

## ARISTOTLE'S *PHYSICS* 5.1, 225A1-B5

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**ABSTRACT:** This contribution offers an interpretation of the last half of chapter 1 of book 5 of Aristotle's *Physics* in the form of a commentary. Among other things, it attempts an explanation of why Aristotle calls the termini of changes 'something underlying' (ὕποκείμενον) and 'something not underlying' (μὴ ὑποκείμενον). It also provides an analysis of Aristotle's argument for the claim that what is not *simpliciter* does not change in the light of this interpretation.

**KEY WORDS:** Aristotle, Physics, Change, Motion, States of Affairs

What follows is a commentary on the second half of Book 5, Chapter 1 of Aristotle's *Physics*, which is an important and neglected text. It is important because, as Ross points out, it seems to make a 'fresh start' in Aristotle's 'analysis of change into its kinds', which led Porphyry and Philoponus to allocate Book 5, along with the books that come after it, to τὰ περὶ κινήσεως rather than to τὰ περὶ ἀρχῶν along with the books that precede it.<sup>1</sup> Aristotle's 'analysis of change into its kinds' is based on the distinction between μεταβολή and κίνησις, which is absent in the preceding books, and which I follow the Oxford translation in rendering as 'change' and 'motion' respectively.<sup>2</sup>

**225a1-11:**

And since every change is from something to something—as the word itself indicates, implying something 'after' something else, that is to say something earlier and something later—that which changes must change in one of four ways: from something underlying to something underlying, from something underlying to something not underlying, not from something underlying to something underlying, or not from something underlying to something not underlying, where by 'something underlying' I mean what is expressed by an affirmation. So it follows necessarily from what has been said that there are three kinds of change, that from something underlying to something underlying, that from something underlying to something not underlying, and that from something not underlying to something underlying; for that not from something underlying to something not underlying is not change, as in that case there is no opposition either of contraries or of contradictories. (225a1-11)<sup>3</sup>

This passage divides all change into three categories: (1) change from something underlying to something underlying, (2) change from something underlying to something not underlying, and (3) change not from something underlying to something underlying. A fourth possibility (change not from something underlying to something not underlying) is eliminated as spurious because ‘in that case there is no opposition either of contraries or of contradictories’. Later on, (1) is given, and (2) and (3) are denied the label ‘motion’. The result is that (1) is both a change and a motion since, as is implied throughout the passage above, motion is a type of change (cf. 225a34), while (2) and (3), which are also called ‘ceasing to be’ and ‘coming to be’ respectively, are merely changes.

The general point of this passage is clear: While motion proceeds between contraries, change that is not motion is a change between contradictories. What is not clear is what Aristotle means by ‘something underlying’ (ὑποκείμενον). Bonitz thinks it is ‘that which is posited as the substratum in which something else inheres’.<sup>4</sup> Ross claims that since the changes in this passage are said to proceed to and from ‘something underlying’, it must be a terminus and not a substratum. It must be ‘a positive entity (a6-7)—a substantial nature, a quality, a size, or a place—which has to be laid down or presupposed as implied in change, viz. as its *terminus a quo* or *ad quem*.’<sup>5</sup> Ross refers to lines 225a6-7, which says ‘by “something underlying” I mean what is expressed by an affirmation’ (τὸ καταφάσει δηλούμενον). But he clearly also has in mind 225b3-5, which says that in a change from something underlying to something underlying, what underlies ‘is either a contrary or an intermediate (for a privation may be allowed to rank as a contrary) and can be expressed by an affirmation, as naked, toothless, or black’, and this seems to suggest that being expressed by an affirmation (δηλοῦται καταφάσει) involves being designated by a positive term.

But glossing ὑποκείμενον as ‘positive entity’ papers over a problem, because ὑποκείμενον literally means ‘something underlying’ and it is not clear on this interpretation what such a ‘positive entity’ underlies. Ross seems to have in mind another

sense of ὑποκείμενον that Bonitz identifies, viz., ‘that which is posited (whether taken as granted or established by demonstration) as a foundation from which other things are concluded’. But surely this is a category mistake, because what are ‘laid down or presupposed’ in this sense are things like ὄροι, or premises of a syllogism, not substantial natures, qualities, sizes and places. There seems to be then, on Ross’ interpretation, nothing that these ‘positive entities’ underlie.

And there is good reason to think that what is expressed by an affirmation is not merely what is expressed by a positive term. In *Categories* 4, Aristotle says that positive terms like ‘man’ and ‘white’ are not ‘said by themselves in an affirmation’, which means that it is only through their combination that an affirmation is produced (2a5-12). In *De Interpretatione* 4, Aristotle says that positive terms like ‘man’ and ‘white’ are significant utterances (φάσεις) but not affirmations (καταφάσεις) since by saying them alone we cannot express (δηλώω) what is required to make a statement (a λόγος ἀποφαντικός, 17a17-19). Statements, which include affirmations and denials (ἀποφάνσεις), are always true or false (17a1-7), and ‘falsity and truth have to do with combination and separation’ but ‘names and verbs by themselves—for instance “man” or “white” when nothing further is added—are like the thoughts that are without combination and separation; for so far they are neither true nor false’ (16a10-18). A noun is a name of a subject, a verb is ‘a sign of what holds of a subject’, and when combined they either affirm or deny ‘something of something’ (τὶ κατὰ τινός, *De Int.* 10, 19b5, cf. *De Int.* 6, 17a25-6; *An Post.* 1.2, 72a13-4), e.g., not simply man or white but *that* a man is white. So it appears that what is primarily expressed by an affirmation is neither an attribute, as Ross suggests, nor a subject of an attribute, as Bonitz suggests, but *that* an attribute holds of a subject.

