόν, in many cases clearly not meaning "immaterial": here, or somewhere, need a fairly comprehensive list of uses of χωριστόν, including at least Physics I,2 185a31, I,3 186a28-31, 186b26-30, plus texts on whether matter is χωριστόν, Physics IV,7 214a14-16 (here also about the void), IV,9 217a24, GC I,5 321a5-7 (here again also about the void), II,1 329a8-13 (whether matter is "bodily and separate"), 329a24-6, or whether the infinite is χωριστόν, Physics III,5 204a8-9, or where a body or composite is called χωριστόν, GC II,1 328b33-329a1, Metaphysics Z3 1029a26-30, H1 1042a26-31 … note some texts about being separate from something (with genitive or παρά), others absolute … also discuss Fine and Morrison in OSAP

question about the mode of being of X: Aristotle never doubts that the genera, being and unity, and mathematicals exist, but he asks in what way they exist. He concedes not only that the genera (and so on) exist, but also that they are prior in λόγος to natural things, and also prior by Plato's test as straightforwardly construed:[4] but, he argues, if these things do not exist separately they cannot be prior in οὐσία (to natural things, or to anything that exists separately), and so cannot be ἀρχαί in the desired sense. But in order to assess Aristotle's arguments, about whether a given X is separate and about why separation is needed for priority in οὐσία, we must first get clearer about the concept of separation. We will also need to see what connections and differences there may be between saying that X exists separately, that it exists καθ' αὐτό, that it is "a this" [τόδε τι], that it is an οὐσία, that it is not said of a subject, that it is the same as its essence, and that it is numerically one.

The concept of separation is connected with the concept of numerical unity, but it is not the same. Each separately existing thing is numerically one: since Plato thinks that the genera are ἀρχαί, and hence exist separately, he must maintain that each genus is numerically one, so that animal-itself is a numerically single thing.[5] But numerical unity is only necessary, not sufficient, for separation, and Aristotle's discussions of separation often do not turn on questions of numerical unity. Thus Aristotle thinks that a given mathematical triangle ABC does not exist separately from natural bodies, but it is still a numerically single thing and not a universal.[6] So too, in the discussion of unity and being in B#11, the issue of numerical unity does not seem to be fundamental. In the K version Aristotle asks whether being and the one are separate and καθ' αὐτά or not; in the more extended B version, he expresses what is apparently the same dichotomy in different terms:

> The most difficult of all questions to examine, and the most necessary for knowing the truth, is whether being and the one are οὐσίαι of things-that-are, and whether each of these is not, being something else, one or being [καὶ ἑκάτερον αὐτῶν οὐχ ἕτερόν τι ὂν τὸ μὲν ἓν τὸ δὲ ὄν ἐστιν], or whether we must ask what being and the one are, there being some other underlying nature [of which these things are predicated] [ἢ δεῖ ζητεῖν τί ποτ' ἐστὶ τὸ ὂν καὶ τὸ ἓν ὡς ὑποκειμένης ἄλλης φύσεως]. For some think that they are the one way and others that they are the other way by nature. For Plato and the Pythagoreans think that being and the one are not something else [of which being or one is predicated], but that this is their nature, so that their οὐσία is just to be being or to be one. But the physicists, such as Empedocles, say what the one is, as if reducing it to something better known: for he seems to be saying that it is love (this is anyway the cause of being-one to all things), and others say that this one [thing] and this being, out of which the beings are and out of which they have come-to-be, is fire, and others that it is

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[4]here, or in the title of this section, give reference to previous treatment of Plato's test, in Iα3 and Iβ3; and to its advantage in resolving disputes about priority (and thus about ἀρχαί) between physicists who take priority in time as decisive and dialecticians who take priority in λόγος as decisive. "Plato's test" should be flagged more clearly

[5]So Topics VI,6 143b29-32 says that a certain argument works only against "those who say that every genus is numerically one; those who posit the ideas do this, for they say that length-itself or animal-itself is a genus". This is also the Platonic position as described in B#9.

[6]Aristotle also says, twice, that matter is "inseparable and numerically one" (GC I,5 320b13 and Physics IV 217a24-5); on matter, see at length IIβ below

air. (1001a4-17)[7],[8]

The fundamental issue here is whether there is something whose nature is just to be being (or to be one), or whether, on the contrary, being and one are just predicates of some other underlying nature (to say that X is predicated of Y is equivalent to saying that Y underlies X, since κατηγορεῖσθαι and ὑποκεῖσθαι are correlatives).[9] If a physicist says that fire or air is the underlying nature of which being is predicated, then he is denying that being exists separately from this underlying nature,[10] even though being may be numerically one, since there may be only a single thing of which it is predicated. If X exists only inseparably, as a predicate of some other underlying nature, then X is not a substance, and this holds equally whether there is only one underlying nature of which X is predicated, or whether there are many. The fundamental reason why a universal cannot be a substance is that it is predicated of something else underlying; the fact that it is predicated of many other underlying things, and so is not

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[7]textual issues in this passage (i) when Plato and the Pythagoreans think οὐχ ἕτερόν τι τὸ ὂν οὐδὲ τὸ ἓν ἀλλὰ τοῦτο αὐτῶν τὴν φύσιν εἶναι, E is apparently isolated (at least against JA^{b}M) in omitting the first τὸ and writing οὐχ ἕτερόν τι ὂν, assimilating it to the phrase a few lines above; here E seems clearly wrong. (ii) the most serious issue, EJ ὡς οὔσης τῆς οὐσίας ταὐτὸ ἓν εἶναι καὶ ὄν τι (or ὄντι), A^{b}M ὡς οὔσης τῆς οὐσίας αὐτοῦ τὸ ἓν εἶναι καὶ ὄν τι (or ὄντι), Alexander the same except αὐτὸ for αὐτοῦ; the text of EJ seems indefensible, that of A^{b}M perhaps basically right, but ὄν τι doesn't seem to make sense and if ὄντι we need ἑνὶ, also the predicate complement of εἶναι in a genitive absolute ought to be in the genitive, so Bonitz (although he printed αὐτὸ τὸ ἓν εἶναι καὶ ὄν τι) conjectured αὐτοῦ τοῦ ἑνὶ εἶναι καὶ τοῦ ὄντι, which is followed by Christ-Ross-Jaeger except that they leave out the superfluous τοῦ before ὄντι; I accept this, taking αὐτοῦ as governed by οὐσίας (although it should strictly be αὐτῶν) and taking τῆς οὐσίας αὐτοῦ as the subject of the genitive absolute, and τοῦ ἑνὶ εἶναι καὶ ὄντι to be its predicate complement (although the parallel Iota 2 1053b11-13 might seem to support taking αὐτοῦ τοῦ ἑνὶ εἶναι καὶ ὄντι together as the subject and τῆς οὐσίας as the predicate complement), with Ross' translation and Madigan. (iii) when Empedocles "says what the one is," EJ have λέγει ὅ τι τὸ ἓν ὄν ἐστιν, A^b apparently λέγει ὅ τί ποτε τὸ ἕν ἐστιν (the epsilon of ἕν is almost invisible but it has a rough breathing), M λέγει ὅ τί ποτε τὸ ὄν ἐστιν; here the text of EJ is worth thinking about, "says being what, the one is" [although the natural word order would be λέγει ὅ τι ὂν τὸ ἕν ἐστιν], certainly lectio difficilior and might explain the diverging readings of A^b and M. (iv) when Empedocles says "that it is love," EJ have λέγειν τοῦτο τὴν φιλίαν εἶναι, A^{b}M λέγειν τι τοῦτο τὴν φιλίαν εἶναι, Jaeger reconstructs λέγειν τι τοιοῦτο τὴν φιλίαν εἶναι (with the idea that this would have been corrupted to the reading of A^{b}M and then corrected to the reading of EJ), I would probably follow EJ

[8]cite some literature including Berti's article in the VIth Symposium Aristotelicum, Études sur la Métaphysique d'Aristote, ed. Aubenque, now reprinted in his Dialectique, Physique et Métaphysique: Études sur Aristote (Louvain-la-Neuve, 2008); also Cavini in Crubellier-Laks. I will discuss further down the view that Aristotle is attributing to Plato and the Pythagoreans, and will cite parallel texts on the dispute about the modes of being of being, unity, infinity, and numbers. Aristotle should more have said, more carefully, that Plato the Pythagoreans think unity exists καθ᾽ αὑτό, and that Plato and Parmenides think being exists καθ᾽ αὑτό.

[9]the question is not whether everything that exists or is one has just existing or being-one as its οὐσία, but whether there is something that has just existing or being-one as its οὐσία; there might also be other things that have some other underlying οὐσία, but exist or are one due to the causality of the first being or first one. if Aristotle were asking whether everything that exists or is one has just existing or being-one as its οὐσία, he would have said that Empedocles says no because (e.g.) the Sphairos is one but has some underlying nature; instead he says that Empedocles says no because unity-itself, the cause of being-one to all things, has some other underlying nature, namely love

[10]it is definitional that if X is in Y as a ὑποκείμενον, X cannot exist χωρίς from Y (Categories c2 1a24-5). so too Physics I,2: "none of the others [i.e. things in other categories] is separate beside [παρά] substance; for all the others are said καθ᾽ ὑποκειμένου of substance" (185a31-2). it is not clear whether παρά here goes with "separate" ("separate from") or with "others" ("the things other than substance," "the things except for substance"), but either way, Aristotle takes it for granted that if X is said of Y καθ᾽ ὑποκειμένου, X cannot exist χωρίς. note this seems to imply the conclusions, which Aristotle rejects, that matter exists χωρίς and that form-matter composites do not; more later on why Aristotle thinks these do not follow

numerically one, is not needed for the argument.

In an important passage at the beginning of Metaphysics N, Aristotle explains why a thing that exists only inseparably, as a predicate of some other underlying nature, cannot be an ἀρχή.

> If the ἀρχή of all things cannot have anything prior to it, it would be impossible for the ἀρχή, being something else, to be an ἀρχή [ἀδύνατον ἂν εἴη τὴν ἀρχὴν ἕτερόν τι οὖσαν εἶναι ἀρχήν]; for instance, if someone said that white, not qua something else but qua white, is an ἀρχή, but that nonetheless it is said of some underlying thing, and, being something else, is white [εἶναι μέντοι καθ' ὑποκειμένου καὶ ἕτερόν τι ὂν λευκὸν εἶναι]: for that [other underlying thing] will be prior (N1 1087a31-36).[11]

This text is not entirely transparent, but it and the text from B#11 can be used to explain each other. Both use the formula "τό X, ἕτερόν τι ὄν, X ἐστι" (or its negation, "τό X, οὐχ ἕτερόν τι ὄν, X ἐστι"),[12] which, as we will see, is a fixed technical expression. The B#11 passage seems to present an exhaustive dichotomy: either what is X is X οὐχ ἕτερόν τι ὄν, or there is some other nature that underlies X (in which case we may keep asking "τί ἐστι X?", not accepting "X" as a final answer); the N1 passage treats it as equivalent for X to be X ἕτερόν τι ὄν and for X to be καθ' ὑποκειμένου. So we can assume that "τό X, ἕτερόν τι ὄν, X ἐστι" and "X is καθ' ὑποκειμένου" are interchangeable or at least mutually entailing. The B#11 passage says that the physicists (unlike Plato and the Pythagoreans) think that there is nothing whose nature is just to be being or one, and that being and one exist only because some other underlying nature exists and is being and one, and the N1 passage supplies the further argument that both sides of the dispute in B#11 take for granted: that if being and one exist only by being predicated of some other underlying thing (or, as the K parallel puts it, if being and one are not separate), then they cannot be ἀρχαί, because the thing that underlies them would be prior to them.

Everyone, including Plato, agrees that inseparable things cannot be ἀρχαί, but they disagree about which things exist separately and which do not; and this disagreement is hard to resolve, because they also disagree about what test we should use to decide whether X exists separately. Now to decide whether X is an ἀρχή, it is enough to have a test for whether X is prior (in οὐσία) to Y, since an ἀρχή is just what is prior to everything else. So if we have an adequate test for priority, we will not also need a further test for separation: if X is inseparable, and so cannot be an ἀρχή because it cannot be prior to the things it is inseparable from, the priority-test will be sufficient to disqualify X from being an ἀρχή. Plato thinks that Plato's test is sufficient for showing priority in οὐσία, and thus that it is sufficient to show separation. Indeed, Plato's test is designed to show separation: it says "those things which can be without others, but not those without them" (Δ11 1019a3-4) are prior, i.e. that X is prior to Y if X can exist without Y but Y

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[11] Aristotle says this here of "the ἀρχή of all things"--as is natural, since it is only the ἀρχή of all things that can have nothing at all prior to it. But it is such ἀρχαί-in-the-strict sense, ἀρχαί with nothing prior to them, which are the objects of wisdom {so above, Iα3; and earlier in the present section?}; and this justifies Aristotle's switching here from "ἀρχή of all things" to "ἀρχή" without qualification. And elsewhere--in a passage which cannot be discredited on the ground that it is in Metaphysics K, or in an aporetic context, or assumes Platonist premisses in arguing against Platonist opponents--Aristotle argues in this way about ἀρχαί without qualification: "the ἀρχή must not be said of some ὑποκείμενον, for there will be an ἀρχή of the ἀρχή: for the ὑποκείμενον is an ἀρχή, and must be prior to the κατηγορούμενον" (Physics I,6 189a30-32).

[12] See discussion below on the force of the negation.

cannot exist without X, or in other words if X can be separated from Y but not Y from X.[13] Aristotle seems to be paraphrasing or interpreting Plato's test as a criterion for priority in οὐσία when he says in Metaphysics M2 that the things that are prior in οὐσία are "ὅσα χωριζόμενα τῷ εἶναι ὑπερβάλλει", "those things when, when they are separated from other things, extend beyond them in existence [i.e. survive them]" (1077b2-3).[14] But in the Metaphysics Aristotle does not think that Plato's test, without some supplement or clarification, is sufficient to establish separation; and if it does not establish separation, it does not establish priority in οὐσία. There is, however, reason to think that Aristotle in earlier writings had regarded Plato's test as sufficient, and a look at the difficulties that Aristotle falls into with an unmodified Plato's test will help to explain his reservations about Plato's test in the Metaphysics.

In the Categories' chapter on priority (c12) Aristotle had cited Plato's test (14a29-35) as giving one sense of priority, apparently the next-strongest sense after priority in time; Plato's test allows us to detect priority-relations where there is no priority in time (e.g. where both the prior thing and the posterior thing have always existed), and, as far as we can tell from the Categories, the only thing wrong with it is that it fails to catch some even subtler priority-relations (where the existence of X entails the existence of Y and conversely, but the existence of X is the cause of the existence of Y, 14b9-23). Aristotle applies Plato's test without reservation to prove that genera are prior to their species: "the genera are always prior to the species, since the implication of existence is not reciprocal: for example, whenever aquatic [animal] exists, animal exists, but when animal exists it is not necessary for aquatic to exist" (Categories c13 15a4-7).[15] But this argument involves Aristotle in difficulties, of which he cannot have been entirely unaware even when he wrote the Categories. For although Plato's test would show that animal is prior to horse (since animal can exist without horse existing but horse cannot exist without animal existing), Plato's test would not show that animal is conjunctively prior to horse and dog and lion and so on, since animal cannot exist without any of these existing. Analogously, Plato's test would show that man is prior to Socrates but not that man is conjunctively prior to Socrates and Xanthippe and Alexander and so on, since man cannot exist without any of these existing.[16] Indeed it seems that, for this reason, Categories c5 wants to say that Socrates and Xanthippe and Alexander and so on, as "primary substances," are prior to man as a "secondary substance," and likewise that man is prior to animal (cf. 2b7-22), contrary to the conclusion of c13. For, as Aristotle says, "if the primary substances did not exist, it would be impossible for any of the other things to exist: for all the other things are either said of these as subjects or are in these as subjects" (2b5-6b). Perhaps Aristotle takes this as a straightforward application of Plato's test to prove that primary substances are prior to everything else, but strictly speaking this cannot be right, since he has not proved that the implication of existence is non-reciprocal: secondary substances could not exist without primary substances existing, but primary substances such as Socrates also could not exist without secondary substances such as man existing.[17] But a parallel passage shows that Aristotle

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[13]note (with cross-reference?) problem of interpretation: does "X can be without Y" mean that X can exist without Y existing (in which case it never holds if Y is a necessary being, thus perhaps never, for Plato, if Y is a Form), or is it enough if X can exist without being (in some sense) conjoined with Y? Aristotle tends to speak as if it were the former, but this may need some refinement

[14]Ross overtranslates "τῷ εἶναι ὑπερβάλλει" as "surpass them in the power of independent existence"; Barnes in his revisions correctly substitutes "continue to exist." τῷ εἶναι ὑπερβάλλειν is just to survive something, to exist for longer than it does

[15]also note the use of Plato's test in Protrepticus B33

[16]the Categories grants this analogy, cf. c5 2b17-19

[17]note Alexander's rather strange attempt to save the argument (in the text translated by A.C. Lloyd in "Form and

took this form of argument as proving, if not that Socrates and Xanthippe and so on are prior to man, at least that man is not prior to them. This is in Metaphysics M2, just after Aristotle has cited Plato's test (1077b2-3) as a criterion, or perhaps rather a definition, of when X is prior to Y in οὐσία:

> If πάθη--for instance, something moved or white--do not exist apart from [παρά] substances, then white would be prior to white man in λόγος but not in οὐσία: for it cannot exist when separated, but is always together [or simultaneous] with the composite (I am calling white man a composite). So it is clear that the result of abstraction [τὸ ἐξ ἀφαιρέσεως, e.g. white] is not prior, nor the result of addition [τὸ ἐκ προσθέσεως, e.g. white man] posterior: for white man is said by addition to white. (M2 1077b4-11)[18]

What Aristotle means is not that white cannot exist without white man, but that white cannot exist conjunctively without white man and without white horse and without white paper and so on. While he avoids saying that white is posterior to these things, he is saying that white fails Plato's test for being prior to these things, and therefore that white is not in fact prior to these things, and thus in particular that white is not prior to white man: despite the fact that Plato's test would imply that white is prior to white man, since white can exist without white man existing and white man cannot exist without white existing. Thus if we frame the same case in different ways, Plato's test can lead us to conclude that X is both prior and posterior to Y, or at least that X is both prior and not prior to Y; and in some of these cases (X = man, Y = Socrates), Aristotle thinks that X is in fact posterior to Y. So it is natural to ask what has gone wrong with Plato's test, and what conditions must be added to it to avoid these antinomies.