In his discussion of truth and falsity in *Metaphysics* Θ 10, Aristotle makes it clear that combinations of linguistic entities in an affirmation are matched, in the case of a true affirmation, by combinations of non-linguistic entities in their truth-makers, or ‘objects’ (πράγματα), as Aristotle calls them. ‘The condition of [truth and falsity] in the objects is

their being combined or separated, so that he who thinks the separated to be separated and the combined to be combined has the truth, while he whose thought is in a state contrary to that of the objects is in error' (1051b2-5). According to Aristotle, it is 'your being white' (τὸ σὲ εἶναι λευκὸν), or more precisely, the combination of you and pallor in the object of the affirmation that you are white that makes this affirmation true. And corresponding to the distinction between significant utterances (φάσεις) and affirmations (καταφάσεις) in language is a distinction between incomposite and composite objects (1051b24-5). A composite object is a combination of a subject and an attribute, e.g., man and pallor, while an incomposite object is, e.g., a form or immaterial substance. And while one can only signify (φάναι) or fail to signify the simple form of, e.g., man, one can affirm (καταφάναι) or deny (ἀποφάναι) the combination of the composite object 'your being white'. Aristotle says that for a composite object to be is to be 'combined and one', and for it not to be is to be 'separated and many'. For the object denoted by 'τὸ σὲ εἶναι λευκὸν' (1051b8) to be is for you to be combined in the appropriate way with pallor. For it not to be is for you to be separated from pallor. The modern name for this composite object or πρᾶγμα, which Aristotle also denotes with an articular infinitive with an (often implied) accusative subject, e.g., 'your being white' (τὸ σὲ εἶναι λευκὸν), is 'state of affairs'. I suggest that the existence of a state of affairs is what is expressed by an affirmation.

And as it happens, Aristotle says that a state of affairs underlies an affirmation in *Categories* 10, which would seem to give us something which underlies that is also expressed by an affirmation:

Nor is what underlies an affirmation and denial (τὸ ὑπὸ τὴν κατάφασιν καὶ ἀπόφασιν) itself an affirmation or denial. For an affirmation is an affirmative statement and a denial a negative statement, whereas none of the things underlying an affirmation or denial (τῶν δὲ ὑπὸ τὴν κατάφασιν ἢ ἀπόφασιν) is a

statement. These are, however, said to be opposed to one another as affirmation and denial are; for in these cases, too, the manner of opposition is the same. For in the way an affirmation is opposed to a denial, for example ‘he is sitting’–‘he is not sitting’ (τὸ κάθεται – οὐ κάθεται), so are opposed also the objects underlying each (τὸ ὑφ’ ἐκάτερον πρᾶγμα), his sitting–his not sitting (τὸ καθῆσθαι – μὴ καθῆσθαι). (*Cat.* 10, 12b6-16)

What underlies the affirmation ‘he is sitting’ as its truth-maker is the state of affairs referred to by the phrase ‘his sitting’. My suggestion is that the ὑποκείμενον referred to in *Physics* 5.1 that is expressed by an affirmation is the state of affairs that underlies an affirmation as a truth maker.<sup>6</sup> Aristotle twice tells us in *Physics* 5.1 that the ὑποκείμενον is related to its opposite as a contradictory (κατ’ ἀντίφασιν). The above passage tells us that statements and their underlying truth-makers are related in the same ways. So if the ὑποκείμενον is related to its opposite as a contradictory, then so are the statements that it and its opposite underlie. That is, if the ὑποκείμενον is what is expressed by an affirmation (e.g., τὸ καθῆσθαι [τινα]), then its opposite is what is expressed by a denial (e.g., τὸ μὴ καθῆσθαι [τινα]). According to the scheme of *Metaphysics* Θ 10, a true affirmation ‘he is sitting’ asserts that someone and the sitting posture are appropriately combined in an underlying state of affairs, and the true denial ‘he is not sitting’ asserts that someone and the sitting posture are appropriately separated in an underlying state of affairs.

There is an immediate, though not insurmountable difficulty in squaring this with the text. First, Aristotle alternates between describing the negative *terminus a quo* as ‘not from something underlying’ (225a5-6) and ‘from something not underlying’ (225a9-10). The first formulation, ‘not from something underlying’, seems to imply that nothing underlies in the *terminus a quo*, and therefore contrary to my interpretation, there is no underlying object of a denial. The second formulation, ‘from something not underlying’,

on the other hand, need not imply that nothing underlies, but only that something does not, i.e., what would otherwise underlie if what is denied were true. This way of looking at the matter can be found in *Metaphysics* Δ 7, where Aristotle casts denial as meaning the falsity of the opposing affirmation:

‘Being’ and ‘is’ mean that a statement is true, ‘not being’ that it is not true but false,—and this alike in affirmation and denial; e.g. ‘Socrates is musical’ means that this is true, or ‘Socrates is not-white’ means that this is true; but ‘the diagonal of the square is not commensurate with the side’ means that it is false to say it is.  
(*Metaph.* Δ 7, 1017a31-5)