One reason why Plato had devised Plato's test was to support the argument, accepted by Aristotle in Categories c13, that the more universal is prior to the less universal. If this argument is valid, it proves that the most universal of all things, being and one, are the ἀρχαί or first of all things: for if anything at all exists, it is existent and one, so that, for any X, if X exists then being and one also exist, whereas for most values of X, there is no reason why, if being and one exist, X should also exist. But Aristotle in the Metaphysics wants to resist the conclusion that being and the one are ἀρχαί; and, apart from his particular arguments why being and the one cannot be ἀρχαί, there is something uneasy-making about Plato's procedure in arguing for these ἀρχαί: it just seems too quick and easy a method for discovering the eternal beginnings of all things. Aristotle's question in the K parallel to B#11 is a way of formulating the basis of this unease: "if someone posits the ἀρχαί that seem most of all to be unmoved, being and the one, then, first, if these do not signify a this and an οὐσία, how will they be separate and καθ᾽ αὑτάς? But we expect the first and eternal ἀρχαί to be of this kind [i.e. separate and καθ᾽ αὑτάς]" (K2 1060a36-b3). That is: it is agreed that we want the ἀρχαί to be separate and καθ᾽ αὑτά, and Plato thinks that, using Plato's test, he has shown his ἀρχαί to be of this kind. But can something really be separate and καθ᾽ αὑτό, unless it is "a this and an οὐσία"? That is: for X to exist separately, it must be the answer to a question "what is this?" (τί ἐστι τόδε?) asked about the thing which is

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Universal in Aristotle"): Socrates cannot exist without man existing, but he can exist without the species man existing, since if Socrates were the only human being, man would not be predicated of more than one thing and therefore would not be a species

[18]note Δ11 parallel 1018b34-7, the accident being prior in λόγος (as a part of a λόγος always is), although the musical can't exist unless something which is musical exists: the M2 text expands on this. text discussed Iγ3 below

X, rather than to a question "what is this like?" (ποῖόν ἐστι τόδε?). So X is an οὐσία, rather than a mere ποιότης or πάθος of the thing; or, equivalently, to say that the thing is X is to say that it is this (τόδε), rather than that it is such (τοιόνδε).[19] If X fails this test, then in the appropriate case "this" will stand for some other nature Y, and X will be a predicate of Y saying what Y is like, rather than what Y is. In such a case it might be true that X can exist without Y existing and that Y cannot exist without X existing (let X = being, Y = earth), but X must nonetheless be posterior to Y in οὐσία, and therefore cannot be an ἀρχή: as N1 says, "if the ἀρχή of all things cannot have anything prior to it, it would be impossible for the ἀρχή, being something else, to be an ἀρχή; for instance, if someone said that white, not qua something else but qua white, is an ἀρχή, but that nonetheless it is said of some underlying thing, and, being something else, is white: for that [other underlying thing] will be prior" (1087a31-36, cited above). Aristotle thinks that he is here only making explicit the implicit reason why the physicists, although they grant that being has always existed and that it is prior to (or at worst simultaneous with) everything else by Plato's test, nonetheless refuse to count it as an ἀρχή: "[some of the physicists] say that this one and this being, out of which the beings are and out of which they have come-to-be, is fire, and others that it is air" (B#11 1001a15-17), so that there is nothing whose nature is just to be being, but being is always predicated of some other underlying nature such as fire or air. If the physicists are right about this, then the right answer to "what is the ἀρχή?" cannot be "being." As white, which is always said of some other underlying nature, cannot be an ἀρχή "not qua something else but qua white," so being could not be an ἀρχή qua being: being could be an ἀρχή only in the weak sense that (say) air is an ἀρχή and air is a being.[20]

So Plato's test must be amended to something like: "X is prior to Y in οὐσία if the existence of Y implies the existence of X and the existence of X does not imply the existence of Y, if X is something whose nature is just to be X, i.e. if X is not predicated of some other underlying nature." Plato is right that priority requires separation, but he is wrong in thinking that Plato's test, as he formulates it, is sufficient to prove separation. For X to be separate from Y in the relevant sense, it is not enough that X can exist without Y: X must also have a certain mode of existence, which Aristotle will call existence καθ᾽ αὑτό, and Plato's test is not sufficient to establish that X exists καθ᾽ αὑτό. Since, as Aristotle will argue, genera and mathematical boundaries and being and one do not exist καθ᾽ αὑτά, these things will not be ἀρχαί, despite their priority to other things by Plato's test as straightforwardly understood.[21]

To understand what Aristotle is doing in distinguishing these modes of existence, it helps to draw a contrast with something more radical that he is not doing. A philosopher might try to defuse the Plato's test argument for the priority of universals as follows: "Plato's test is supposed to show that animal is prior to horse and to Bucephalus, since animal can exist without Bucephalus or horse existing, but Bucephalus and horse cannot exist without animal existing. But this is wrong: Bucephalus exists, for a certain time, but animal does not exist at all. 'Animal'

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[19] for discussion of these terms, see the next subsection

[20] there is a closely parallel issue about infinity in Physics III,4-5, discussed below

[21] from Beta Symposium paper: at Metaphysics Δ11 1019a4-11 (not in the Categories parallel), Aristotle seems to suggest that Plato's test can be supplemented by filling in the sense of "being" or "existence" in saying that X can be without Y but Y cannot be without X. Different senses of being--notably, being-in-potentiality and being-in-actuality--would yield different versions of Plato's test and thus different senses of priority. Presumably being-in-actuality, rather than being-in-potentiality, will yield the κύριον sense of priority κατ᾽ οὐσίαν. The strategy I describe above can be seen as an elaboration of this idea, applying Aristotle's distinction between being καθ᾽ αὑτό and being not καθ᾽ αὑτό to yield different senses of priority, one more κύριον. But Δ11 1019a4-11 is too compressed for me to feel confident of Aristotle's meaning.

is a universal, and universals do not exist, except for universal words and universal thoughts. When we say that animal exists, this is inaccurate: what we really mean is that something else (e.g. Bucephalus) exists, which falls under the universal predicate-term 'animal'. So it is wrong to say that animal always exists, or that it exists both when Socrates exists and at the later time when Bucephalus exists; first one thing exists that falls under the predicate 'animal', and then another thing exists that falls under the predicate 'animal', but there is no one thing, animal, that exists in both cases."[22] This bears a family resemblance to what Aristotle is saying, but it is not what Aristotle is saying. It never occurs to him to suggest that universals are only words (or thoughts). He takes it for granted that when Bucephalus exists, animal also exists; to say "ζῷον οὐκ ἔστι" would imply that there are no animals. Animal exists when Bucephalus exists and also when Socrates exists, and since "animal" means the same thing in both cases, it is even legitimate to say that it is the same thing (namely animal) that exists in both cases. Of course, it is not numerically the same thing that exists in both cases, but only generically the same: animal is not a this existing in both cases, but a such existing in both cases.

Aristotle does not distinguish the logical syntax of the assertions "Bucephalus exists" (where Bucephalus is a this) and "[an] animal exists" (where animal is a such), in the way that a twentieth-century philosopher might, by expressing the second assertion, but not the first, in the form "there exists some Y such that Y is [an] animal." Aristotle would agree that "animal exists" is logically equivalent to "there exists some Y such that Y is [an] animal," but "Bucephalus exists" is also logically equivalent to "there exists some Y such that Y is Bucephalus," and Aristotle does not distinguish syntactically between an "is" of identity and an "is" of predication. The fundamental difference is, rather, between the state of affairs underlying "there exists some Y such that Y is Bucephalus" and the state of affairs underlying "there exists some Y such that Y is [an] animal": namely, the first assertion is true because there exists some Y whose nature is just to be Bucephalus, whereas the second assertion is true because there exists some Y whose nature is something other than just to be animal, but of which animal is truly predicated. If X exists because there exists something whose nature is just to be X, then X is a this and an οὐσία (an answer to τί ἐστι τόδε?); if X exists because there exists something whose nature is something other than just to be X, but of which X is truly predicated, then X is a such. Suches are posterior in οὐσία (we might translate, "posterior in existence") to thises, because the cause of the existence of suches is the existence of the thises of which they are predicated.[23]

Given this explanation of the difference between the way that Bucephalus exists and the way that animal exists, we can understand why Aristotle says that Bucephalus exists καθ᾽ αὑτό and that animal exists not καθ᾽ αὑτό. "The musician builds" may be true, but the musician does not build καθ᾽ αὑτό, because musician as such is not the subject of the act of building; rather, "the musician builds" is true because there is something else (say, Callias) of which both "musician" and "builds" are predicated. So too "the musician exists" is true, but the musician does not exist καθ᾽ αὑτό, because musician as such is not the subject of existence; rather "the musician exists" is true because there is something else (Callias) of which both "musician" and "exists" are predicated. "X builds" is true not καθ᾽ αὑτό if it is true only because, for some Y, Y builds and Y is X; "X exists" is true not καθ᾽ αὑτό if it is true only because, for some Y, Y exists and Y is X. But we have seen that, if X is a such, X exists only because, for some Y (whose nature is not just to be X), Y exists and Y is X; so if X is a such, X does not exist καθ᾽ αὑτό. Conversely, if X is a

[22]something like this radical position seems to have been known to Aristotle, since it seems to have been maintained by some of his and Plato's philosophical opponents, including Lycophron; see Iβ4c below

[23]perhaps note on "cause of being" as the tie-breaking test for priority in the Categories

this, X does exist καθ᾽ αὑτό, that is, not merely because something else exists and is X. Here too "X exists" is logically equivalent to "for some Y, Y exists and Y is X," but the Y that makes this true will be just X itself, and not some other nature of which X is predicated; so the fact that X exists will not be parasitic on the fact that something else exists.[24]

This difference between two ways of existing is what Aristotle is expressing, in abbreviated form, in his official definitions of existence καθ᾽ αὑτό and not καθ᾽ αὑτό in Posterior Analytics I,4. Aristotle has been describing the different ways in which something can be said to be καθ᾽ αὑτό. Something can be said to be something or to belong to something καθ᾽ αὑτό, but something can also be said to exist καθ᾽ αὑτό, or to be καθ᾽ αὑτό without further qualification, namely

> what is not said of some other underlying thing [ὃ μὴ καθ᾽ ὑποκειμένου λέγεται ἄλλου τινός]: for example, the walking [thing], being something else, is walking [τὸ βαδίζον ἕτερόν τι ὂν βαδίζον ἐστί], and likewise the white,[25] but substance, and whatever signifies a this, are not, being something else, what they are [οὐχ ἕτερόν τι ὄντα ἐστὶν ὅπερ ἐστίν]. So the things that are not καθ᾽ ὑποκειμένου, I call καθ᾽ αὑτά, and the things that are καθ᾽ ὑποκειμένου I call accidents. (73b5-10)

In these definitions of existence καθ᾽ αὑτό and not καθ᾽ αὑτό, we find the same crucial phrase "ἕτερόν τι ὄν" that is in B#11 and in the N1 argument that what is καθ᾽ ὑποκειμένου cannot be an ἀρχή. Aristotle here assumes that "X is [said] καθ᾽ ὑποκειμένου" is equivalent to "the X, ἕτερόν τι ὄν, is X", and he helps to explain why these would be equivalent, and how the phrases "the X, ἕτερόν τι ὄν, is X" (or "the X, ἕτερόν τι ὄν, is ὅπερ ἐστίν", i.e., is X) and "the X, οὐχ ἕτερόν τι ὄν, is X" should be construed. Since Aristotle wants to say that "the white, ἕτερόν τι ὄν, is white" is true and "Socrates, ἕτερόν τι ὄν, is Socrates" is not true, the sentence "the X, ἕτερόν τι ὄν, is X" cannot be meant as a pure conjunction, "X is something else, and, also, it is X": for then it would be equally true to say that the white is Socrates and is also white or that Socrates is white and is also Socrates. Rather, the participial clause must be construed as a circumstantial clause (we might call it temporal or causal) implying a logical priority: first the X is Y, and, logically afterwards, it is X. In English we might put it by saying that the X is something else which is X, i.e. some other underlying nature of which X is predicated. And this is what the negative sentence "the X, οὐχ ἕτερόν τι ὄν, is X" denies. If Aristotle had said "the X, ἕτερόν τι οὐχ ὄν, is X," this would be what Jespersen and Moorhouse call "special negation," negating the term it is immediately attached to, with the sense "the X is not something else, and [then] it is X"; but the preposed negative (preposed either to the beginning of the sentence, or to second position, immediately after the topic) is what they call "nexal negation," negating the entire sentence, whether logically simple or complex. (So in Moorhouse's example from Demosthenes 18.179, "οὐκ εἶπον μὲν ταῦτα, οὐκ ἔγραψα δέ", "it is not the case that I said these things but did not write them": Demosthenes did write these things, whereas if the first οὐκ negated only the μέν-clause, he would be saying that he did not. Or with a circumstantial participle, Antiphon First Tetralogy 1.2, "οὐ τὸν αἴτιον ἀφέντες τὸν ἀναίτιον διώκομεν," "it is not the case that, having let the guilty person go, we are prosecuting an innocent person," where

[24] if Y is X and X is a this, either Y is simply identical with X or the predication is per accidens, so Posterior Analytics I,22. warning: Δ7 cuts up differently what exists καθ᾽ αὑτό and what doesn't, see Iγ1c

[25] Ross emends τὸ λευκόν to τὸ λευκὸν λευκόν, but this can simply be understood: so, rightly, Barnes

if οὐ negated only the participial clause, as it would in "τὸν αἴτιον οὐκ ἀφέντες", the speaker would be saying that he is prosecuting an innocent person. This use of the negative is later exploited in Stoic logic.) If "the X, ἕτερόν τι ὄν, is X" were a pure conjunction, "X is something else, and, also, it is X," it would not make much difference whether the negation were negating the whole sentence or only the first conjunct, since the second conjunct "X is X" is certainly true in any case; but "the X, ἕτερόν τι ὄν, is X" means that X is first something else (say Y) and then X, and this is what "the X, οὐχ ἕτερόν τι ὄν, is X" is denying. Thus Plotinus, affirming the "Pythagorean and Platonist" answer to Aristotle's question in B#11 about the status of the one, says that it is "really one, not being something else and then one [ὄντως ἕν, οὐχ ἕτερον ὄν, εἶτα ἕν]" (V,4,1,8), where the οὐχ is clearly negating the whole "ἕτερον ὄν, εἶτα ἕν," and where the "εἶτα" makes clear the assertion of logical priority.[26]

When Aristotle says that the white, being something else (say Socrates), is white, he does not mean exactly that white is white because it is Socrates, or after being Socrates: white is white per se, and does not need a further cause for being white. Aristotle's point is not about why the white, qua white, is white, but about why this thing, which happens to be white, is white. To take Aristotle's example, "τὸ βαδίζον", the walker or the walking thing, picks out this thing, whatever it is, that walks: if τὸ βαδίζον exists at all, i.e. if anything walks, then there is some this, such that this thing walks, and the phrase "τὸ βαδίζον" picks out this thing (uttered in a particular context, it may pick out e.g. the nearest thing that walks, or the thing I am pointing to that walks). The question is then about this thing which walks, whether it ἕτερόν τι ὂν βαδίζον ἐστί, whether it is first something else, and, logically afterwards, walks. We may always ask, of this thing which is X, τί ἐστι: if the answer is something other than X (so that X is only the ποῖον of this thing and not its τί), then this thing which is X is X only ἕτερόν τι ὄν. So the question is whether the nature of this thing which is X is just to be X, or whether it has some other nature of which X is predicated. For the thing which is X to have some other nature of which X is predicated, is for X to be καθ᾽ ὑποκειμένου; and, Aristotle is saying, if X exists in this way then X does not exist καθ᾽ αὑτό, but only because this underlying nature exists.[27] (So at B#11 1001a9-12, "Plato and the Pythagoreans think that being and the one are not something else, but that this is their nature, so that their οὐσία is just to be being or to be one," the question is not whether the οὐσία of being-as-such or one-as-such is to exist or be one, but whether the οὐσία of this thing which exists or is one is to exist or to be one, or whether it has some other underlying nature of

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[26]the Plotinus passage is cited by Berti in his article cited above (refs.). Barnes in Posterior Analytics 73b8 writes, correctly, "are not just what they are in virtue of being something different" [my emphasis] … reply to Cavini in Crubellier-Laks p.177 n7 … refs to Moorhouse and Jespersen, including the Demosthenes quote (Moorhouse p.1). Moorhouse's examples from Herodotus IV,132,3, ἢν μὴ ὄρνιθες γενόμενοι ἀναπτῆσθε ἐς τὸν οὐρανόν, "unless you become birds and fly up to heaven" (p.103), and from Thucydides I,68,4 οὐ γὰρ ἂν Κέρκυράν τε ὑπολαβόντες βίᾳ ἡμῶν εἶχον καὶ Ποτείδαιαν ἐπολιόρκουν, "[the Athenians] would not have taken over Corcyra and held it by force against us and besieged Potidaea" (p.108), become nonsense if the negatives negate only the participial clause. (See also his discussion, higher on p.108, of Thucydides I,22,4.)

[27]note parallel passages in Posterior Analytics I,22. e.g. "ὅσα δὲ μὴ οὐσίαν σημαίνει, δεῖ κατά τινος ὑποκειμένου κατηγορεῖσθαι, καὶ μὴ εἶναι λευκὸν ὃ οὐχ ἕτερόν τι ὂν λευκόν ἐστιν" (83a30-32), unless there is a Form of white, which there isn't; again, things ὅσα μὴ τί ἐστι are all accidents, and "ταῦτα δὲ πάντα καθ᾽ ὑποκειμενου τινὸς κατηγορεῖσθαί φαμεν, τὸ δὲ συμβεβηκὸς οὐκ εἶναι ὑποκείμενόν τι· οὐδὲν γὰρ τῶν τοιούτων τίθεμεν εἶναι ὃ οὐχ ἕτερόν τι ὂν λέγεται ὃ λέγεται, ἀλλ᾽ αὐτὸ ἄλλου καὶ τοῦτο καθ᾽ ἑτέρου" (83b20-24). also note I,19 81b24-9 and I,22 83a1-14, where Aristotle is distinguishing cases of "X is Y" (and "X becomes Y") into per se (X = man, Y = white) and per accidens (X = white, Y = man) by whether "τὸ X, ἕτερόν τι ὄν [i.e. something other than X], Y ἐστι" (in per accidens cases) or "τὸ X, οὐχ ἕτερόν τι ὄν, Y ἐστι" (in per se cases) … note 83a7-8 must mean "it is not the case that, being white or being some white, it became wood," not that not being white it became wood

which existence or unity is predicated.)

We might thus sum up the conclusion of the Posterior Analytics I,4 account of existence καθ' αὐτό by saying that X exists καθ' αὐτό if X is a this, and does not if X is a such, or that X exists καθ' αὐτό if X is an answer to a τί ἐστι question (that is, if X is an οὐσία), and does not if X is an answer to a ποῖον ἐστί question. This is almost right, but it needs a slight amendment to cover the case of things named by abstract nouns. Instead of asking about the walker or the white, we could ask about the act of walking or about whiteness [τὸ βαδίζειν, ἡ λευκότης]; and Aristotle certainly does not think that these things exist καθ' αὐτά. But it is not the case that whiteness exists because some Y exists and Y is whiteness; rather, whiteness exists because some Y exists and Y is white. So it is more precise to say that there are two ways of existing not καθ' αὐτό: X exists not καθ' αὐτό and concretely if X exists only because, for some Y, Y exists and Y is X; X exists not καθ' αὐτό and abstractly if X exists only because, for some Y, Y exists and Y is a paronym of X. If X exists not καθ' αὐτό and concretely, then X is a such, and is the answer to a ποῖον ἐστί question asked of some this. If X exists not καθ' αὐτό and abstractly, then X can be the answer to a τί ἐστι question (e.g. what is justice?), and so may in a derivative sense be called an οὐσία and a this; but things that exist not καθ' αὐτά and abstractly exist in an even weaker way that things that exist not καθ' αὐτά and concretely, since their existence is parasitic on the existence of things that exist not καθ' αὐτά and concretely, whose existence is in turn parasitic on the existence of things that exist καθ' αὐτά.[28]

Aristotle's main use of the distinction between existence καθ' αὐτό and not καθ' αὐτό, in the different passages where he invokes it, is to argue, against some philosopher who has maintained that X is an ἀρχή, that X does not exist καθ' αὐτό and therefore cannot be an ἀρχή. Even Plato must concede that some things exist not καθ' αὐτά: not-Socrates exists not καθ' αὐτό, since there is something that is not Socrates, but nothing whose nature is just not to be Socrates: whatever is not Socrates must, being something positive, not be Socrates.[29] But once Plato admits that not-Socrates exists not καθ' αὐτό, the door is open to the possibility that the genera and being and one and the numbers and the infinite and the great and the small also exist not καθ' αὐτά, and Plato will have to argue in each case that these things cannot be like not-Socrates. The relevant Aristotelian passages are overwhelmingly directed against Plato and the Pythagoreans or Pythagorizers, although Aristotle thinks that other philosophers have also fallen into this kind of error.

While Aristotle uses varying terminology to describe the two kinds of existence that the disputed items might have, many of these passages (including B#11 on being and one) seem to be referring back to the Posterior Analytics I,4 definitions of existence καθ' αὐτό and not καθ' αὐτό, by using the catch-phrase "ἕτερόν τι ὄν". Two of these passages, in Physics I,4 and Posterior Analytics I,22, are speaking about quality-terms such as "white". Physics I,4, criticizing Anaxagoras, says that if qualities as well as substances are ingredients in the pre-cosmic mixture, νοῦς will be unable to separate them out, since affections are inseparable [ἀχώριστα]: "so if colors and dispositions are mixed in, then when they are separated out

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[28]cite Z1, both on the existence of accidents as parasitic on the existence of substances, and on the even weaker mode of existence of things named by abstract (as opposed to concrete) accidental terms. cite Topics I on the τί ἐστι question as asked of (abstract) accidents, and Topics III,1 116a23-4 on δικαιοσύνη (but not ὁ δίκαιος) as ὅπερ τόδε τι. the notion of existence not καθ' αὐτό and abstractly is important, because Aristotle will maintain that matter exists in this way: see below, IIβ.

[29]note Aristotle says that Plato rejected Forms of negations. I will assume he is right about this (despite some counter-evidence from the Sophist); but even if Plato believed in a Form of not-F, where F is a Form, he cannot have believed in a Form of not-Socrates

[διακριθῶσιν], there will be some white or healthy not being something else nor καθ' ὑποκειμένου [ἔσται τι λευκὸν και ὑγιεινὸν οὐχ ἕτερόν τι ὂν οὐδὲ καθ' ὑποκειμένου]" (188a7-9). In Posterior Analytics I,22, it is Plato who makes this Anaxagorean mistake of trying to separate out qualities, by positing Forms for quality-terms: "whatever does not signify οὐσία must be predicated of some ὑποκείμενον, and there cannot be a white which is not, being something else, white [καὶ {δεῖ} μὴ εἶναι λευκὸν ὃ οὐχ ἕτερόν τι ὂν λευκόν ἐστιν]: for goodbye to the Forms, since they are empty talk ..." (83a30-33). And the opening of Metaphysics N1 (cited above) is arguing quite generally, against almost all earlier philosophers, that contraries cannot be ἀρχαί, because "all contraries are καθ' ὑποκειμένου and none of them is separate" (1087b1-2), and whatever is καθ' ὑποκειμένου and is what it is only ἕτερόν τι ὄν is posterior to its ὑποκείμενον, and therefore cannot be an ἀρχή (1087a31-6).

Most often, though, the disputed items are being or the one or the numbers or an ἀρχή contrary to the one (the infinite or the great and the small): Plato and the Pythagoreans (or Parmenides for being) say that these things are what they are οὐχ ἕτερόν τι ὄντα, while most other philosophers say that they are what they are only ἕτερόν τι ὄντα. "The Pythagoreans said in the same way [as other early philosophers] that the ἀρχαί are two, but they added this much that was peculiar to themselves, that they thought that the limited and the infinite were not any other natures, like fire or earth or anything else of this kind, but that the infinite itself and the one itself were the οὐσία of the things of which they are predicated; whence they also thought that number was the οὐσία of all things" (Metaphysics A5 987a13-19); and Plato too, "like the Pythagoreans, said that the one is a substance, and that it is not, being something else, called one [καὶ μὴ ἕτερόν γέ τι ὂν λέγεσθαι ἕν], and that the numbers are causes of οὐσία to the other things" (A6 987b22-5). Building on these passages, as we have seen, B#11 ascribes to Plato and the Pythagoreans the view "that being and the one are not something else [of which being or one is predicated], but that this is their nature, so that their οὐσία is just to be being or to be one" (1001a10-12), or equivalently that "being and the one are οὐσίαι of things-that-are, and ... each of these is not, being something else, one or being [καὶ ἑκάτερον αὐτῶν οὐχ ἕτερόν τι ὂν τὸ μὲν ἓν τὸ δὲ ὄν ἐστιν]" (1001a5-8), while the physicists say--rightly, in Aristotle's view--that "we must ask what being and the one are, there being some other underlying nature [δεῖ ζητεῖν τί ποτ' ἐστὶ τὸ ὂν καὶ τὸ ἓν ὡς ὑποκειμένης ἄλλης φύσεως]" (1001a7-8).[30] Aristotle also uses similar language in inquiring about the status of numbers: the Academics, who think that numbers are "separate οὐσίαι and the first causes of beings" (M6 1080a14), must say that "number is some nature, and its οὐσία is not something else but this very thing" (a15-16). To say that the number three is separate, or a nature, or an οὐσία--and these terms are all equivalent--is to say that it exists καθ' αὐτό, i.e. that there is something whose nature is just to be three, and not merely some other nature of which "three" is predicated: "so if it is necessary that, if number is among the things that exist καθ' αὐτά [εἴπερ ἐστὶν ἀριθμὸς τῶν ὄντων τι καθ' αὐτό], it must be in one of the ways that have been described, and if it cannot be in any of these, then it is clear that number does not have such a nature as those who make it separate posit" (M8 1083b19-23). B#11 had already argued that, whether we say that the one is or is not an οὐσία (1001a24-6, b1-4), it follows in either case that "it is impossible for number to be an οὐσία" (b2-3) or that "number would not be a separated nature of beings" (a25-6): this is meant to be the same conclusion in both cases ("ἀμφοτέρως," b1), and is supposed to be an embarrassment for the Academics, who, whether they believe in a Form of three or not, all believe that there is

[30]cite the parallel passage of B1 996a5-8: πότερον τὸ ἓν καὶ τὸ ὄν, καθάπερ οἱ Πυθαγόρειοι καὶ Πλάτων ἔλεγεν, οὐχ ἕτερόν τί ἐστιν ἀλλ' οὐσία τῶν ὄντων, ἢ οὔ, ἀλλ' ἕτερόν τι τὸ ὑποκείμενον

something whose nature is just to be three. But Aristotle himself thinks that the conclusion is simply correct, and that the argument shows that numbers do not exist καθ᾽ αὑτά.

Perhaps more surprisingly, Aristotle also poses the question of existing separately or καθ᾽ αὑτό, or of the X being X οὐχ ἕτερόν τι ὄν, in the case of the Platonic and Pythagorean material ἀρχαί, the infinite or the great and the small. Great and small, Aristotle says, are relations (πρός τι, Metaphysics N1 1088a21-22): that is, to be great is always to be greater than something, and to be small is always to be smaller than something; and this is already a Platonic thesis.[31] But, Aristotle goes on to argue, "τὸ πρός τι is least of all a φύσις or οὐσία, out of all the categories, and is posterior to quale and quantum... for nothing is either great or small, either many or few, or in general πρός τι, which is not ἕτερόν τι ὄν many or few or great or small or πρός τι" (a22-24, 27-9): if something is (say) fewer than five, then it must, being three, be fewer than five, or being two, be fewer than five--it cannot simply be the πρός τι fewer-than-five without first being something else, in this case some determinate quantity. Aristotle takes this argument as refuting the claim of the "indefinite dyad of the great and the small" to be an ἀρχή, or to be prior to quantities. Instead, great and small and many and few are "affections and accidents, rather than ὑποκείμενα, of numbers and magnitudes" (1088a17-18), and so posterior to, because existing parasitically on, these numbers and magnitudes. Of course three-feet-long is always great (in relation to two feet) and small (in relation to four feet), whereas great and small can exist without being three-feet-long, so great and small are prior by Plato's test to three-feet-long or to any other particular magnitude; but here again Plato's test fails to show priority in οὐσία.[32]

Aristotle's main discussion of the Platonic and Pythagorean claim that τὸ ἄπειρον exists καθ᾽ αὑτό, and is an ἀρχή, comes not in the Metaphysics but in the Physics: this discussion is particularly interesting, because the inferences that Aristotle draws (toward a reductio ad absurdum) from the thesis that the infinite exists καθ᾽ αὑτό help to bring out more clearly what the thesis that X exists καθ᾽ αὑτό would imply, and so what this thesis would mean. Aristotle introduces the discussion by asking "whether the infinite exists or not, and, if it exists, what it is" (Physics III,4 202b35-6), but this question is closely bound up with the question of whether the infinite is an ἀρχή. All philosophers worth mentioning who have touched on physics, Aristotle says, have given an account of the infinite, and indeed they have all made it in some way an ἀρχή of beings (203a1-4), but they disagree about how it exists and about how it is an ἀρχή. The Pythagoreans and Plato say that it exists (and is an ἀρχή) "καθ᾽ αὑτό, not as an accident of something else, but the infinite being itself a substance [καθ᾽ αὑτό, οὐχ ὡς συμβεβηκός τινι ἑτέρῳ, ἀλλ᾽ οὐσίαν αὐτὸ ὂν τὸ ἄπειρον]" (203a4-6), while "all the physicists posit some one of the so-called elements, like water or air or what is between them, as a different nature underlying the infinite" (203a16-18).[33] In the first half of Physics III,5 (204a8-34) Aristotle undertakes to refute the thesis of Plato and the Pythagoreans; then he turns to examine whether the infinite might exist in the way that the physicists say it does. Although Aristotle introduces his

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[31] for more discussion about the dyad of the great and the small, and why it is "indefinite" or "indeterminate" or "undemarcated" [ἀόριστος], see Iγ2c below

[32] same point at A9 992b1-4 against describing the ὑποκειμένη οὐσία ὡς ὕλη as the great and the small: this is a predicate and differentia of the substratum rather than the differentia itself. that is: the great and the small do not exist καθ᾽ αὑτά, so a further question arises what it is that is great and small, and only the final answer to that question will give the ὑποκειμένη οὐσία ὡς ὕλη of the thing. see also discussion of Xenocrates' apparent criticism of Plato in this issue in Iγ2

[33] ὑποτιθέασιν here means not just 'posit' but 'posit under': the meaning is clear enough just from looking at the present text - there is no other way to make sense of the dative τῷ ἀπείρῳ - but will also be confirmed by a parallel to be considered below. perhaps note why no exception here for Anaximander

discussion of the Platonic and Pythagorean thesis by announcing his conclusion that "it is impossible that the infinite should be something separate from the sensibles, being some infinite-itself [αὐτό τι ὂν ἄπειρον]" (204a8-9), his arguments in this section never use the assumption that the infinite is separate from sensibles, but only that the infinite exists separately in the sense of existing καθ᾽ αὑτό--or, as Aristotle puts it, that there is an infinite-itself.[34] This section contains a number of arguments, in highly compressed form, but the crucial argument is as follows:

> It is also clear that the infinite cannot exist as existing in actuality and as a substance and an ἀρχή. For, if it has parts, any part of it that is taken will be infinite (for to-be-for-the-infinite and [what is] infinite are the same, if the infinite is a substance and not [said] of a subject [τὸ γὰρ ἀπείρῳ εἶναι καὶ ἄπειρον τὸ αὐτό, εἴπερ οὐσία τὸ ἄπειρον καὶ μὴ καθ᾽ ὑποκειμένου]), so that it is either indivisible or divisible into infinites. But it is impossible for many infinites to be the same (and yet, just as a part of air is air, so also a part of the infinite is infinite, if it is a substance and an ἀρχή). So it is without parts and indivisible. (204a20-28)

We want to understand what Aristotle means by the different propositions of this argument by seeing what they are supposed to imply and to be implied by; and to see this it will help to lay out the structure of the argument. The argument is a reductio ad absurdum of the premiss that the infinite is a substance (or, equivalently, that it exists καθ᾽ αὑτό, or not καθ᾽ ὑποκειμένου). The core series of inferences is as follows:

(1) The infinite is a substance (or exists καθ᾽ αὑτό, or not καθ᾽ ὑποκειμένου).
(2) [What is] infinite and to-be-for-the-infinite [τὸ ἀπείρῳ εἶναι] are the same.
(3) Any part of [what is] infinite is infinite.
(4) Either
  (4a) something that is infinite has no parts, or
  (4b) something that is infinite has parts each of which is infinite.

The inference from (3) to (4) is immediate. Aristotle thinks that (4a) is absurd because, as he has argued just above (204a11-14), something that is indivisible can be called infinite only improperly, "as voice is invisible" (204a12-13), that is, only negatively and not privatively: the infinite is "that of which, for those who take [from it some determinate] quantity, there is always something left over to take" (Physics III,6 207a7-8), and if something has no quantitative parts, so that no part of it can be taken, then it is infinite or inexhaustible only as voice is invisible or as a stone is blind. So if (4) holds, and (4a) is absurd, then (4b) must hold. But Aristotle thinks that (4b) is also absurd, because (as he puts it here) "it is impossible for many infinites to be the same": that is, several infinites cannot add up to a single infinite, since the whole must be greater than the part.[35] So Aristotle thinks that (4) is absurd, and he wants to infer that (1) is also impossible. The difficulty is to understand why the inferences from (1) to (2) and from (2) to (3)

[34]the question is again put in terms of an αὐτὸ ἄπειρον at 204a17-18. Aristotle denies that the Pythagoreans thought the infinite existed separated separately from sensibles; he nonetheless refutes them together with Plato, and not together with the physicists

[35]compare arguments from Physics VIII,10

are supposed to be valid. Evidently neither of these inferences depends on anything special about the infinite: it is supposed to follow generally for any X that if X is a substance (or exists καθ' αὐτό, or not καθ' ὑποκειμένου), then what is X is the same as to-be-for-X, and also that if what is X is the same as to-be-for-X, then any part of what is X is itself X (Aristotle thinks both of these inferences hold for X = air, if air is a substance and an ἀρχή). But it is not obvious why either of these inferences is supposed to hold, because it is not obvious what it means to say that what is X is the same as to-be-for-X--or, using the conventional translation of "τὸ X-dative εἶναι" as "the essence of X," what it means to say that what is X is the same as the essence of X.