The falsity of the opposing affirmation expressed by its denial is just the fact that the truth maker of that affirmation does not underlie. This need not mean that nothing underlies the denial. So which interpretation to choose? Well first, it is obvious that since Aristotle alternates between the two formulations, saying οὐκ ἐξ ὑποκειμένου at line 5 and ἐκ μὴ ὑποκειμένου at lines 9-10, he is insensitive to any difference it might make, and he intends the same thing by both. Second, it is unclear whether we should read οὐκ ἐξ ὑποκειμένου or ἐξ οὐχ ὑποκειμένου in line 5. Although οὐκ ἐξ ὑποκειμένου is in many of the manuscripts, Themistius reads one, and Simplicius reads both of the occurrences of that phrase in line 5 as ἐξ οὐχ ὑποκειμένου. In the light of this textual uncertainty, one should be able to choose a reading that permits negative states of affairs, as in *Categories* 10.

Nonetheless, De Rijk and Crivelli have argued that a general rejection of negative states of affairs is implicit in certain parts of the *Metaphysics*. On De Rijk’s view, a prohibition on negative states of affairs follows from Aristotle’s exposition of ‘having the truth’ in *Metaphysics* Θ 10.<sup>7</sup> De Rijk takes Aristotle’s distinction at 1051b32-5 between ‘being as true’ and ‘being as false’ to be between ‘being the case’ and ‘not being the case’

respectively, so when Aristotle identifies being as true with the combination of the subject and attribute and being as false with their separation, he means to identify ‘being the case’ and ‘not being the case’ with these things respectively. On this interpretation, then, when Aristotle says that having the truth is thinking of what is combined as combined and of what is separated as what is separated at 1051b2-5, he is saying that having the truth is thinking of what is the case that it is the case, and of what is not the case that is not the case. But thinking of what is not the case that is not the case posits the absence of a positive *πρᾶγμα*, not the existence of a negative one. So negative *πράγματα* are not required. According to Crivelli, Aristotle implies the same thing in *Metaphysics* Δ 29 where he says that a *πρᾶγμα* is false if ‘it is not combined or it is impossible for it to be combined’. Assuming that by *πρᾶγμα* Aristotle means ‘state of affairs’, it would seem to follow that if there were negative states of affairs, then Aristotle would have also said that a negative *πρᾶγμα* could be false if it were *not* divided.<sup>8</sup> But he does not, and so, according to Crivelli, he must not countenance negative states of affairs. The problem with these conclusions, I think, is that they are never explicitly avowed by Aristotle, while *Categories* 10 gives us a clear example of a negative state of affairs: τὸ μὴ καθῆσθαι [τινα]. Crivelli acknowledges the evidence of *Categories* 10, but claims that Aristotle must have changed his mind by the time he wrote the *Metaphysics*. But in the light of the explicit evidence of the *Categories* and the inferential nature of the evidence opposing it, I am inclined to think that Aristotle envisaged negative states of affairs.

Another issue worth mentioning, but one which counts neither for nor against my interpretation, is the question of whether states of affairs, in addition to existing or not existing, also obtain or do not obtain, with the implication that non-obtaining states of affairs have some existence as a mental or abstract object. Aristotle does, for instance, talk at *Metaphysics* Δ 29, 1024b17-21 of false states of affairs (again called *πράγματα* and referred to with articular infinitives with accusative subjects) as either not combined or unable to be combined, and this would seem to suggest that states of affairs are bivalent.

But then he goes on to say, depending on how one interprets the Greek, either that false states of affairs do not exist either always or sometimes, or are not in the sense of being false.<sup>9</sup> So either false πράγματα do not exist *simpliciter*, or they exist yet do not have being in the sense of being false. Finally, there is *Metaphysics* E 4, which says that truth and falsity are in thought and not in the πράγματα, which if we take πράγματα to mean states of affairs seems to point to the conclusion that they are not bivalent after all (1027b25-6, 29-31). In any case, I think it makes little difference to my interpretation whether we say that when a positive state of affairs does not underlie, it has some continued existence as a mental or abstract object because, as such, it plays no role in the change. On my account, when the positive state of affairs does not underlie, it is the contradictory negative state of affairs that underlies and therefore plays a role in the change.

**225a12-19:**

Now change not from something underlying to something underlying, the relation being that of contradiction, is coming to be *simpliciter* when the change takes place in an unqualified way, qualified coming to be when the change is of something: for instance, [change] from not white to white is a coming to be of this, while change from not being *simpliciter* to being is coming to be *simpliciter*, in respect of which we say that something comes to be *simpliciter*, not that it comes to be something. Change from something underlying to something not underlying is ceasing to be—ceasing to be *simpliciter* when the change is from being to not being, qualified ceasing to be when the change is to the opposite negation, the distinction being the same as that made in the case of coming to be. (225a12-19)