Indeed, one's natural first reaction is that there is something syntactically wrong with the statement that τὸ X is the same as τὸ X-dative εἶναι: what can it mean to equate an ordinary noun phrase like "the white [thing]" with an infinitive phrase like "to be white" or "to be for the white"? But with a bit of sympathetic understanding we can tease out Aristotle's meaning. A clue comes from his saying "for to-be-for-the-infinite and [what is] infinite are the same, if the infinite is a substance and not [said] of a subject" (204a23-4): this suggests that it is specifically the fact that X exists not καθ' ὑποκειμένου that explains why the X is the same as the essence of X. Recall that in Posterior Analytics I,4 τὸ βαδίζον, the walker or walking thing, is an example of something that does not exist καθ' αὐτό, because it is said of some other underlying thing: as Aristotle says, "the walking [thing], being something else, is walking." By contrast, if X exists καθ' αὐτό and not καθ' ὑποκειμένου, then it is not the case that X, being something else, is X. In the latter case (say X = Socrates), the thing that is X is something whose nature is just to be X, not something of some other nature of which to-be-X is predicated: so we can say that in this case the thing that is X is the same as to-be-X, whereas the walking thing is not the same as to-be-walking (or to-walk), but something else of which to-be-walking is predicated. Alternatively, instead of speaking of the nature of the thing that is X, we can say that, if X is not said of it καθ' ὑποκειμένου, then for this thing to exist is just the same as for this thing to be X, whereas, if X is said καθ' ὑποκειμένου, then for this thing (which is in fact X) to exist is not the same as for this thing to be X. Thus for the thing which is Socrates to exist is just the same as for it to be Socrates: the thing which is Socrates cannot, for instance, cease to be Socrates while continuing to exist, unless there is some other ὑποκείμενον of which Socrates is predicated. By contrast, if Socrates is also the thing that is walking, then for this thing to exist is not the same as for it to be walking, since this thing, namely Socrates, can continue to exist even after it stops walking.[36] Indeed, if Socrates is the thing that is walking, then it cannot be the case both that the thing that is Socrates is the same as to-be-Socrates and that the thing that is walking is the same as to-be-walking, since it would follow, absurdly, that to-be-Socrates and to-be-walking are the same; Aristotle will discuss this argument in Metaphysics Z6 (see IIγ1 below).

All this helps in understanding why Aristotle infers in Physics III,5 from "X is a substance and not καθ' ὑποκειμένου" to "the thing that is X and to-be-X are the same." It also helps make sense of the further inference from "the thing that is X and to-be-X are the same" to "any part of what is X is itself X." If X is merely a predicate of some other underlying nature Y, so this thing (which is in fact X) can continue to exist as long as it is Y (whether or not it remains X), then it might happen that X is predicated only of the totality of Y, and not of each particular thing that is Y and is part of this totality. This is especially plausible if "X" is a quantitative term, like "two

[36]but note that in some cases where the thing that is X and to-be-X are not the same, the thing that is X cannot cease to be X while continuing to exist (e.g. X = animal). on the relation between "X exists" and "this thing is X," see below Iγ1. it may help to say: this X and its being-X are not the same if the X can be without its being-X being, i.e., without it being X

liters": what is two liters is ἕτερόν τι ὄν (say, being water) two liters, but it is this totality of water which is two liters, and the particular parts of the water will each be water but will not each be two liters. But, Aristotle says, if X is not predicated of some other underlying nature, then any part of X is itself X: "just as a part of air is air, so also a part of the infinite is infinite, if it is a substance and an ἀρχή". Presumably the reason is that if the parts of X are not themselves X, but (say) one part of X is Y and the remaining part is Z, then X will be predicated of Y and Z together as a whole, and so X will be said of some other underlying thing or things, and so will not be a substance (and Y and Z will be prior to X, and so X will not be an ἀρχή).[37] So if the infinite is predicated of some other underlying nature (e.g. of the extracosmic air), then the parts of this substance can be finite, but if the nature of this substance is just to be infinite, then all its parts must also be infinite. Indeed, this argument works equally well if we assume merely that some kind of multiplicity or non-unity exists not καθ᾽ ὑποκειμένου (without assuming that this is specifically infinite multiplicity): if the thing is a multiplicity, it has parts, and if each of its parts is always a multiplicity, then the thing is infinite in multiplicity, and so is each of its parts.

Aristotle's argument from the premiss that the infinite exists not καθ᾽ ὑποκειμένου (or from the weaker premiss that some kind of multiplicity exists not καθ᾽ ὑποκειμένου) to the conclusion that something that is infinite has a part that is also infinite (4b above) would be accepted by Aristotle's chief target here, Plato; the disagreement is about whether (4b) is absurd. The crucial texts are in the Parmenides' discussion of the "others," the things other than the One. In the third Hypothesis, Plato tries to determine the nature of the others in themselves by abstracting away all their relations with the One. Before the others come to participate in the One, they cannot yet be one (individually or as a totality), so they must be many; but they cannot be finitely many (either as a totality or individually), because each part of the totality must itself be many, since it does not yet participate in the One. Thus the others by their own nature, abstracting from their participation in the One, are infinitely many: "if we always consider the nature other than the form, itself by itself, whatever we see of it will always be infinite in multiplicity [ἄπειρον πλήθει]" (158c5-7). When to this nature considered in itself we add participation in the One, then "there comes to be, in the things other than the One, from the combination of the One with themselves, something else that gives them a limit [πέρας] in relation to each other, whereas their own nature in themselves [gives them] unlimitedness [ἀπειρία]" (d3-6). As these texts show, Plato thinks he can analyze everything other than the One-itself into two pure constituents, the pure unity that it receives from participation in the One-itself and the pure non-unity or multiplicity that remains when everything it receives from the One is subtracted: the unity of the thing can be described as its form (what it receives by participation in the separate Form of unity), and the remaining multiplicity as the material substrate which receives this form. If such an analysis is possible, then the material substrate must be not merely a πλῆθος but ἄπειρον πλήθει. Plato would accept the formulation that this infinite exists καθ᾽ αὑτό, that it is not a mere accident of the material substrate but the essence of this substrate. He also accepts the consequence that a whole which is infinite has parts which are infinite, and, apparently, the further consequence that the whole is not greater than the part. As

[37] one might wonder how much of this Aristotle actually believes, since in Metaphysics Z13-16 he seems to deny that parts are prior (in the relevant sense, i.e. in οὐσία) to their wholes; but this does seem to be what he is assuming for the argument in Physics III,5. from the standpoint of Metaphysics Z, a cat is an οὐσία, and a cat has parts, but these parts are not cats (though there is still a sense in which they are cat rather than dog). but these parts exist only potentially, and so a cat has parts only potentially. applied to the infinite: either its parts are also infinite, or it has parts only potentially; but if it has parts only potentially, it is infinite only potentially. which is what Aristotle thinks; but then, as Physics III,5 puts it, "the infinite cannot exist as existing in actuality and as a substance and an ἀρχή"

Plato says when he returns to the "others" in the seventh Hypothesis, "even if one takes what seems to be the smallest [part within the continuum of the others], suddenly, as in a dream, it will appear many instead of seeming to be one, and instead of smallest [it will appear] very great in comparison to the fragments of it" (164d1-4): these seemings are all equally false, and nothing in the continuum of the others, prior to their participation in the One, is objectively of any determinate magnitude, being all, on examination, equally infinite. For Plato, apparently, this is just one of the many surprising consequences that the dialectician can derive from his ἀρχαί; for Aristotle, it is a reductio ad absurdum. By analyzing the things other than the One into a formal component (the One that they participate in) and a material component (the nature other than the One that comes to participate in the One), Plato thinks he can reach both formal and material ἀρχαί, each of which exists καθ᾽ αὑτό and is what it is οὐχ ἕτερόν τι ὄν. Aristotle is thus justified in Metaphysics B#11 in attributing to Plato the thesis that the οὐσία of what is and of what is one are just τὸ ὄντι εἶναι and τὸ ἑνὶ εἶναι (1001a9-12), and equally justified in Physics III,5 in attributing to Plato the thesis that τὸ ἄπειρον is the same as τὸ ἀπείρῳ εἶναι; if he can derive absurdities from these Platonic theses, he will have shown that being and unity and infinity do not exist καθ᾽ αὑτά and so cannot be ἀρχαί. It is important that the question whether X is the same as the essence of X--which Aristotle will take up notably in Metaphysics Z6, see Iγ1 below--does not arise only for formal ἀρχαί. "Essence of X" does not mean "form of X": even if X is a material ἀρχή it would have to be the same as the essence of X. And if this X is not the essence of X (like the many others of the third Hypothesis of the Parmenides, which are each one, and which are therefore not the essence of otherness), then this X is neither a material nor a formal ἀρχή, but can be traced back to some underlying nature participating in some form, each of which will be an ἀρχή prior to this X. Sometimes Plato affirms that some X is the same as the essence of X, and Aristotle will deny it, in order to undermine Plato's claim that X is an ἀρχή; sometimes Plato denies that this X is the same as the essence of X, in order to find a path from this X to prior formal or material ἀρχαί, and Aristotle will affirm that this X is the essence of X, again to undermine Plato's path to the ἀρχαί. To understand any of these disputes we need to bear in mind what we have seen about being καθ᾽ αὑτο and not καθ᾽ αὑτο, being X ἕτερόν τι ὄν and οὐχ ἕτερόν τι ὄν.

Iβ4b: Τόδε vs. τοιόνδε, τί ἐστι vs. ποῖόν ἐστι

In the previous subsection, following Aristotle's example, I have used the phrase "a this" (τόδε τι, τόδε), and its opposite "such" (τοιόνδε, ποιόν), without explanation. Nominal definitions are easy: X is a this if it can be referred to, in some appropriate circumstance, by the demonstrative pronoun "this" (either deictic or anaphoric), and otherwise X is a such.[38] (The expression "τόδε τι", "a this", means the same as "τόδε", "this": Aristotle opposes "τόδε τι" to "τοιόνδε", "this thing" to "this kind of thing", and sometimes he just says "τόδε" instead of "τόδε τι". But usually he says "τόδε τι" rather than "τόδε", to avoid ambiguity. If I say "every substance-term signifies τόδε", and I happen to be pointing at a table, I will have said something false, since not every substance-term signifies this table, i.e. the thing that the term "this" refers to in the present circumstance. It is safer to say "every substance-term signifies τόδε τι", i.e. something that the

[38]Strictly we ought to distinguish such (ποιόν, τοιόνδε, τοιοῦτον) from so-much (ποσόν, τοσόνδε), and so on, but Aristotle often lumps these all together as "such" by contrast with "this," and for the present purpose the finer distinctions make no difference.

term "this" can signify in some appropriate circumstance.)[39] We cannot hope to give real definitions of "this" and "such", since these concepts are primitive. But a wider view of the historical context will help to understand how Aristotle uses these terms and why, and how they are connected with other terms that he uses. The this/such distinction was not Aristotle's private property, but part of a philosophical discourse which existed before Aristotle, and which continued after Aristotle without being much influenced by him. I do not mean that there was a fixed technical vocabulary that Aristotle simply accepted; but his use of these terms is part of the larger discourse, and responds to earlier philosophers' uses. Naturally, Aristotle is strongly influenced, positively and negatively, by Plato, indeed both by themes in Plato that go back to Socrates and by themes in Plato that go back to the physicists. Less obviously, Aristotle is also responding to an anti-Platonic dialectical tradition: this tradition includes Antisthenes, Lycophron, and Stilpo and other Megarians, but there is too little evidence to discern which individuals Aristotle may be responding to.

One important source of the this/such distinction is the investigation of the οὐσία of things, that is, the pursuit of τί ἐστι questions, as it was carried out both by the physicists and by Socratic dialectic. The distinction between "this" and "such" is closely connected with the distinction between "τί ἐστι" and "ποῖόν ἐστι" questions. An answer to a "τί ἐστι" question takes the form "τόδε", while an answer to a "ποῖόν ἐστι" question takes the form "τοιόνδε". For instance, if I ask "who is the man in the corner?", the answer "Socrates" has the form "τόδε" (or "ὅδε" in the masculine),[40] whereas if I ask "what is the man in the corner like?", the answer "white" or "snub-nosed" has the form "τοιόνδε" (or "τοιόσδε"). So if "τίς ἐστι the man in the corner?" and "τίς ἐστι the wisest man in Greece?" have the same answer, then ὅδε, this person who is in the corner, is the wisest man in Greece; if "ποῖός ἐστι the man in the corner?" and "ποῖός ἐστι the wisest man in Greece?" have the same answer, then it is only τοιόσδε, someone like the person in the corner, who is the wisest man in Greece. This point is summed up in the maxim, which Aristotle takes for granted in the Metaphysics, that οὐσία-terms (answers to τί

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[39]The scholarship has often both misconstrued the syntax of the phrase "τόδε τι", and imagined more philosophical weight in it than is really there. (It is a bad sign that the one-page article of J.A. Smith, "ΤΟΔΕ TI in Aristotle," Classical Review 35 (1921), p.19, completely unargued and written in Hegelian jargon, is still sometimes cited as an authority.) Frede-Patzig in a very brief discussion of the meaning of the term (II,15) say that there are two possible construals: either "τόδε" stands in for some species-term, and τόδε τι is a particular member of that species, or "τι" stands in for a species-term, and τόδε τι is a particular member of that species. Both construals would thus mean the same thing, and both are certainly wrong. (Frede-Patzig are apparently guided by a reading of Z1 1028a10-13, where "being" signifies in one way τὸ τί ἐστι καὶ τόδε τι; they think that "τί ἐστι" would suggest a universal, and that "τόδε τι" corrects this impression to make clear that Aristotle means an individual οὐσία. But in context τί ἐστι and τόδε τι are synonymous, and contrasted with ποιόν and so on: an answer to a τί ἐστι question takes the form "τόδε". See IIα below for discussion of Z1.) At Z8 1033b19-26 and Z13 1038b23-7 Aristotle goes back and forth between "τόδε" and "τόδε τι" (or "τὸ τόδε" and "τὸ τόδε τι") interchangeably, and at N2 1089b28-1090a2 (and context) between both of these and also "τὸ τί ἐστιν": τὸ τόδε is clearly what can be signified by a demonstrative, and there is no hope of making the τι bear any further burden in either of the ways Frede-Patzig suggest. When Aristotle says "τόδε τι" he is not thinking in the first instance either of individuality or of species, but of the underlying nature by contrast with its attributes. While scholars often say "a τόδε τι", this is misleading, since English "a" duplicates Greek "τι"; correct is "a τόδε" or "a this." Frede-Patzig translate "τόδε τι" as "ein Dies von der Art"--"a this of the kind"?--which is, as Theodor Ebert puts it {Archiv für Geschichte der Philosophie 1990, p.248, get details}, "leider einfach kein Deutsch"; and, as Jacques Brunschwig asks, Göttingische Gelehrte Anzeigen, CCXLIV, 1992, pp.41-55, at p.45, "'ein' = τι; 'Dies' = τόδε; 'von der Art' = τι bis?".

[40]note Post An I,22 on unnatural predications like "what is approaching [τὸ προσιόν] is Callias." so Callias is, in the nature of things, the subject of τὸ προσιόν rather than something predicated of it; but the subject of τὸ προσιόν is still a way of answering τί [or τίς] ἐστι τὸ προσιόν. this will be taken up in IIα3

ἐστι questions), and only οὐσία-terms, signify τόδε τι.[41] The grammarians make the same point in reverse, when they say that pronouns (including "τόδε" and "τοῦτο" and "ἐκεῖνο", in both deictic and anaphoric uses) "signify οὐσία without ποιότης": the pronoun "τόδε" applies to this thing, and continues to apply to this thing despite any qualitative changes it may undergo, because it signifies only what the thing is, its οὐσία, without regard to its ποιότητες, what it is like, which may change while the thing remains.[42] The only person who had ever tried to break the connection between the pronoun "τόδε" and the question "τί ἐστι?" (or between τόδε and οὐσία) is Aristotle himself in the Categories, where he wants to say that species- and genus-terms are said of their individuals ἐν τῷ τί ἐστι, and so signify an οὐσία and not merely a ποιόν,[43] but where, as we will see, he also has reasons forcing him to deny that any universal is τόδε τι. Even in the Categories, Aristotle finds this separation of οὐσία from τόδε difficult: "every οὐσία[-term] seems to signify τόδε τι" (c5 3b10) on account of its grammatical form, and this is "incontestable and true" (3b11) for the primary οὐσίαι, though Aristotle thinks we must resist the appearance in the case of secondary οὐσίαι.[44] But in the Metaphysics Aristotle is able to rejoin the usual and less uncomfortable position identifying οὐσία with τόδε τι, since he now insists that "none of the things that are said universally is οὐσία" (Z16 1041a3-5, cf. Z13 1038b8-9, 1038b34-1039a2).