Given my interpretation of the immediately preceding passage, the most pressing issue is whether the examples, here, can be plausibly interpreted to refer to states of affairs. The phrase ‘[change] from not white to white’ (ἡ μὲν ἐκ μὴ λευκοῦ εἰς λευκόν) in lines 14-15 would seem to refer to just the qualities white and not white. Now of course, Aristotle would agree that every change from not white to white is also a change from something not being white to something being white because attributes cannot exist on their own. The question is whether Aristotle means to single out attributes as what comes to be in a qualified coming to be, and this depends on whether τούτου in line 15 refers to λευκόν. Taken on its own it certainly seems to, and the result is that this passage seems to say that qualified coming to be is, e.g., coming to be of white. But a passage in *Generation and Corruption* 1.3 that also mentions qualified coming to be casts doubt on this assumption. There, Aristotle says, ‘Qualified coming to be is from not being something, e.g. from not white or not beautiful, whereas coming to be *simpliciter* is from not being *simpliciter*.’<sup>10</sup> Here, the *terminus a quo* of qualified coming to be is “not being something” (μὴ ὄντος τινός), e.g., ‘not being white’ instead of just ‘not white’, so in this passage ‘not white’ and ‘not beautiful’ are short for ‘not being white’ and ‘not being beautiful’. This leads me to believe that ‘white’ and ‘not white’ are also short for ‘being white’ and ‘not being white’ at *Physics* 5.1, 225a14-15.

I say ‘not being white’ (ἐκ μὴ [ὄντος] λευκοῦ) instead of ‘being not white’ (ἐκ [ὄντος] μὴ λευκοῦ) since this is the word order at *Generation and Corruption* 1.3, 317b3-5, and because the expression must be a denial that opposes ‘being white’ as a contradictory (225a11-12). In *Prior Analytics* 1.46, Aristotle says that while ‘to not be white’ (τὸ μὴ εἶναι λευκόν) is a denial, ‘to be not-white’ (τὸ εἶναι μὴ λευκόν) is an affirmation, albeit of a negative property.<sup>11</sup>

So if, in general, the *terminus a quo* of qualified coming to be is ‘not being something’, then we should also take ‘from not white to white’ in 225a14-5 (ἐκ μὴ λευκοῦ εἰς λευκόν) to be short for ‘from not being white to being white’ (ἐκ μὴ [ὄντος]

λευκοῦ εἰς [οὐσίαν] λευκόν). If this is the case, then the reference of τούτου in line 15 is ‘being white’ rather than just ‘white’. So a qualified coming to be is the coming to be of τὸ ὄν τι from τὸ μὴ ὄν τι which can be more plausibly interpreted as a change between states of affairs. This is because the participles can be read as substantives (e.g., as ‘something being something’ or ‘something not being something’), and since Aristotle evidently takes τὸ μὴ εἶναι (225a18) and τὸ μὴ ὄν (225a15) to be equivalent expressions, we can assimilate both τὸ μὴ ὄν ἀπλῶς and τὸ μὴ ὄν τι to the negative state of affairs τὸ μὴ καθῆσθαι [τινα] underlying a denial in *Categories* 10. And the contradictories of these, viz., τὸ ὄν ἀπλῶς and τὸ ὄν τι are the things that underlie an affirmation and do not underlie a corresponding denial. So τὸ μὴ ὄν ἀπλῶς and τὸ μὴ ὄν τι are the *termini a quo* and τὸ ὄν ἀπλῶς and τὸ ὄν τι are the *termini ad quem*, respectively, of changes from something not underlying to something underlying.

**225a20-34:**

Now things are said not to be in several ways; and there can be motion neither of that which is not in respect of combination or separation, nor of that which is not in the sense that it only potentially is, that is to say the opposite of that which actually is *simpliciter*; for although that which is not white or not good may nevertheless be in motion accidentally (for example that which is not white might be a man), yet that which is *simpliciter* not a ‘this’ cannot in any sense be in motion. Therefore, it is impossible for that which is not to be in motion. This being so, it follows that becoming cannot be a motion; for it is that which is not that becomes. For however true it may be that it accidentally becomes, it is nevertheless correct to say that it is that which is not that becomes *simpliciter*. And similarly it is impossible for that which is not to be at rest. There are these difficulties, then, [in the way of the assumption that that which is not can be in

motion], and it may be further objected that, whereas everything which is in motion is in place, that which is not is not in place; for then it would be somewhere. So, too, perishing is not a motion; for a motion has for its contrary either another motion or rest, whereas perishing is the contrary of becoming. (225a20-34)

*Things are said not to be in several ways.*

Aristotle begins this section of the text by considering two senses of something not existing (τὸ μὴ ὄν):<sup>12</sup> (1) something not existing as a combination or separation (τὸ κατὰ σύνθεσιν ἢ διαίρεσιν) and (2) something not existing as a ‘this’ and actually *simpliciter*, but existing potentially. The ensuing argument, that takes up the rest of the chapter, establishes the claim that no coming to be or ceasing to be *simpliciter* is a motion based on the assumption that all changes of these types start or end in the second of these states of not existing, and things that do not exist in this sense cannot undergo motion. Having eliminated these sorts of changes as motions, it is then inferred that only changes from something underlying to something underlying are motions. Simplicius, however, reads three senses of non-being at 225a20-25, distinguishing existing potentially and not actually *simpliciter* from not existing as a ‘this’, but I think the γάρ at 225a23 suggests that what follows is an elaboration on existing potentially and not actually *simpliciter* (Simplicius, *In Phys.* 815,24 ff.). Again, *Generation and Corruption* 1.3 is helpful, because there, Aristotle talks of ‘that which is only potentially a “this” and existing, but neither a “this” nor existing *simpliciter*’ (τὸ δυνάμει μόνον τόδε καὶ ὄν, ἀπλῶς δὲ μὴ τόδε μὴδ’ ὄν). This appears just to be τὸ μὴ ὄν ἀπλῶς that we encountered at 225a15-16. Simplicius also takes the first sense to apply only to a statement or belief, and explains the claim that what is not in this sense (i.e., false) does not change by the fact that it is through the πράγματα changing that true and false come to belong to statements and

beliefs while they themselves do not change (cf. *Cat.* 5, 4a21-b13). This, I think, makes the mention of this sense of non-being curiously irrelevant, since we are unlikely to suppose that changes in beliefs and statements would fall under the present discussion. Rather, I suggest that not existing as a combination or separation is the other sense of non-being just encountered in 225a12-19, viz., τὸ μὴ ὄν τι. According to *Metaphysics* Θ 10, falsity involves not only the combination and separation of thoughts and words in affirmations and denials but also combinations and separations of components of the πράγματα that make these things true and false. Indeed, *Metaphysics* Δ 29 says that there is a sense in which a πράγμα can be false, i.e., if ‘it is not combined or it is impossible for it to be combined’, which seems to be just τὸ μὴ ὄν τι, or a πράγμα in which a subject and an attribute are not combined. So what are canvassed in this passage are the two senses in which changes from something not underlying originate in non-being, viz., from something not being *simpliciter* and from something not being something.

It might be objected, however, that, in fact, τὸ μὴ ὄν ἀπλῶς is just a type of separation falling under the first sense of non-being. Boethius, for instance, claims, ‘when I say “Socrates is not” I have separated “to be” from “Socrates”’ (Boethius, *In De Int.* 49,18-23). Whether this is true or not depends on the more general question of whether, on Aristotle’s view, positive and negative existential statements about a ‘this’ are made true and false by the combination or separation of existence from the ‘this’. Whitaker thinks the answer is ‘no’ because, first, being is homonymous, and is not a single attribute to be combined with a single type of subject, and second, since Aristotle treats existential statements like ‘a man is’ as different and more basic than statements like ‘a man walks’ in *De Interpretatione* 10, the two cases cannot be semantically analogous.<sup>13</sup> If we find these objections persuasive, and I think we should, we seem to have two options for the semantics of positive and negative existential statements involving concrete particulars; that is, while these statements involve combinations of names and verbs and ‘say something of something’, either the combinations and

separations in the underlying πράγματα are of a different sort than in predicative statements, or there are no combinations and separations. In the former case, perhaps the combinations and separations are of matter and substantial form while in the latter case, the πράγματα are simple, as in the case of incomposites in *Metaphysics* Θ 10. That is, if incomposites in this text are taken to include individual substantial forms, there is, perhaps, a case for the simplicity of the πράγματα underlying affirmations and denials of their existence.

There is, of course a fairly obvious problem, at least on my interpretation of *Physics* 5.1, in supposing that the πράγματα underlying existential statements are simple, because according to *Metaphysics* Θ 10, positive existential statements cannot be false. Aristotle distinguishes the truth conditions of statements about composites and incomposites as follows:

As regards being in the sense of truth and not being in the sense of falsity, in one case there is truth if the subject and the attribute are really combined, and falsity if they are not combined; in the other case, if the object is existent it exists in a particular way, and if it does not exist in this way it does not exist at all; and truth means thinking these objects, and falsity does not exist, nor error, but only ignorance,—and not an ignorance which is like blindness; for blindness is akin to a total absence of the faculty of thinking. (*Metaphysics* Θ 10, 1051b34-1052a3)

If existential statements about incomposites cannot be false, as this passage seems to suggest, and Socrates (or, rather, Socrates' form or soul) is an incomposite, then there will be a πράγμα underlying the affirmation 'Socrates is' but, contrary to what I have claimed, no πράγμα underlying the denial 'Socrates is not'.

Although Aristotle concedes that people sometimes speak of the soul of Socrates as Socrates (*Metaph.* Z 9, 1037a5-9), this is not his preferred way of talking. Most often,

Aristotle refers to an individual like Socrates as a composite (σύνολον) of form and matter (*Metaph.* Z 11, 1037a32). Crivelli takes up this issue, and argues that the πράγματα underlying existential statements about material substances are form-matter composites.<sup>14</sup> The texts that he cites include *Metaphysics* Z 17, which seeks a fresh start on the question of what is substance by asking the question: ‘why is this individual thing, or this body in this state, a man?’ The answer is because this form is combined with this matter, which would seem to imply that the statement ‘Socrates exists’ is made true by the combination of this form with this matter. Crivelli also cites texts in which Aristotle treats the matter-form relation as analogous to the substance-accident relation, the most impressive and sustained example being the application of the privation-form-subject model in *Physics* 1.7 to both substantial and non-substantial coming to be.<sup>15</sup> These passages lead me to conclude that the πράγματα underlying existential statements about material substances are form-matter composites rather than incomposites.