The distinction between "τί ἐστι?" and "ποῖόν ἐστι?" questions comes especially from Socratic dialectical practice. Plato represents Socrates as insisting that the "τί ἐστι?" question must be answered first, and that it is illegitimate to answer a "τί" question with a "ποιόν" answer. Thus at the beginning of the Gorgias, when Socrates and Chaerephon ask what the art is that Gorgias professes, and Polus answers that it is "the finest of arts" (448c9, simplifying),

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[41]references from the Metaphysics on the connection between οὐσία and τόδε τι, and note the hopelessness of distinguishing οὐσία τις from οὐσία τινός in this connection; cite B#12 1001b29-32 arguing that affections etc. do not signify the οὐσία of anything, since they are all said of a ὑποκείμενον, and none of them is τόδε τι; also Z1 τί ἐστι καὶ τόδε τι. recall the Topics passage about asking τί ἐστι of non-substance items; but, again, the answers here will be accidental abstracta rather than concreta, and these are in a sense οὐσίαι and in a sense τόδε τι (δικαιοσύνη is ὅπερ τόδε τι and ὁ δίκαιος isn't)

[42]I don't know a fully satisfying exposition in the Greek grammarians of the theory of pronouns (either deictic or anaphoric, signifying οὐσία without ποιότης) and nouns (signifying οὐσία with ποιότης), but see Apollonius Dyscolus De Pronomine [Grammatici Graeci II,1] 9,7-10 and 25,7-22 and De Constructione [Grammatici Graeci II,2] 29,1-32,8, 100,13-102,5, and 113,5-14. The grammarians' account of pronouns seems to be developing a Stoic account (although the Stoics lump pronouns together with "articles," i.e. with what we would call the definite article and the relative pronoun, Apollonius De Pronomine 5,13-9,6; all have similar anaphoric functions). The grammarians sometimes, but not always, accept the Stoic assumptions that οὐσία is matter (so that the thing's identity comes from its having the same matter) and that Socrates is not a this but a such; Aristotle could accept their analysis of pronouns and οὐσία, while rejecting these Stoic theses. … maybe also cite Priscian Book XVII, around p.131, noting that Priscian is a Latin adaptation of Apollonius … the grammarians (e.g. Priscian, not too far away), say nice things about οὐσία and τί ἐστι questions. note on the distinction I am expressing as "signify" vs "apply to"; maybe note on deictic and anaphoric

[43]it is important to maintain this distinction for the purposes of the Topics, see Topics I,5 102a31-5 and IV,1 120b21-9

[44]Aristotle says at 3b13-16 that secondary substance-terms "seem to signify τόδε τι on account of the σχῆμα τῆς προσηγορίας", but in fact signify ποιόν τι instead. Σχῆμα τῆς προσηγορίας here is what he calls σχῆμα τῆς λέξεως in the Sophistical Refutations: the claim is that a term like "ἄνθρωπος" gives rise to fallacious arguments because it has the grammatical but not the logical form of a term signifying a this, i.e. of a proper name. Aristotle does not explain why "ἄνθρωπος" appears grammatically to signify a this, but the reason is probably that, unlike adjectives, it is not inflected for gender and therefore never becomes paronymous. On sophisms of σχῆμα τῆς λέξεως, turning on an incongruity between grammatical and logical form, see Iβ4c below.

Socrates complains that "when Chaerephon asked in what art Gorgias is an expert, you praise his art as if someone had criticized it, but you have not answered what it is [ἥτις ἐστί] ... no one is asking what Gorgias' art is like [ποία τις], but what it is [τίς]" (448e2-4, 6-7). So to say of Gorgias' art that it is the finest of arts is to say ποία τίς ἐστι, whereas to say that it is rhetoric (as Gorgias now does, 449a5), is to say τίς ἐστι, albeit not clearly enough for Socrates' purposes: to give a clear answer, we would have to answer the further question "what is rhetoric?", not stopping until we reached a final definition, which would define the art by telling us what things it is knowledge of. Similarly, in the Meno, to say what virtue is would be to give a definition of it: Meno initially wants to know whether virtue is teachable, but (Socrates says) this is asking ὁποῖόν τι virtue is, and we cannot possibly know ὁποῖόν τι virtue is unless we first know τί ἐστι. For "if I do not know what something is [τί ἐστι], how would I know what it is like [ὁποῖόν τι]? Or do you think it is possible that someone who does not even know who Meno is would know whether he is beautiful or rich or noble or the contraries of these?" (71b3-7). So in order to answer Meno's question about what virtue is like, we must first define virtue: and if Socratic inquiry does yield a definition of virtue (or of rhetoric), the thing signified by this definition (as by all dialectical definitions according to Plato) will be a Form. So the final answer to a τί ἐστι question of the type of "what is virtue?" or "what is Gorgias' art?" will be a verbal formula that signifies a Platonic Form.

A Platonic Form ought therefore to be τόδε τι. Plato does not explicitly use this formula for the Forms. But he does say that some other things ought not to be called τόδε or τοῦτο, and the reasons that disqualify the other things are disadvantages that the Forms are notably free from. In the Theaetetus, describing the opinions of those philosophers ("all the wise except Parmenides," 152e2) who think that all things are always in motion and that "nothing is any one thing αὐτὸ καθ᾽ αὑτό" (152d2-3, 156e8-157a1, 157a8), he says that according to this doctrine we should say only that things come-to-be and not that they are, and "we must not admit 'τι' ... or 'τόδε' or 'ἐκεῖνο' or any other name that would bring things to a stop" (157b3-5). Plato himself does not agree that "nothing is any one thing αὐτὸ καθ᾽ αὑτό", since the Form of F is F αὐτὸ καθ᾽ αὑτό and in no way not-F, but Republic V argues that the many sensible F's are all also in some way not-F, so that none of the sensibles is any one thing αὐτὸ καθ᾽ αὑτό: so by the reasoning of the Theaetetus it should follow that sensibles should not be called τόδε or ἐκεῖνο. Plato draws this conclusion explicitly in the Timaeus. What now appears to us as water will later appear to us (having undergone some transformation) as air or earth or fire: so "since each of these never appears the same, of which of them would one not be ashamed to maintain firmly that it is this and not something else [τοῦτο καὶ οὐκ ἄλλο]?"--e.g., to say of what appears to be water that it is water and not air (49c7-d3). So far the Timaeus is echoing Republic V ("is each of the many [F's], more than not being, this thing that one would say it is [τοῦτο ὃ ἄν τις φῇ αὐτὸ εἶναι, i.e. F]?", Republic V 479b9-10): both texts say that it is wrong to describe a sensible F as τοῦτο, when the pronoun "τοῦτο" stands in anaphorically for the noun "F". But the Republic does not say we can never use demonstrative pronouns to refer to sensibles. The Timaeus, by contrast, does draw this conclusion: "by far the safest when we discuss these things is to speak in this way: as for what we see always coming to be at different times in different places, like fire, on each occasion we should call fire not 'this' [τοῦτο] but 'such' [τὸ τοιοῦτον], nor should we call water 'this' but always 'such', nor [should we speak] of anything else as having stability, of all the things we point to and use the words 'τόδε' and 'τοῦτο', thinking we are signifying something: for it does not wait around for 'τόδε' and 'τοῦτο' or any other expression that would indicate that they

are stable" (49d3-e4).[45]

The Forms, by contrast with sensibles, do wait around: the Form of fire, unlike sensible so-called fire, can safely be called "fire", and if the pronouns "τόδε" and "τοῦτο" indicate stability, it should be quite safe to apply them to the Forms. To say of something that it is fire is to say that it is this thing, namely fire, and properly this should be said only of the Form: sensible things are better described by some expression that says not that they are this thing but only that they are such a thing, that they are like the Form: so it would be better to say that this sensible thing is "fiery", rather than that it is fire. To put the point in terms of τί and ποῖον questions: the answer to the τί ἐστι question, asked of sensible so-called fire, is not "fire", where fire is a this (namely, the Form of fire), but the answer to the ποῖόν ἐστι question, asked of sensible so-called fire, is "fiery", where fiery is a such. The Forms are indeed answers to τί ἐστι questions (what is fire? what is virtue?), but they are not the answers to the question "τί ἐστι τοῦτο?" when we fix the meaning of "τοῦτο" deictically rather than anaphorically, by physically pointing in the direction of some sensible object.

So what is the answer to "τί ἐστι τοῦτο?", when we fix the meaning of "τοῦτο" by pointing in the direction of some sensible object? Or, to put it another way: when we try to fix the meaning of "τοῦτο" by pointing in the direction of some sensible object, what is it that "τοῦτο" really signifies? Plato had not raised this question in earlier dialogues, and when he takes it up in the Timaeus, he is no longer following the model of Socratic dialectic, but rather the model of the physicists, who had pursued the "what is X" question by looking for the ultimate subject of which X is predicated, or for the first material ἀρχή out-of-which X arose. As we have seen, the Stoics follow this physical tradition when they say that the οὐσία of a thing is its matter, or (since the grammarians are reflecting Stoic doctrine) that pronouns such as "τόδε" and "τοῦτο" signify οὐσία without ποιότης. But the Stoics are taking this more immediately from the Timaeus. For Plato says, in trying to describe more clearly the relation of fire and air and earth and water to the underlying nature of which they are predicated,

> if someone had shaped all figures out of gold and did not cease to reshape each of them into all the others, and if someone pointed to one of them and asked what it is, by far the safest in respect of truth would be to say that it is gold, and as for the triangle and all the other figures that arise in it, never to say 'these things are' [λέγειν ταῦτα ὡς ὄντα]--things that slip away in the middle of our assertion--but rather to be content if they will accept [the designation] 'such' [τὸ τοιοῦτον] with some stability. Now this same account holds for the nature that receives all bodies [i.e. that is related to earth, water, air and fire as the gold is related to the golden figures]" (50a5-b6).[46]

That is: if someone points to what we ordinarily call a triangle, shaped out of the gold, and asks

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[45]note on some difficulties and controversial aspects of the passage, and note what is uncontroversial. besides Cherniss (reprint in his Selected Papers), see Gill in Phronesis 1987, Silverman in CQ (when?), and other references cited by these authors. even Cherniss agrees that Plato is saying that (what we ordinarily call) fire cannot be called τόδε, and, further down, that the receptacle can be called τόδε. also note the play on legal terminology in φεύγει οὐχ ὑπομένον (cp. Andocides) and ἔνδειξις. also: here or in another footnote, note some other conditions for something to be named by a pronoun, at Theaetetus 202a4 and Parmenides 164a, also Sophist on conditions for τι and το.

[46]more problems. Cornford's guess that there is an opposition between ταῦτα and τοιοῦτον may be right. Cherniss' reading of this part of the passage seems very implausible to me. maybe a note against Gill

"τί ἐστι?", the correct answer is not "triangle", since it is not triangle (where triangle is a this), but only something triangular, where triangular is a such; but what it is that is triangular is gold, and so "gold" is the correct answer to the "τί ἐστι" question. Likewise, if someone points to what we ordinarily call fire and asks "τί ἐστι?", the correct answer is not "fire" (since it is not fire, where fire is a this, but only fiery, where fiery is a such): what it is that is fiery is (a piece of) the receptacle, where receptacle is the nature analogous to gold, and so "receptacle" is the correct answer to the "τί ἐστι" question. So for the Timaeus, as for the Stoics, the οὐσία of any object I can point to is its material substratum. Equivalently, if I point at what we ordinarily call fire and say "τόδε", what the pronoun really signifies is not fire but its material substratum. As we have seen, Timaeus 49d3-e4 argues that when I point at the fire and say "τόδε", the pronoun fails to signify the fire; instead, as Plato goes on to say, "that in which they [fire etc.] each appear when they come to be, and out of which again they perish [namely the receptacle]--only this [should be] referred to using the words 'τοῦτο' and 'τόδε'" (49e7-50a2): when I point at a fiery piece of receptacle and say 'τόδε', what I have signified is receptacle, just as, when I point at a triangular piece of gold and say 'τόδε', what I have signified is gold.

The receptacle is thus in some ways like the Forms, and unlike sensible bodies. The receptacle, like the Forms, is an eternal ἀρχή, not manifest to the senses, which we can discover only by reasoning back from sensible things to their causes: by considering the deficiencies of sensible things, and especially their changeability, we can infer that they cannot be ἀρχαί in themselves, but presuppose, as ἀρχαί prior to them, both the Forms and the receptacle. The Forms and the receptacle are both in different ways οὐσίαι of the manifest things, answers to τί ἐστι questions about the manifest things, the Form of fire giving the essence, what fire is, while the receptacle gives the ὑποκείμενον, the thing that is fire: they are thus respectively analogous to the One and the infinite nature of the others in the third hypothesis of the Parmenides. Because the receptacle and the Form both answer τί ἐστι questions, they can both be signified by "τόδε" (one deictically, the other anaphorically), whereas sensible fire is only τοιόνδε. Or, to put it in the terms of Posterior Analytics I,4, the Form and the receptacle exist καθ᾽ αὑτά, while sensible fire exists not καθ᾽ αὑτό, because it is what it is only ἕτερόν τι ὄν: it is receptacle which is fiery, just as the walker is some man who is walking. We can also put the point in terms of the question (discussed in the previous subsection) whether the thing that is X and the essence of X are the same. If the Timaeus is right that (what we ordinarily call) fire does not exist καθ᾽ αὑτό, then in this case the thing that is fire and the essence of fire are not the same, just as the walking thing and what-it-is-to-walk are not the same. Once we can show that X does not exist καθ᾽ αὑτό, this non-identity allows us to argue both to the ὑποκείμενον of X and to the essence of X as two ἀρχαί existing prior to X. This reasoning takes us from the composite, fiery receptacle, to pure receptacle and to pure fire. But both of the ἀρχαί that we reach in this way must themselves be identical with their essences (like the One and the infinite, discussed above) or an infinite regress would result. It is thus important to be able to determine when a thing is identical with its essence and when it is not. Plato's claim that, for an ordinary sensible X, the thing that is X is not the same as the essence of X, gives him a powerful argument to both his formal and his material ἀρχαί, and so it will be important for Aristotle, in Z4-6, to examine and contest this claim.

Iβ4c: Sophistic and the question of τόδε τι

Plato is important in two very different ways for Aristotle's question "is X a τόδε?". First, as we have seen, Plato raises the question "is X a τόδε?" when he denies that ordinary sensible

bodies are τάδε, and claims that the pronouns "τόδε" and "τοῦτο" must refer instead to the receptacle or (though Plato does not makes this explicit) to the Forms. But, second, Plato's opponents raise the question "is X a τόδε?" and use it to challenge the theory of Forms by arguing that what is signified by a universal term like "animal" cannot be τόδε τι. Notably, Aristotle himself says in the Categories that, despite what the linguistic form would suggest, secondary-substance terms such as "animal" do not signify τόδε τι. However, this is not a peculiarly Aristotelian thesis, but merely Aristotle's preferred formulation of a point made by a broad range of critics of the Forms, and already familiar by the time Aristotle wrote the Categories. In the Categories, and in the broader tradition that the Categories here represents, this point arises out of reflection on dialectic, and has no special connection with inquiry περὶ ἀρχῶν; but Aristotle in the Metaphysics seizes on the point in order to show that things said universally, since they are not τάδε, cannot be ἀρχαί. So the tradition of dialectical criticism of the Forms gives one important context for understanding the question "is X a τόδε?" as it arises in the Metaphysics.

The anti-Platonist dialecticians are roughly coextensive with the people that Aristotle calls "sophists," and it will help to have some discussion of these people.[47] It is notorious that Aristotle never applies this word to any of the people who are nowadays thought of as the canonical sophists (Protagoras, Gorgias, Prodicus, Hippias); and, while he never gives a systematic account of "the sophists," his scattered remarks about them suggest that he is usually thinking of a specific type of philosopher, a type quite different from Protagoras.[48] To begin with, the "sophists" that Aristotle speaks of are dialecticians rather than rhetoricians (the sophist is a person with dialectical ability who uses it to appear wise, rather than merely to test others' claims to wisdom);[49] but beyond this, they practice a single specific type of dialectic.

That Aristotle is thinking of a specific type of "sophist" is clear from his descriptions of what the sophists always or typically do. Most sweepingly, in Metaphysics E2, he says that "Plato was in a way not wrong to say that sophistic is about not-being. For almost all of the λόγοι of the sophists are about accidents: whether the musical and the grammatical, and musical Coriscus and Coriscus, are the same or different, and whether everything that is, but has not always been, has come-to-be, so that if, being musical, he has come-to-be grammatical, then being grammatical, he has come-to-be musical, and however many other λόγοι of this kind there may be. For accident seems to be close to not-being" (1026b14-21).[50] And indeed, in other passages about sophists or sophistic, Aristotle returns obsessively to these subjects, Coriscus and musical

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[47]it is to the credit of Aubenque to have seen the importance of the sophistic background for Aristotle's investigation of the senses of being; although he is too willing to accept Plato's and Aristotle's point of view on the sophists, and to use "sophist" as a pejorative

[48]it's very rare that Aristotle calls someone a sophist by name: just Aristippus, Lycophron, Bryson, and Polyidus, once each {I give the Lycophron and Bryson refs below; Aristippus is B#1, Polyidus is Poetics 1455a6}. Classen in Kerferd, ed., The Sophists and their Legacy (Hermes Einzelschriften 44) reviews the evidence about who Aristotle means by "sophists"; also compare discussion in Louis-André Dorion, Aristote: Les refutations sophistiques

[49]texts (one in the Rhetoric, 1355b15-21, besides the obvious ones)

[50]text-issue and coordinate with other treatments (in Iγ1?): De Rijk proposes switching γραμματικός and μουσικός, I had thought of emending ὥστ᾽ εἰ to ὥστε … also note parallel Topics I,11 104b24-8, and see Brunschwig's note ad locum … I would think the point has to be, as Brunschwig suggests top of I,129, that being γραμματικός is presupposed by being μουσικός, so you can't, being musical, come to be grammatical, nor, being musical, are you eternally grammatical; rather than, as he says at the end, that the problem is about acquiring the two attributes simultaneously. but this is supported by Metaphysics K8 1064b23-6, where the sophism seems to be "being musical, he became grammatical; so he is both musical and grammatical; he was not always both musical and grammatical; so he became both musical and grammatical"

Coriscus and a small family of variations, as the specialties of the sophist. Furthermore, the sophist deals in a specific kind of argument about these subjects. Sophistic is dialectical skill applied toward constructing only apparently conclusive arguments. "Dialectic and sophistic are concerned with the same genus [namely, being] as philosophy, but dialectic is [only] peirastic [i.e. able to test a respondent's claims to knowledge] about the things that philosophy knows, and sophistic is apparent, but not real [knowledge]" (Metaphysics Γ2 1004b22-6). Since "sophistic is apparent but not real wisdom, and the sophist is someone who makes money from apparent but not real wisdom," the sophist must "appear to produce the ἔργον of the wise man" (SE c1 165a21-4). But, Aristotle goes on to say, "the ἔργον of one who knows is to speak without falsehood about the things he knows, and also to be able to show up the person who speaks falsely about them: the first of these consists in being able to give a λόγος, and the second in being able to receive one" (165a24-8)--that is, the first is the role of respondent, and the second the role of questioner in a dialectical exchange--and so the sophist must appear to do what the wise man actually does as questioner and respondent. The genuine wise man will be able to prove his conclusions out of the respondent's mouth (or to refute their contradictories) as well as to defend himself under questioning; the dialectician, as questioner, need only examine, on the basis of common opinion, a respondent who lays claim to knowledge; but the sophist as questioner must argue in such a way as to seem to be wise himself, and this means that he must seem to prove his conclusions, or refute their contradictories.

The sophist must therefore (as Aristotle infers, 165a28-31) seek out the kind of argument that Aristotle calls "sophistical refutations [σοφιστικοὶ ἔλεγχοι]," and that later writers call simply "sophisms".[51] These arguments are called ἔλεγχοι because they are the kind of arguments given in dialectic, that is, they are series of yes-no questions designed to force a respondent to contradiction (or, next-best, to asserting a falsehood or a paradox[52] or to speaking ungrammatically or to repeating himself, or to apparently doing one of these things, SE c3 165b12-22). But these arguments are "sophistical ἔλεγχοι [that is, they are] apparently ἔλεγχοι, but really paralogisms and not ἔλεγχοι" (from the beginning of the SE, 164a20-21), that is, they will seem to force the respondent to contradiction only as long as some flaw in the reasoning remains unnoticed. Aristotle's On Sophistical Refutations is devoted, first to classifying these pseudo-ἔλεγχοι and discovering the principles from which they arise (through c15), and then (from c16 on) to showing how to "solve" [λύειν] these arguments, that is, how to discover the flaw in the reasoning, so that, if you are respondent, you can draw the necessary distinctions and explain to the questioner and the audience why the conclusion that the questioner wants does not really follow. The SE is conceived as part of the Topics, and teaches another aspect of the same art of dialectic.[53] The sophist needs the art of dialectic to construct his apparent refutations: as Aristotle puts it, sophistic differs from dialectic "in the choice of life," by how the sophist and the dialectician choose to use their knowledge, not because they know different things (Metaphysics Γ2 1004b24-5). Both the sophist and the honest dialectician will need to study the

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[51]Aristotle does use "σόφισμα" in the relevant sense in just one text, Topics VIII,11 162a12-18 (twice), where it is equivalent to συλλογισμὸς ἐριστικός, or what he elsewhere calls a σοφιστικὸς ἔλεγχος (Brunschwig deletes 162a15-18, for reasons not connected with the word "σόφισμα", but that would still leave the occurrence of "σόφισμα" in a14). he also uses the adjective σοφισματώδης = σοφιστικός at Topics VIII,3 185a35. (he also uses "σόφισμα" in the Politics to mean a political "trick" or device, e.g. of an oligarchy to restrict popular participation)

[52]παράδοξον here is the opposite of ἔνδοξον: i.e. an answer that is embarrassing because contrary to common opinion or to the respondent's own opinion, thus an answer which the respondent would not have given unless forced to it by the argument--even if the answer turns out to be true

[53]cf. the conclusion in SE c34, and note Ross' editorial practice ("I" = Book IX at the top)

material that Aristotle presents in the SE, but the sophist will use it to construct apparent refutations, the dialectician to defend himself by solving them. The dialectician will also gain some lessons for philosophy, since this practice will teach him to distinguish the different meanings of words, and since, in learning to guard against invalid arguments from other people, he will also learn to avoid falling into these traps in his own reasoning (SE c16 175a5-12).

This, at any rate, is what Aristotle wants us to believe about what the sophists do and about the different purposes of studying sophistical reasoning. But difficulties emerge if we ask who these sophists are supposed to be. Aristotle wants us to believe that there are two radically different groups of people who study sophisms: the sophists, who want to use sophisms in order to create a false appearance of knowledge, and the honest dialecticians, who need to understand sophisms in order to defend themselves against the sophists or as a means to philosophical knowledge. So the sophists would only create sophisms, without solving them, and then the dialecticians would solve the sophisms that the sophists had created: there would be a constant arms-race between the offensive weapons of the sophists and the defensive weapons of the dialecticians.[54] But we should know better than simply to take at face value Aristotle's description of his philosophical rivals; and unbiassed historical investigation gives no reason to think that there was ever a group of philosophers who only created sophisms without also solving them. There was, in Aristotle's time and afterwards, a recognized philosophical practice of propounding sophisms, often in the form of a series of questions; this practice (or the knowledge it requires) is sometimes called "sophistic" and its practitioners "sophists"; but the purpose of the practice was always to teach how to solve the sophisms. Naturally it is easy to ridicule the practice of deliberately propounding sophistical arguments, to make it look as if the point of the practice was to deceive, or (since a typical ancient sophism would never fool anyone into actually believing its conclusion) simply to confuse a respondent into contradicting himself. Thus Plato in the Euthydemus ridicules Euthydemus' and Dionysodorus' practice of sophistic, and Sextus does the same to Diodorus at Outlines of Pyrrhonism II,245; the word "sophist," though it can mean neutrally "expert in sophisms," also easily recalls the accusations of deception and money-seeking. And because sophistic has such a bad reputation, it is also natural for a writer on sophistic, like Aristotle, to try to distinguish himself from "the sophists," and to imply that he has taken up the study of sophistic only in defense against them. But we know some things about at least some of the "sophists" Aristotle has in mind, and in each case they, like Aristotle, were interested in solving sophisms and not only in creating them.

The clearest instances of the people Aristotle calls "sophists" are the Megarian school and Lycophron. Lycophron is one of the few people that Aristotle calls a sophist by name (Politics III,9 1280b10-11); so is Bryson the Megarian (Historia Animalium VI,5 563a7 = IX,11 615a10), and Bryson's companion Polyxenus is called a sophist by Aristotle's student Phanias (in his Against Diodorus, cited by Alexander In Metaphysica 84,16-21) and by Diogenes Laertius (DL II,76). The reason that the Megarians came to be called sophists is that they were known for constructing sophisms or σοφιστικοὶ λόγοι. Aristotle twice cites Bryson as giving a σοφιστικὸς λόγος (Rhetoric III,2 1405b6-11 and SE c11 171b3-172a7, the latter argument described both as σοφιστικός and as ἐριστικός), and this is surely why he is able to refer to him for short as "Bryson the sophist." Eubulides and Stilpo and Diodorus were all famed for their "dialectical λόγοι," which are all σοφιστικοὶ λόγοι in Aristotle's sense: indeed, almost the only thing

[54]this picture is explicitly endorsed by Dorion, p.261, which quote. (the dialecticians would of course also be developing offensive weapons--but "fair" ones, not sophisms; the dialectician, in so far as he studies sophistic, does so only for defensive purposes)

Eubulides was remembered for was his collection of named λόγοι, the "veiled" and the "liar" and the "horned" and so on (DL II,108), of which Aristotle treats the veiled at SE c24 179a33-b33, and the liar at SE c25 180a3b2-7, as sample σοφιστικοὶ λόγοι. It is because of arguments of this kind that Stilpo is said to have surpassed his fellows in "sophistical inventiveness" [εὑρεσιλογία καὶ σοφιστεία] (DL II,113); Sextus Empiricus, having described Diodorus as giving "σοφιστικοὶ λόγοι against motion and against many other things," immediately and for this reason refers back to him as "the sophist" (Outlines of Pyrrhonism II,245). These σοφιστικοὶ λόγοι seem to have been typically posed as series of questions to lead a respondent to contradiction: Diogenes Laertius speaks of Eubulides as "asking" his λόγοι (DL II,108); Chrysippus speaks of "the Megarian questions" designed to refute ordinary beliefs (cited by Plutarch De Stoicorum Repugnantiis 1036e6-8); at DL II,111 Stilpo "asks" Diodorus some διαλεκτικοὶ λόγοι in the presence of Ptolemy Soter, and Diodorus, being unable to solve them [διαλύσασθαι] on the spot, slinks off and dies of shame.[55] So the Megarians seem to be paradigmatic sophists in Aristotle's sense: and commentators who (like Dorion) have accepted Aristotle's distinction between sophists and honest dialecticians have generally identified the Megarians as his target.[56] But it is clear that the Megarians, besides propounding their sophisms, also solved them. Epictetus, besides telling us that Diodorus devised the master λόγος by deriving a contradiction from three plausible premisses, also tells us how Diodorus solved the argument, by denying one of these premisses; Epictetus also adds that Cleanthes and Chrysippus solve the same λόγος differently, each choosing a different premiss to deny (Discourses II,19). When Diodorus "asked" the master λόγος in a dialectical exchange, he would not reveal his solution ahead of time: rather, in posing the sophism, Diodorus was challenging his respondents to find the solution on their own, just as Stilpo challenged Diodorus. Sophisms thus serve as competitive tests of dialectical power,[57] and also as fixed topics of professional discussion, accumulating different possible solutions as they are passed down from one philosopher to another. A teacher might also "ask" a sophism of a prospective student, as a recruitment technique: the respondent will be refuted and baffled, but he sees the hope that, if he studies with this teacher, he will learn how to loosen the knot. Assuming the student will pay for his instruction, there is thus a kernel of truth to Aristotle's saying that the sophists use their sophisms to make money: but they succeed in making money only because they can solve their sophisms.[58]

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[55]Diodorus' dying of shame is presumably borrowed from the story (Alcidamas') about the death of Homer. the words for "ask" and "question" in all these texts are forms of ἐρωτᾶν, the verb Aristotle uses for what the questioner does in a formal dialectical exchange: the same practice is being referred to throughout. the fact that Diodorus' arguments are all against something shows that his intention is to reduce his respondent's views to contradiction. note also the argument given at PH II,231 (which cite), which essentially depends on being posed as questions: this is particularly interesting, because as Sextus presents it it is assertoric; this suggests that many other arguments which are given to us as series of assertions were in fact originally intended as series of questions. note also Alexinus asking Menedemus whether he'd stopped beating his father DL II,135 (a version of the horned λόγος), and getting into a dispute on how to solve the sophism

[56]note on Sedley's paper and my attitude

[57]note aspect of competition for patronage (it is relevant that Ptolemy is there). also note Aristotle in the SE on the reputation-value of knowing how to solve a sophism posed by a questioner: it's not enough to not be taken in, you also have to be able to explain just where the argument goes wrong. contrast Sextus, who argues the uselessness of sophistic by saying that it's good enough just not to be fooled, and none of the arguments that dialectic teaches you to solve are ones that would actually fool you, even if you can't put your finger on why they're invalid

[58]note on the Euthydemus (teaching you a lesson in distinguishing the senses of words; first the confusion, then the light; why a protreptic [i.e., recruitment technique]; accused not of dishonesty but of triviality); cp. the SE on the value of sophistic in teaching you to distinguish senses of words; the Theaetetus passage implying that money will

The solution might consist in showing that the absurd conclusion does not really follow from the premisses, or that one of the true-seeming premisses should be denied; or instead it might consist in showing that the false-seeming conclusion can really be true.[59] Thus Diodorus' argument that nothing moves is a sophism but nonetheless (Diodorus thinks) a sound argument: Diodorus' solution is to accept the apparently absurd conclusion that nothing moves, but ease the paradox by distinguishing it from the genuinely absurd conclusion that nothing has moved (Sextus AM X,85-90, 97-102). And it was not only the Megarians who solved their sophisms: Aristotle's testimony shows that Lycophron did too. For Aristotle speaks in Physics I,2 of arguments seeking to infer, from the fact that some things can be predicated of others, the apparently absurd conclusion that "the same thing is both one and many" (185b26-7). "For which reason some, like Lycophron, took away 'ἐστίν', and others changed the expression around, saying not that the man is white but that he whitens [λελεύκωται, perfect passive], not that he is walking but that he walks, so that they should not, by attaching 'ἐστί', make the one to be many" (185b27-31). So Lycophron and the others posed a sophism that concluded, absurdly, that one thing is many--perhaps it turned on an inference "Socrates is white, Socrates is musical, therefore white and musical are the same," perhaps on an inference "Socrates is white, Plato is white, therefore Socrates and Plato are the same"--and they solved the sophism by denying the premiss that Socrates is white, "the others" saying that Socrates λελεύκωται, and Lycophron saying merely ὅτι Σωκράτης λευκός. So although Aristotle calls Lycophron a sophist, and although Lycophron posed sophisms, Aristotle is admitting that Lycophron used his sophisms to present a positive philosophical position in solving them; and we have no reason to think that any other "sophist" did otherwise.[60]

It is not hard to see the attractions of sophisms as a method of teaching. A sophism is a way of inducing aporia. As we have seen (in Iβ1 above), Aristotle uses aporiai to awaken the hearer or reader to the interest and difficulty of the subject, and to bring him to a state of perplexity from which he will gratefully accept Aristotle's own doctrine as a solution to the difficulty. The sophists use their sophisms for the same purposes: the main difference between a (say) Megarian sophism and an Aristotelian aporia is that the sophism is "asked" as a series of questions, letting the respondent answer and be driven to absurdity, instead of being expounded in continuous prose.[61] As we saw, one function of an Aristotelian aporia is to show that the accounts of earlier philosophers have been unable to solve the difficulty (writ large, Metaphysics B as a whole shows that the physicists and dialecticians and mathematicians have not achieved wisdom, since

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be charged for solutions. refer to "Aristotle and the Sophists," and perhaps handle some issues only there

[59]note both Aristotle and Sextus on this kind of sophism, whose conclusion is a paradox rather than a falsehood or a contradiction. Sextus gives an example of this kind of sophism at PH II,230, and shows how to solve it at II,233

[60]collect other references to people constructing sophisms based on strict criteria for "is": note Plutarch Against Colotes cc22-23 on Stilpo, DL II,134 on Menedemus. also cross-refs to other discussions of Lycophron and co: probably in talking about Δ7 (Iγ3) and Z6 (IIγ1)

[61]note on Buridan's Sophismata, where Buridan presents his whole theory of meaning and truth-conditions by means of a series of sophisms, introducing each doctrine or technical distinction only as it is needed to resolve some particular sophism. note, though, that Buridan's sophisms are not put in question-and-answer form: rather, he posits a case, states a proposition, and gives the arguments that the proposition must be true, and that it must be false, in the given case--to solve the sophism is to announce whether the proposition is true or false, and to disarm the arguments for the opposite conclusion. note also Vives' Against the Pseudodialecticians, an attack on the scholastics which would give you the same impression of the scholastics that Aristotle would of the Megarians: you would get the impression that the scholastics spent all their time constructing arguments for conclusions on the order of "the dog is your father." Vives never breathes a hint that the scholastics solved their sophisms, much less that they also did more systematically constructive things

they are unable to solve the difficulties about the ἀρχαί). And this function of aporiai, in showing that one's predecessors and rivals have not reached their goal, is also an important part of the Megarian use of sophisms. The Megarians were, after all, Socratics, and so part of their mission is to ask questions that refute other philosophers' claims of knowledge. One way to do this is to ask philosopher X a sophism that other philosophers might be able to solve, but that philosopher X himself cannot solve without undermining either his own theses or his own arguments. We have a nice example of this in the practice of the later Megarian Alexinus, who specialized in refuting Zeno the Stoic (DL II,109-110). Alexinus is following the model of Euclid of Megara, who "objected to demonstrations not in their premisses but in the inference" (DL II,107). Zeno had argued: "the rational is better than the non-rational; but nothing is better than the cosmos; therefore the cosmos is rational" (Sextus AM IX,104); so Alexinus offered the parallel argument "the poetical is better than the non-poetical, and the grammatical than the non-grammatical ... but nothing is better than the cosmos; therefore the cosmos is poetical and grammatical" (AM IX,108). This is a way of showing that there must be something wrong with Zeno's inference, even if the premisses are granted. Alexinus' argument is of course a sophism, and there are several ways that someone might solve it, but Zeno will have difficulties, since he cannot deny the premiss that nothing is better than the cosmos without denying his own thesis, and he cannot deny that Alexinus' argument is valid without denying that his own argument is valid.[62]