*That which is not is not in a place.*

Lines 225a31-32 might also make us doubt that there is a πράγμα underlying the denial ‘Socrates is not’. Aristotle uses the claim that τὸ μὴ ὄν ἀπλῶς is in no place and the claim that everything that moves is in a place to argue that things not existing *simpliciter* cannot be the subject of motion: ‘Everything which is in motion is in place, that which is not (τὸ μὴ ὄν) is not in place; for then it would be somewhere’ (225a31-32). And in *Generation and Corruption* 1.3, Aristotle infers from the claim that what exists only potentially is in no place to the claim that it does not exist at all:

Will that which is only potentially a 'this' (which only potentially is), while without qualification it is not a 'this' (i.e. is not), possess, e.g., any determinate size or quality or place? For if it possesses none, but all of them potentially, the

result is that a being, which is not a determinate being, is capable of separate existence; and in addition that coming-to-be proceeds out of nothing pre-existing—thesis which, more than any other, preoccupied and alarmed the earliest philosophers. (*GC* 1.3, 317b26-31, cf. 317b7-11, which infers from not being a substance to not having a place.)

So it looks like a change from not existing *simpliciter* (ἐκ τοῦ μὴ ὄντος ἀπλῶς) is a change *ex nihilo* (ἐκ μηδενός) as the ‘earliest philosophers’ feared, which would appear to be a change from no πρᾶγμα at all (instead of from a negative πρᾶγμα, as I have claimed). But I think it is not an exaggeration to say that the whole of *Generation and Corruption* 1.3 is given over to avoiding this conclusion, and we must look to it to avoid the present difficulty. Aristotle starts with the assumption that coming to be *simpliciter* must be ‘from not existing *simpliciter*’ (ἐκ τοῦ μὴ ὄντος ἀπλῶς), and then sets out to find an interpretation of not existing *simpliciter* that does not result in generation *ex nihilo* (317b5). His method is to work through a series of ἀπορίαι which seem to threaten coming to be *ex nihilo*, and though the general outline of his answer is clear, the precise answer to the question is uncertain because the discussion ends in an ἀπορία.

First, Aristotle claims that ‘*simpliciter*’ can mean one of two things: either ‘the primary within each category, or the universal, i.e. the all-comprehensive’ (317b5-7). If the first, then substances come to be from what is not a substance; if the second, then substances come to be from what is not anything. The latter is obviously generation *ex nihilo*, but so is the former because what is not a substance is not anything either, the reason being that everything else is dependent for its existence on substance (317b5-12). Aristotle’s characterization of things that *simpliciter* are not as ‘*simpliciter* not a “this”’ in *Physics* 5.1, would seem to have him choosing the former horn of the dilemma. But his characterization of them as potential existents in the same passage gestures toward Aristotle’s solution in *Generation and Corruption* 1.3. The answer to this dilemma, says

Aristotle, is that ‘in one sense things come to be out of that which is not *simpliciter*; yet in another sense they come to be always out of what is. For there must pre-exist something which *potentially* is, but *actually* is not; and this something is spoken of both as being and as not being. (*GC* 1.3, 317b15-17).

It is clear from what follows that that ‘which *potentially* is, but *actually* is not’ is potentially a substance. And this solution faces another puzzle because what is potentially a substance must have all of its attributes potentially as well, otherwise the attributes would be ‘separable’. But a potential substance with only potential attributes is nothing at all, so again we have generation *ex nihilo* (317b23-33). That which potentially has quality, quantity and place, as we have seen, has no quality, no quantity, and is in no place.

How the puzzle in *Generation and Corruption* 1.3 is ultimately solved is not obvious. What is obvious is that it involves the idea that the generation of one thing is the destruction of another (318a23-25). We know from what Aristotle has already said that substances come to be from what is not a substance, in the sense of what is not actually a substance. From the idea that the generation of one thing is the destruction of another, we can infer that what is not actually a substance gets destroyed and what is actually a substance comes to be. From Aristotle’s examples (earth, fire, & etc.), we can infer that what is not actually a substance is now not what is not any sort of substance. Rather, what is not actually a substance is either not actually the sort of substance that is coming to be or it is not actually the particular substance that is coming to be. As another sort, or as another particular substance, it has attributes and is thus not nothing at all, it just does not have the attributes of what is coming to be. But if what simply is not is just another substance from which, as matter, another substance comes to be, it does not help us with our passage in *Physics* 5.1, because this other substance will obviously be in some place. So we must look to the next stage of the argument in *Generation and Corruption* 1.3.

Aristotle raises a doubt whether this understanding of what is not actually a substance (i.e., what is not actually the sort of substance that is coming to be or it is not actually the particular substance that is coming to be) is what is not *simpliciter* because it too appears to be a thing that is (319a29-33). Then an extremely brief and tentative final section canvasses the possibility that what is not actually a certain token or type of substance is only potentially a thing that is (319a33-b2). But this seems to run up against the horn of the last dilemma that says a potential substance with only potential attributes is nothing at all. The standard response to this is that what is not in this sense is prime matter, something which in itself is only potentially a thing that is, but which at any time is always informed (Philoponus, *In GC* 1.3, 63; Aquinas, *In GC* 1.3, 70). The problem with this, one might think, is that however much prime matter is in itself only potentially a thing that is, it is nonetheless always in a place, i.e., the place of the thing it is the matter of.