But for an earlier generation of Megarians, the pretender to wisdom most in need of refutation would be Plato. And the Megarians, and doubtless other "sophists" as well, devoted much ingenuity to constructing sophisms that a Platonist cannot solve without undermining either the doctrine of Forms or some of the arguments for the Forms. Many of the arguments collected in Aristotle's On Ideas (whether invented by Aristotle or taken over from earlier sources) are Alexinus-style parallels to Platonist arguments for the Forms, adapted to deduce conclusions that Plato finds unacceptable: these are challenges to Plato to solve these arguments without undermining his own. Often such arguments are given in the form of "third man" arguments, that is, arguments parallel to a Platonist argument for the Forms (or, in one case, to a Platonist argument for intermediate mathematicals) that have as their concluding line "therefore there is some third man, beside the many individuals and the idea." Alexander of Aphrodisias gives four such arguments in commenting on Aristotle's mention of the third man in Metaphysics A9 (990b17; Alexander In Metaphysica 83,34-85,12), and there is a fifth argument in Metaphysics K1 (1059b3-9). The so-called "third man argument" in Plato's Parmenides (although its example is not "man" but "large," and although no ancient source calls it a third man argument), is also of this type: it is likely that Plato is adapting the argument from some "sophistic" opponent of the theory of Forms, and projecting that fourth-century argument back into the fifth century (perhaps changing the example from "man" to "large" to make it fit better the context in the dialogue). It is also possible that Plato himself had sufficient detachment and humor to construct such a sophism against his own theory; but even if so, in putting this sophism in the mouth of the character Parmenides, he will be fictionally projecting back to the fifth century a real fourth-century practice of constructing sophisms against the Forms. Another such argument that "introduces the third man," is credited to the Megarian "sophist" Polyxenus: "if man exists by participation and presence of the idea man-himself, then there must be some man who has his existence in relation to the idea. But this is not man-himself (who is the idea), nor is it any particular man. So it remains that there is some third man who has his existence in relation to the idea" (Alexander In

[62]note Sextus AM IX,109-110 on how the Stoics solved the sophism

Metaphysica 84,17-21). The point is that in the (ex hypothesi) true sentence "man participates in the idea of man," the subject-term "man" cannot stand for the Form of man; but neither does it stand for a particular man such as Socrates or Plato. The reason why it cannot stand for a particular man is made more explicit in a closely related argument that Alexander gives in the same place and credits vaguely to "the sophists": "if when we say 'man walks' we are not saying either of the idea, man, that it walks (for it is unchanging), nor of some individual man that he walks (for how could we be saying this of someone we don't know? for we know that man walks, but we don't know which individual we are saying this of), then we are saying of some third man, besides these, that he walks: so there will be some third man of whom we predicate walking. This argument is sophistical, but those who separate the universal from the individuals--which is what those who posit the ideas do--offer the starting-points for it" (In Metaphysica 84,9-16). So, the sophisms conclude, the subject-term "man" in "man participates in the idea of man" or in "man walks" must stand for a third man.[63] A Platonist will have to accept the premisses of these sophisms but cannot accept their conclusions, and so he will have to find some way to solve them. And the sophisms can indeed be solved, though they cannot be solved well without some relatively sophisticated logical theory, such as medieval supposition theory or modern quantificational logic. In medieval terms, we might solve them by saying that in "man walks" the term "man" has determinate common supposition for all men, and that in "man participates in the idea of man" the (first) term "man" has confused and distributive common supposition for all men, and that in neither case does it have discrete supposition either for any mortal man or for the idea of man, so that it cannot be replaced salva veritate with the name of any mortal man or with the phrase "the idea of man." A Platonist could and should admit something like this. But once he has admitted that the term "man" can function in a true sentence without there being any man (either a mortal man or the idea) that this term stands for, then he has undercut the reasons for thinking that "man" in "Socrates is a man" stands for the idea (a medieval can analyze it as having determinate common supposition for all mortal men) or that "man" in "man is an animal" stands for the idea (a medieval can analyze it as having confused and distributive common supposition for all mortal men): he has thus undercut his semantic arguments for the existence of ideas.

Polyxenus may not have had a good positive explanation of how the term "man" functions in "man walks," but at least he knew that it did not function as a name for an individual, either a mortal or an eternal one. So in solving his own sophism he would avoid the conclusion "there is some third man of whom we predicate walking" by denying that there is some man of whom we are predicating walking when we say "man walks." The term "man" in this sentence must signify man, but there is not some man who is signified by "man" in this sentences. So the man signified by "man" in these sentences is not some man but no man, οὔτις.

It was in fact a notorious doctrine of the "sophists" that man, or any other universal, is οὔτις. Although this doctrine is often thought of as Stoic (it is attributed to Chrysippus by Simplicius In Categorias 105,7-21), it is attested already for Stilpo in only slightly different terminology at DL II,119 (on the most probable reading, Stilpo said "he who says man says no one," τὸν λέγοντα ἄνθρωπον λέγειν μηδένα).[64] And whether for Megarians or for Stoics, the doctrine emerges as a

[63]Harold Cherniss argued (Aristotle's Criticism of Plato and the Academy, Baltimore, 1944, v.1, pp.500-501) that these last two arguments (out of the four total "third man" arguments transmitted in the text) are a later interpolation in the Alexander passage, but even if this is so there is no reason to doubt the historical testimony.

[64]note on the textual mess, refer to Giannantoni for discussion. most people seem to prefer the text I have given, but the doctrine comes out the same on any plausible reading. (the textus receptus is impossible, and so is the manuscript alternative noted by Long--d update from Marcovich, or Dorandi if available)

solution to sophisms. There are several different sophisms that could be solved by the doctrine of οὔτινα. The most famous of these, which seems to have been specially marked out as "the Οὖτις λόγος", argues: "if someone [τις] is in Megara, he is not in Athens; but man is in Megara; therefore man is not in Athens" (Simplicius 105,13-14, also DL VII,187 and cp. VII,82).[65] To solve the sophism, we must say that man is not τις, in other words that man is οὔτις. In the same passage Simplicius gives a second sophism, "what [ὃ] I am, you are not; but I am [a] man; therefore you are not [a] man" (Simplicius 105,17-18): here too the sophism arises "because it used what is οὔ τις [or οὔ τι] as if it were τις [or τι]" (105,20). While Simplicius does not make explicit how this diagnosis would be used in solving the sophism, presumably both Chrysippus and Aristotle would solve it by saying that you are not what I am, but such as I am, because although we are both ἄνθρωπος, ἄνθρωπος is not a this but a such; Lycophron would solve the sophism by denying that I am ἄνθρωπος, and saying only ὅτι ἐγὼ ἄνθρωπος, and the "others" of Physics I,2 would make up a verb and say ὅτι ἀνθρωπίζω.

The Simplicius passage helps to bring out the connection between the "sophistic" doctrine of οὔτινα and Aristotle's denial in Categories c5 that universal terms signify τόδε τι. It is on the occasion of this Aristotelian denial that Simplicius mentions for comparison the Stoic (as he thinks of it) doctrine of οὔτινα. Simplicius thinks, rightly, that Chrysippus raised these sophisms as a difficulty for the Platonic ideas: "for Chrysippus too raises the aporia about the idea, whether it will be said to be τόδε τι" (Simplicius 105,8-9); the point is that if Plato says yes, he will have trouble solving the sophisms. Simplicius thinks that Chrysippus and Aristotle are both responding to the same difficulty in denying that terms like "man" and "animal" can signify τόδε τι; Chrysippus draws the conclusion that "man" and "animal" are not οὐσία-terms (saying in one context that "man" signifies a common quality, in another that man, the idea, is a mental construct [ἐννόημα] and thus οὔτις), while Aristotle in Categories c5 avoids this conclusion by distinguishing primary and secondary οὐσία-terms and saying that secondary οὐσίαι do not signify τόδε τι. Simplicius says that the Οὖτις sophism arises "from ignorance that not every οὐσία signifies τόδε τι, [and] from the σχῆμα τῆς λέξεως" (Simplicius 105,11-13).[66] The

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[65]note textual problems (the lacuna in Simplicius, d follow Kalbfleisch's indications), and the name Οὖτις (note circumflex vs. acute). also note Simplicius' use of γάρ at 105,14, like Aristotle's in SE c22 (and elsewhere?) to indicate the solution of a sophism, in this case that man is οὐ τις or οὔτις. {why do LS think this is not the Οὖτις?}. note similarity to the "man walks" argument. when I say "man is in Megara" I can't mean any individual man; but nor can I mean the idea of man, since by parity of reasoning he would also be in Athens, and therefore separated from himself; but do I mean some third man? solution: the man signified by "man" in "man is in Megara" is οὔτις … add on οὔτις: Sedley "Stoic Metaphysics" in Southern Journal of Philosophy supp. 1985 (mostly duplicating LS). Graeser, "Der Dritte Mensch von Polyxenus," Museum Helveticum 1974, with literature there cited. Graeser at least sees that the problem is indefiniteness, but thinks that Polyxenus himself thinks that "A is B" is true only where "A" signifies something of which this is true, not that Polyxenus is reducing that Platonic thesis to absurdity

[66]translation problem. is Simplicius' saying that the Stoics' ignorance of this gives rise to the sophism? I doubt it, but so LS 30E. if so, Simplicius' point would be that Chrysippus overshoots the mark, unnecessarily denying that "man" is an οὐσία (and thus unncessarily denying that man is τις? -- but as far as I can tell Simplicius thinks Chrysippus was right about the latter point). more likely Simplicius' point is just that the sophism arises from ignorance of the fact that "man" (which Simplicius, following Aristotle rather than Chrysippus, calls an οὐσία-term) does not signify τόδε τι--and this is just the relevant case of saying that the sophism arises from the σχῆμα τῆς λέξεως. Chrysippus and Aristotle would then both be solving the sophism in essentially the same way although in different terminology--it's not that Chrysippus would be a victim of the sophism, which is silly. (look for parallels to παρὰ τὴν ἄγνοιαν. note grammatical difficulties with LS' construal. on the other hand, there may well be something wrong with the text. I wonder whether the phrases τὸ παρὰ τὸν Ο. σόφισμα and παρὰ τὸ σχῆμα τῆς λέξεως may have gotten interchanged--the καί is hard to interpret as it stands)

Chrysippean (and Megarian) doctrine of οὔτινα clearly comes out of a solution to sophisms of the kind Simplicius cites, and Aristotle's denial that universal terms signify τόδε τι also emerges from a solution to similar sophisms. Aristotle does not quite say so in the Categories, which lays down without argument that universal terms do not signify τόδε τι. But the Categories does say that "every οὐσία[-term] seems to signify τόδε τι ... [so that] in the case of secondary οὐσίαι, it seems similarly [to the case of primary οὐσίαι], because of the σχῆμα τῆς προσηγορίας, to signify τόδε τι, when someone says 'man' or 'animal'" (3b10, 13-15). To say that the σχῆμα τῆς προσηγορίας of secondary οὐσία-terms makes them falsely appear to signify τόδε τι is to say that these terms give rise to sophisms παρὰ τὸ σχῆμα τῆς λέξεως. Such sophisms (discussed briefly in SE c4 166b10-19 and at length in SE c22) are traditionally in English called "sophisms of figure of speech," but better "sophisms of grammatical form": they are invalid arguments which appear to be valid because grammatically similar expressions are taken to signify ontologically similar things. To solve such sophisms we must recognize when an expression signifies something other than what it grammatically appears to, and this is one main use that Aristotle makes of the Categories in other works. "It is clear how to respond to [sophisms] that turn on things that are not the same being said in the same way, since we possess the kinds of predication [τὰ γένη τῆς κατηγορίας, i.e. the categories]. For the respondent, when asked, granted that something that signifies τί ἐστι does not hold [of some subject], and the questioner showed that something [that signifies] πρός τι or ποσόν, but appears on account of its λέξις to signify τί ἐστι, does hold [of that subject]" (SE c22 178a4-8). So the relevant ontological distinctions will emerge from a study of sophisms of σχῆμα τῆς λέξεως. As Simplicius says, the Οὖτις argument is such a sophism, and gives occasion for distinguishing between τόδε τι and τοιόνδε and saying that universal terms like "man" signify τοιόνδε. "Likewise also in the case of Coriscus and musical Coriscus, are they the same or different? The former signifies τόδε τι, the latter τοιόνδε, so that it is not possible to set it out [οὐκ ἔστιν αὐτὸ ἐκθέσθαι]" (SE c22 178b39-179a3)--i.e., because "musical Coriscus" does not signify τόδε τι, it is not possible to replace the phrase with a proper name (or with a symbolic letter as in the ἔκθεσις of a geometrical proposition), saying "musical Coriscus is some person, call him Erastus, now are Coriscus and Erastus the same person or two different people?"[67] So too a sophism of σχῆμα τῆς

[67]Aristotle's use of "ἔκθεσις", here and elsewhere, is borrowed from the terminology of geometry--Ross misses this in his otherwise helpful list of Aristotle's uses of "ἔκθεσις" and "ἐκτίθεσθαι" (AM I,208-9), and so misses how Aristotle's different uses of the terms fit together. The statement of a geometric proposition (e.g. "if in a triangle two angles be equal to one another, the sides which subtend the equal angles will also be equal to one another," Euclid Elements I,6) is followed first by the ἔκθεσις ("let ABC be a triangle having the angle ABC equal to the angle ACB"), and then by the διορισμός ("I say that the side AB is also equal to the side AC"), and then by the construction, proof, and conclusion. The geometer's ἔκθεσις of the proposition is his "setting out" of an arbitrary individual instance, temporarily assigning names (or letters of the alphabet) to the different objects referred to in the proposition, and also (by drawing the points A, B and C and the lines connecting them) "setting them out" to the pupil's sight; the geometer will then proceed as if what he had to show were simply the διορισμός, the particular instance of the proposition applied to the case of the ἐκτεθέντα. Euclid does not himself use the noun ἔκθεσις, but he often uses the verb ἐκτίθεσθαι, usually in its suppletive passive ἐκκεῖσθαι (so especially in Book X, but also I,22, IV,10, IV,11; also an aorist middle infinitive ἐκθέσθαι at XIII,18 and an aorist passive subjunctive ἐκτεθῶσιν at IX,36). Aristotle unmistakably uses ἐκτίθεσθαι in this technical geometrical sense at Prior Analytics I,41 49b33-50a4 (and "ἐκκείσθω" in the geometrical passage on the rainbow in Meteorology III,5, 376a10). He also applies the geometrical term metaphorically in syllogistic, for "setting out" the terms with names or letters ("τοὺς ὅρους ὀνόματι ἐκτίθεσθαι", Prior Analytics I,35 48a29), and also in proving a syllogism such as "P belongs to every S, R belongs to every S, therefore P belongs to some R" τῷ ἐκθέσθαι, i.e. by "setting out" an individual instance of S: "for if both [P and R] belong to every S, if some one of the S's is taken, such as N, both P and R will belong to this, so that P will also belong to some R" (Prior Analytics I,6 28a22-6). (See Robin Smith, "What is Aristotelian

λέξεως concludes "that there is some third man besides [man-]himself and the individuals" (178b36-7);[68] the key to solving the sophism is that "man, and every universal, signifies not τόδε τι but τοιόνδε τι or ποσόν or πρός τι or something like this" (b37-9). Aristotle adds that conceding man to be τόδε τι is the cause of the third man, and concludes "that one must not concede that what is predicated universally of all [e.g. of all men] is τόδε τι, but that it signifies either ποιόν or πρός τι or ποσόν or something like this" (179a8-10).

Aristotle's doctrine that universal terms do not signify τόδε τι seems to have emerged as a response to sophisms against the Forms, whether leading to a third man or not and whether invented by the Megarians or by others, which were common topics of discussion in the Academy. The Megarians solve the sophisms by saying that universal terms signify οὔτι; Aristotle, armed with the categories and with the τόδε/τοιόνδε distinction (coming not from the Megarians but from Plato), can say not just negatively that "man" and "white" do not signify τόδε, but positively that they signify τοιόνδε, and that "large" signifies ποσόν; instead of saying that these terms signify οὔτι, he can say that while they do not signify τι in the strict sense which is equivalent to τόδε, they do signify τι in the broad sense that covers all the categories. These distinctions also allow Aristotle to save the copula "is" in sentences like "Socrates is [a] man" or "Socrates is white," which the Megarians and Lycophron had thought it necessary to paraphrase without the verb "to be." These "sophists" think that if Socrates is man and Plato is man, it follows that Socrates is Plato (this was the point of Simplicius' second Οὗτις sophism above), or that if Socrates is white and Socrates is musical, it follows that white and musical are the same, because they construe every two-place use of the verb "to be" as asserting identity, and therefore as symmetric and transitive.[69] (And since they deny that anything is man, they also deny that man exists.) By contrast, Aristotle can accept the ordinary assertions that Socrates is man and that Socrates is white, while saying that these assertions do not express identities, because they say only ὅποιος Socrates is and not ὅστις he is. (And man and white exist, although not καθ᾽ αὑτά, because there is someone who is them, i.e. because they are ὅποιος someone is, although not ὅστις he is.) So Aristotle solves sophisms turning on a strict construal of the copula by saying that the sense of the copula depends on the logical type of the predicate. If P is τόδε τι then for S to be P is for it to be τόδε, and this is an identity, but if, for example, P is in the category of ποιεῖν (let P be "walking"), then for S to be P is just for S to act in a certain way, which is not an identity; if "Socrates is walking" means no more than "Socrates walks," then the Megarians cannot be right to assert the latter and deny the former.[70] The inference from "S is P and T is P" to "S is T" is valid only where P is τόδε τι, so that, as Aristotle puts it, it is possible to "set out" [ἐκτίθεσθαι] P: then we can infer that <u>this</u> is both S and T, and therefore that <u>something</u> is both S and T, or that some S, namely <u>this</u>, is T.