There is a way, however, to avoid this conclusion. Let us assume that what is not actually a substance is not actually the particular substance that is coming to be. For example, Socrates comes to be from what is not actually Socrates, e.g., the menses (τὰ καταμήνια), as Aristotle believes. Even so, it does not follow that at the time the change starts there is some unique and locatable entity that is potentially Socrates. So there is a sense in which what is potentially Socrates is in no place. Or take the example of a house. At the time when a builder decides to make this house out of this matter, then this matter here is potentially this house. But this need not always be the case. Indeed it is more likely that the builder will decide to make a house from some matter or other and then choose which matter to use as the house is built. In this case, any wood available to the housebuilder as he builds is potentially part of the house. Now in the case of Socrates, the sperm (γονή) is not capable of deciding to make this embryo out of these menses here. It behaves like an ‘automatic puppet’ and works on whatever menses happens to be at hand (*GA* 2.1, 734b10 ff.). So any menses available to it is potentially

an embryo and there is no unique collection of menses at the time at which the change begins that has this status. Again, there is a sense in which what is potentially Socrates is in no place. It is nonetheless true, though, that the matter (which may be prime matter but need not be) that is potentially Socrates, though not all of it will end up being a part of what finally becomes Socrates in actuality, is part of a  $\pi\rho\tilde{\alpha}\gamma\mu\alpha$  in which it and the substantial form of Socrates are separated.

*That which is not accidentally becomes.*

Before concluding my commentary on this section, I wish to address Aristotle's remark at 225a27-29 that that which is not accidentally becomes. In what sense does that which is not accidentally become? Aristotle's other mention of accidental change in this passage is clear enough. He says, 'that which is not white or not good' is accidentally in motion because 'that which is not white might be a man'. According to *Posterior Analytics* 1.4, a man is 'just what it is without being something else', but 'that which is not white' is not. 'That which is not white' is 'something different being [not] white', e.g., a man, which is intrinsically in motion (*Post. An.* 1.4, 73b6-9). Since the man is accidentally 'that which is not white or not good' and the man is in motion intrinsically, 'that which is not white or not good' is in motion accidentally. Aristotle's claim that that which is not accidentally becomes, however, is about a substantial rather and a non-substantial change, and is not illustrated with an example. After having concluded that becoming cannot be a motion, because that which is not becomes, he continues, 'For however true it may be that it accidentally becomes, it is nevertheless correct to say that it is that which is not that becomes *simpliciter*' (225a27-29). Simplicius and Alexander think that 'that which is not' ( $\delta\acute{o}\mu\eta\ \acute{\omicron}\nu$ ) at 225a29 refers to prime matter, which they apparently identify with 'that which is not *simpliciter*' ( $\tau\acute{o}\ \mu\eta\ \acute{\omicron}\nu\ \acute{\alpha}\pi\lambda\acute{\omega}\varsigma$ ), the *terminus a quo* of coming to be *simpliciter* in *Generation and Corruption* 1.3 (Simplicius and Alexander *apud*

*Simplicium*, In *Phys.* 818,5-819,3). But when Aristotle speaks of τὸ γιγνόμενον, he can also mean what is coming to be, rather than what is coming to be this ('This' refers to τὸ γιγνόμενον. *Phys.* 1.7, 190b11-12). When Socrates is gestating in his mother's womb, we say that Socrates is coming to be *simpliciter* (γίγνεται ἀπλῶς), and that the menses is coming to be Socrates. So why, then is Socrates *accidentally* coming to be? I suggest that while he is gestating, it is more proper to say that his parts are coming to be. So Socrates is coming to be because his parts are coming to be, which Aristotle has identified at the beginning of the chapter as a type of accidental change (ἡ μεταβολὴ κατὰ μέρος, 224a24-6; b16-17, 23-4). The point of the passage, then, is that even though one can say that something is accidentally coming to be because its parts are coming to be, the thing that is coming to be nonetheless cannot be in motion because it simply does not exist until the end of the process.

The following passage from *Physics* 7 talks of material processes resulting in substantial coming to be and makes the point that these processes must have a subject that is different from the subject that is coming to be:

Moreover it would seem absurd actually to speak in this way, to speak, that is to say, of a man or house or anything else that has come into existence as having been altered. Though it may be true that every such becoming is necessarily the result of something's being altered, the result, e.g. of the matter's being condensed or rarefied or heated or cooled, nevertheless it is not the things that are coming into existence that are altered, and their becoming is not an alteration. (*Phys.* 7.3, 246a4-9)<sup>16</sup>

This, of course, follows from the fact that these material processes culminate in the substance's existence. If a substance exists only at the end of these processes and not before, then the subject of the processes culminating in its existence must be something

other than the substance. Another passage from *Physics* 6 makes the same point, but with regard to substantial generations that are extended in time and continuous. If a substance is thought to emerge at the end of a continuous process of coming to be, the subject of that process prior to its completion must be something other than the substance that comes to be, e.g., one of its parts:

So it is evident also that that which has become must previously have been becoming, and that which is becoming must previously have become, everything (that is) that is divisible and continuous; though it is not always the actual thing that is becoming of which this is true: sometimes it is something else, that is to say, some part of the thing in question, e.g. the foundation-stone of a house. (*Phys.* 6.6, 237b9-13)

Even though we describe the coming to be of a house as a single continuous, time-extended process, it actually consists and indeed must consist of a series of processes with subjects other than the house. Otherwise, the house would be undergoing a process before it exists. Since these different subjects will later be part of the house, the house is coming to be during this time, but since these subjects are only parts of the house, the house is only accidentally coming to be. The coming to be of the house, perhaps, supervenes on the coming to be of its parts.