For Aristotle and other Academics, the kinds of sophisms we have been discussing are not simply attacks by enemy Megarians which must be repelled by discovering techniques of solution. Sophisms are puzzles, which often generate philosophical discussions of how best to solve them, and which can be used to support one philosophical view against another. Scholars

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Ecthesis?", <u>History and Philosophy of Logic</u> v.3 (1982), pp.113-27 for the point that Aristotle is here using the geometrical notion of ἔκθεσις, and for argument that N here is an <u>individual</u> S rather than a subclass of S.)

[68]Aristotle doesn't say <u>which</u> argument concluding to a third man he means; both Pseudo-Alexander <u>In Sophisticos Elenchos</u> 158,20-26 and the anonymous paraphrase {give CAG ref.} take it to be the "man walks" argument--but perhaps only because Alexander attributes this to "the sophists," and they think Aristotle must here be referring to a <u>sophistical</u> third man argument

[69]perhaps collect witnesses (Stilpo, Menedemus, etc.)

[70]see discussion of Δ7 in Iγ1c below

have sometimes been disturbed that Aristotle at SE c22 178b36-9 lists third man arguments as sophisms of σχῆμα τῆς λέξεως while elsewhere using them himself against the theory of Forms, but there is no tension here: as Alexander says of the "man walks" argument, "this argument is sophistical, but those who separate the universal from the individuals--which is what those who posit the ideas do--offer the starting-points for it" (In Metaphysica 84,14-16, cited above). Third man arguments are not intended to refute the hypothesis of Forms (the conclusion "there is some third man" neither seems to follow deductively from "there is a Form of man," nor does it involve a contradiction), but rather, like Alexinus' sophisms against Zeno, to show that a philosopher who accepts certain arguments for the Forms must also accept other arguments for conclusions he will find unacceptable. Aristotle in On Ideas collects or generates arguments which will cause this kind of difficulty for the Platonists; and, elsewhere, he uses them to support his thesis that universals signify not τόδε but τοιόνδε. Plato too makes philosophical use of such sophisms, notably in the Parmenides. To recall the context, the character Zeno had given sophisms purporting to show that, if there are many things, the same things will have contrary attributes, being for instance both one and many (Plato does not actually give us Zeno's arguments, but the arguments that the same thing is both one and many would have turned either on a single whole being many parts [so Parmenides 129c4-d6, and cf. Philebus 14d8-e4], or on a single subject having many predicates [cf. Philebus 14c11-d3]). The character Socrates offers a solution based on his hypothesis of Forms: there is no difficulty in the same thing participating in contrary Forms, but he will be astonished "if someone shows that what one is [ὃ ἔστιν ἕν][71] is itself many, and again that the many are one" (Parmenides 129b6-c1), or if any of the other Forms can be shown to have these contrary attributes. The character Parmenides then gives a series of sophisms, including a "third man" argument (although the example is "large"), some of them claiming to prove that each Form is not just one but also many, which Socrates will not be able to solve so easily. Here and in the Philebus, and also in the Sophist,[72] Plato distinguishes two classes of arguments concluding that the same things are both one and many: these are often called the "easy one-many problems," arguing that each sensible thing is also many, and the "hard one-many problems," arguing that each Form is also many. These can be seen as stages in a discussion with the "sophists." First, Lycophron and the Megarians and so on propose arguments which seem to lead from ordinary predicative statements "S is F" to absurdities (and either Plato imagines Zeno as proposing such arguments too,[73] or he represents Zeno's arguments from part-whole structure as similar to Lycophron-style sophisms); then Plato solves such sophisms by positing the Forms, and saying that a single sensible thing can participate at once in many and even contrary Forms (including unity and multiplicity) without being identical to any of them; then the opponents reply by constructing "hard one-many problems," which arise as a result of the Platonists' positing Forms to solve the "easy one-many problems," and which cannot themselves be solved by the same methods. Plato in the Parmenides, Philebus and Sophist cites such "hard one-many problems" and puts them to his own philosophical use, and at least in the second part of the Parmenides he himself develops new problems of this type; Aristotle also makes use of older "hard one-many problems" and develops new variations. Plato thinks it is possible to solve such problems in such a way as to save the hypothesis of Forms (while perhaps drawing new consequences about the Forms from the solutions, and perhaps modifying things he had said earlier about the Forms), but Aristotle thinks that no such solutions are satisfactory, and,

[71] query about construal, note correspondence with Mueller and Sedley, September 2005
[72] references in the three dialogues
[73] as Eudemus does, fr. 37a Wehrli, Simplicius In Physica 97,11-16 and 138,32-193,3 {d check}

beginning in the On Ideas and continuing especially in Metaphysics ZH and MN, tries to develop one-many problems to defeat each Platonist attempt at solution.

One example of such a problem is the fifteenth and last aporia of Metaphysics B. Like most of the other aporiai of B, it is about ἀρχαί, and the Megarians and other "sophists" seem to have had no interest at all in speculation about ἀρχαί. But for something to be an ἀρχή, it must be an οὐσία, and for something to be an οὐσία, it must be τόδε τι rather than τοιόνδε, and so arguments that X is not τόδε τι (perhaps refining arguments of earlier "sophists" that X is οὔτι) will also refute the claim that X is an ἀρχή. And one-many problems can give a way to challenge the claim that X is τόδε τι. B#15 asks "about the ἀρχαί … whether they are universal or what we call individuals," or perhaps better "whether they exist universally or as we say individuals do" (1003a6-7), and raises objections against either answer. (The issue is close to the issue of B#9, discussed in Iβ3 above, whether the ἀρχαί are each numerically one, i.e. one-per-type, or only specifically one, i.e. many-per-type. While we might expect that "numerically one" would be equivalent to "individual," in fact the Platonists, who in #9 are said to make the ἀρχαί each numerically one, are here said to make the ἀρχαί universal, in that for them the ἀρχή α is not any of the many-per-type α's but rather a single thing predicated of them all.)[74] As in B#9, the objection against the anti-Platonist position is epistemological. "If [the ἀρχαί] are not universal but [exist] as individuals [do], they will not be [scientifically] knowable,[75] for the sciences of all things are universal:[76] so that there will be other[77] ἀρχαί prior to the ἀρχαί, the ones that are predicated universally [of them],[78] if there is going to be [scientific] knowledge[79] of them" (1003a13-17): the claim is perhaps not exactly that individuals cannot be scientifically known, but that since ἐπιστήμη of an individual depends on subsuming it under a universal of which we have ἐπιστήμη, the universal must be scientifically known first and make the individual scientifically known derivatively, and so the universal rather than the individual will be the ἀρχή. This is the epistemological argument against making the ἀρχαί individual (to which Aristotle will reply when he takes up the aporia in M10, see Iγ2d below); the argument against the Platonist position, that the ἀρχαί are universal, is ontological, a one-many problem.

> If [the ἀρχαί] are universal, they will not be οὐσίαι; for no universal [term] signifies a this, but rather such, whereas an οὐσία [signifies, or is] a this; if what is universally predicated were a this and could be "set out" [εἰ δ᾽ ἔσται τόδε τι

[74]but note complications, as described in your article in the Beta Symposium volume; these become more evident in Aristotle's treatment of the aporia in M10, discussed in Iγ2d, so perhaps defer until then. there are in theory three possible positions: that the ἀρχαί are one-per-type universals, that they are one-per-type individuals, and that they are many-per-type individuals. B#9 is main concerned with the dispute between the second and third of these possibilities, B#15 with something more like the first and third, although it is probably more precise to say that B#15 represents it as the Platonist view that the ἀρχαί are something like species or genera, then argues that those cannot be individuals, and that if they are not individuals they cannot be ἀρχαί.

[75]reading οὐκ ἔσονται ἐπιστηταί with EJ; A^bM have οὐκ ἔσονται ἐπιστῆμαι, taking ἔσονται as existential rather than predicative.

[76]reading αἱ ἐπιστῆμαι πάντων with EJ Bonitz Christ; ἡ ἐπιστήμη A^bM Ross Jaeger. The difference is meaning is not much, unless (as I suspect) the β tradition is taking πάντων conjunctively ("there is a single universal science of everything"), which is certainly wrong.

[77]M omits ἕτεραι

[78]reading αἱ καθόλου κατηγορούμεναι with A^bM Bonitz Christ Ross Jaeger, EJ omit αἱ.

[79]J (reported correctly by Ross; Jaeger is silent) reads ἐπιστῆμαι, so "if there are going to be sciences of them"

> καὶ ἐκθέσθαι τὸ κοινῇ κατηγορούμενον],[80] then Socrates would be many animals, himself and Man and Animal [πολλὰ ἔσται ζῷα ὁ Σωκράτης, αὐτός τε καὶ ὁ ἄνθρωπος καὶ τὸ ζῷον],[81] if each of these signifies a single this [τόδε τι καὶ ἕν].[82] (1003a7-12)

The overall structure is: a universal predicate does not signify a this; therefore a universal is not an οὐσία, and therefore it cannot be an ἀρχή. To show that a universal does not signify a this, Aristotle raises a one-many problem: one thing, Socrates, will be many things, namely the species and genera that are predicated of him. The Platonist opponent can solve the problem by pointing out that it turns on a sophism of σχῆμα τῆς λέξεως, treating non-thises as if they were thises, but he can do so only at the cost of admitting that the species and genera are not thises, and therefore are not οὐσίαι or ἀρχαί. The one-many problem turns on treating non-thises as thises because it turns on a "setting-out" [ἔκθεσις] of "man" and "animal," and only if animal is a this will it be available for setting-out [ἔσται … ἐκθέσθαι]. As usual, the ἔκθεσις becomes more perspicuous if we assign proper names (or symbolic letters) to what we are setting out: Socrates is an animal, but the man that is predicated of Socrates is also an animal, call it Xanthippe, and the animal that is predicated of Socrates is also an animal, call it Alcibiades. If Socrates and Xanthippe and Alcibiades are the same animal, then it is the same thing for Socrates to be Socrates and to be human and to be an animal, which is absurd, but if Socrates and Xanthippe and Alcibiades are three different animals, then the one animal, Socrates, will be three animals, which is also absurd.[83] This sophism turns on ἔκθεσις in much the same way as the

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[80]according to Bekker, a late manuscript, codex T, and codex G^{b} of Syrianus, has ἔστι for EJA^{b}M ἔσται … the word ἐκθέσθαι has troubled readers because ἔσται has to be taken both as predicative "is τόδε τι" and as potential "can be set out." they have perhaps been troubled especially because it seems that τὸ κοινῇ κατηγορούμενον would have to be both nominative as subject of ἔσται τόδε τι and accusative as object of ἐκθέσθαι; but we have here the personal ἔστι potential "S ἔστι V-infinitive" = "it is possible to V S," "S is available for V-ing" (cp. German "S ist zu V-en," English "John is easy to please") as at Aeschylus Persians 419 θάλασσα δ᾽ οὐκέτ᾽ ἦν ἰδεῖν and the similar Eupolis Fr. 148,2 Kassel-Austin, so τὸ κοινῇ κατηγορούμενον will be in the nominative both times. various emendations have been proposed: Christ suggested replacing καὶ ἐκθέσθαι with κατ᾽ ἔκθεσιν; Jaeger added δεῖ before ἐκθέσθαι, but then τὸ κοινῇ κατηγορούμενον would have to be construed first as nominative and then as accusative; Ross, following H. Richards, "Aristotelica," Journal of Philology v.34 (1915-18), 247-54, changed a κ to a ν and wrote ἓν θέσθαι, yielding "if it were possible to posit that what is universally predicated is a this and one," with a nice parallel to 1003a12 two lines below. Richards' emendation is possible, but the transmitted text is also possible, and the reference to ἔκθεσις is very much à propos, see discussion in the main text

[81]Jaeger, following a suggestion of Christ, brackets ζῷα, I suppose because he thinks the argument supports only the conclusion that Socrates is three things, not that he is three animals. Sarah Broadie (oral comment) suggests putting the comma after ζῷα rather than after Socrates, yielding "there will be many animals, Socrates himself and man and animal": this might be right, but for the absurdity we want to conclude that one thing, presumably Socrates, will be these many animals

[82]"Τόδε τι καὶ ἕν" (which would also be at 1003a10 with Ross's emendation) is unusual: any univocal term should signify one thing, even if it does not signify τόδε τι. But cf. Δ13 1020a7-8, a quantum is "what is divisible into constituents each of such a nature as to be ἕν τι καὶ τόδε τι": so perhaps here too the point of ἕν may be not that "man" signifies one rather than many, but that man and animal are two units that can be counted within a quantum, whereas white Socrates is not a quantum composed of Socrates and white if Socrates is a this and white is a such that is predicated of him.

[83]If with Jaeger we delete ζῷα, we can still run the argument, asking whether Socrates and Xanthippe and Alcibiades are three different things, rather than whether they are three different animals; but since "animal" is predicated of Socrates and man and animal, if they are three different things they will also be three different animals. This makes the absurdity more manifest, and was a standard way of concluding this kind of reductio ad absurdum: so M7 1082a35-b1, where Forms which are animals will be composed of animals, Topics VI,6 144a36-b1 where "if animal were predicated of each of the differentiae, many animals would be predicated of the species, since the differentiae

Parmenides-style third man argument, which turns on setting out man alongside the individual men and asking about the man that is predicated of all of them, or Polyxenus' and the anonymous sophists' third man arguments, which turn on setting out man and asking "who is that man of whom you just predicated that he walks, or that he has his existence in relation to the idea?", or the sophism about Coriscus and musical Coriscus, which turns on setting out musical Coriscus and asking whether he is the same person as Coriscus or a different person from Coriscus. An anaphoric pronoun or a proper name always signifies a this, and can only be used to signify equivalently to a term "X" if "X" itself signifies a this; if "X" does not signify a this, then the ἔκθεσις, whether accomplished with proper names or symbolic letters or merely with pronouns, is illegitimate, and when this is pointed out any argument based on it is solved.[84] This was Aristotle's point, about third man arguments and about musical Coriscus, at SE c22 178b36-179a10 (partly cited above),[85] and it applies to the "many animals" argument as well.

The anti-Platonist argument of B#15 is perhaps not the most obvious way to show that a universal predicate does not signify τόδε τι--we might have expected some variety of third man argument--but it nicely complements the anti-Platonist argument of B#9. There the argument was that if the genus animal were numerically one, it could not both combine with biped in man and combine with quadruped in horse; here, that if the genus animal and the species man were thises (and animals), they could not combine in the single this (and single animal) Socrates. Both arguments turn on one-many problems, there that one thing, animal, will be many and contrary things, biped and quadruped, here that one thing, Socrates, will be many things, Socrates and man and animal. (The problem in B#9 is a "hard one-many problem," since it shows that a Form, rather than a sensible, has contrary attributes at once. The problem in B#15 is in a sense an "easy one-many problem," since it shows that an individual sensible thing is both one and many through having many predicates and thus being many things. This was the sort of problem that troubled Lycophron and the others, but that was supposed to be easy to solve once we realized that "S is F" need not be an identity statement, may say not τί ἐστι but ποῖόν ἐστι, depending on what kind of term "F" is. But Aristotle's point is that the Platonists are debarred from solving the problem in this way if they say that the universal predicate is τόδε τι; and in that sense it is a "hard one-many problem" that the Platonists bring on themselves by positing Forms.) Both arguments are appropriate to Metaphysics B's aporiai about the ἀρχαί (more appropriate than a third man argument would be), since they both say that, while we may have reasons as Plato says to think that the universal is prior to what falls under it, once we posit the universals as ἀρχαί we will have no way back down to the things that are supposed to be derived from them--just as B#10 argues that, while perishable things may presuppose something prior, imperishable ἀρχαί

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are predicated of the species," and Seneca Letter 113,3, where if the Stoics are right that virtues are animals, "all the arts are also animals … it follows that many thousands of animals reside within these narrows of the chest, and each of us is many animals or contains many animals."

[84]caution: a pronoun might signify something existing not καθ᾽ αὑτό and abstractly, but not something existing not καθ᾽ αὑτό and concretely … examples again of ἡ δικαιοσύνη and ὁ δίκαιος … but it would have to be an individual justice … maybe cite from Plato arguments for the Forms "F and G are together two, so they are each one"

[85]note: having said that what is not a this cannot be set out, and that this is the way to solve the musical Coriscus argument (178b39-179a3), Aristotle adds that it is not ἔκθεσις that is at the root of the third man but conceding that man is tovde ti (179a3-5)--presumably because, once you make this concession, the ἔκθεσις will follow. Aristotle then adds more parenthetically (179a5-8) that if you allow the ἔκθεσις, then even if you don't say that the thing set out is a this, "it will make no difference": the absurdity will still follow. this whole passage, and in particular the role of ἔκθεσις in it, is badly misunderstood by Nicholas White {ref.}, unfortunately followed by Dorion in his commentary on the passage

would not give rise to perishable things, and B#11 argues that, while being and unity seem to be prior to anything else, if they were ἀρχαί nothing else could exist, and B#14 argues that, while δυνάμεις or δυνάμενα causes seem to be prior to ἐνέργειαι or ἐνεργοῦντα causes, δυνάμεις or δυνάμενα causes would not be sufficient to produce actual effects. Developing the legacy of "sophistic" one-many problems, Aristotle will pursue both the B#9 and B#15 arguments against the Platonists in Metaphysics ZH and MN, and will solve the arguments himself by saying that universals are only potential οὐσίαι (so that animal can be both biped and quadruped, each only potentially, and so that Socrates is not three actual things and can thus be one actual thing). But once someone adopts this solution, he cannot accept universals as ἀρχαί, and must look for some other kind of ἀρχαί, which Aristotle will try to provide: individuals, essentially actual, which do not combine to constitute their effects, but cause their effects in some quite other way.