**225a34-b5:**

Since, then, every motion is a kind of change, and there are only the three kinds of change mentioned above; and since of these three those which take the form of becoming and perishing, that is to say those which imply a relation of contradiction, are not motions: it necessarily follows that only change from something underlying to something underlying is motion. And every such

underlying thing is either a contrary or an intermediate (for a privation may be allowed to rank as a contrary) and can be expressed by an affirmation, as ‘naked’, ‘toothless’, or ‘black’. (225a34-b5)

Aristotle has established that every motion is a type of change, and that there are only three types of change. He has also just established that the two that proceed between contradictories and represent coming to be *simpliciter* and ceasing to be *simpliciter* are not motions. We can now infer that only the remaining type of change from something underlying to something underlying is a motion. Now he adds the claim, ‘And every such underlying thing is either a contrary or an intermediate (for a privation may be allowed to rank as a contrary) and can be affirmatively expressed, as naked, toothless, or black’ (225b3-5).

So things that underlie in this sense, which are expressed by affirmations, are either contraries or intermediates, and privations may be included among these, because they can be expressed by an affirmation as ‘naked’, ‘toothless’, or ‘black’. I have argued that what is expressed by an affirmation is the existence of a *πρᾶγμα* or state of affairs. And now it seems that being expressed by an affirmation also requires the use of a positive predicate adjective. The reason is that Aristotle thinks affirmations using negative predicate adjectives have a qualified status. That is, while a privation can be expressed by what is only ‘kind of’ (*πῶς*) an affirmation as, e.g., ‘unclothed’, it can be expressed by what is *simpliciter* and in the strict sense (*ἀπλῶς τε καὶ κυρίως*) an affirmation as, e.g., ‘naked’.

In *Metaphysics* Iota 4, Aristotle says that privation is a type of contradiction, by which he means a negation (1055b8-11). And in *Prior Analytics* 1.46, he tells us that affirmations containing negative predicate adjectives are only ‘kind of’ (*πῶς*) affirmations (*An. Pr.* 1.46, 51b32-4). Alexander explains this qualification as follows:

He adds a ‘kind of’ (πῶς) because these things are not the same as affirmations without qualification (ἀπλῶς) and in the strict sense (κυρίως). For such affirmations, for example one which says ‘It is white’ or ‘It is good’, posit something, but those which are expressed in the other way, propositions by transposition, predicate existence of their subjects and, being affirmations with respect to this subject, they do away with what is predicated of them; and in a way they negate this. Of this kind are ‘It is not-white’ and ‘It is not-good’, since they say that the subject is not-such-and-such. (401,19-25)<sup>17</sup>

Negative predicate adjectives produce what are only ‘kind of’ (πῶς) affirmations because they ‘do away with’ what is otherwise predicated of a subject using the corresponding unnegated predicate adjective. And as Aristotle tells us in the *De Interpretatione*, what is signified by a negative predicate adjective is only ‘kind of (πῶς) one thing’ and ‘indefinite’ (*De Int.* 10, 19b9):

Now an affirmation signifies something about something, this last being either a name or a ‘non-name’; and what is affirmed must be one thing about one thing. (Names and ‘non-names’ have already been discussed. For I do not call ‘not-man’ a name but an indefinite name—for what it signifies is kind of (πῶς) one thing, but indefinite—just as I do not call ‘does not recover’ a verb). (*De Int.* 10, 19b5-10)

In the passage he calls the subject a ‘non-name’, but a predicate adjective can be a ‘non-name’ as well. What Aristotle means by being only ‘kind of (πῶς) one thing’ and ‘indefinite’ is elaborated on in the fragment from Aristotle’s *On Forms*, quoted in Alexander’s commentary on the *Metaphysics*:

This argument, Aristotle says, establishes Forms even of negations (τῶν ἀποφάσεων) and of things that are not; for one and the same negation is in fact

predicated of many things, and even of things that are not (τῶν μὴ ὄντων), and is not the same as any of the things of which it is predicated truly. For ‘not-man’ is predicated of horse and dog and of everything apart from man, and for this reason is a one-over-many (ἐν ἐπὶ πολλῶν) and is not any of the things of which it is predicated. Again, it always remains predicable in a like way of things that are alike; for ‘non-musical’ is predicated truly of many things (of all those that are not musical), and similarly ‘not-man’ of all things that are not man, so that there are Ideas even of negations. But this is absurd; for how could there be an Idea of not-being? For if one accepts this – [that there are Forms of negations] – there will be a single Idea of things generically dissimilar and totally different – of line, for instance, and man; for both of these are ‘not-horse’. (Aristotle *apud* Alexander, *In Metaph.* 80,15-81,5)<sup>18</sup>

Since what is signified by a negative predicate adjective is only ‘kind of (πῶς) one thing’, an affirmation using such an expression is only kind of (πῶς) an affirmation because what is affirmed in an unqualified affirmation ‘must be one thing about one thing’. ‘To affirm or deny one thing of many, or many of one,’ says Aristotle, ‘is not one affirmation or negation unless the many things together make up some one thing. I do not call them one if there exists one name but there is not some one thing they make up.’ (*De Int.* 11, 20b12-15; cf. 8, 18a12-19). For example, if we predicate many characteristics that are essential to a certain type of subject like ‘man’, the many characteristics make up ‘some one thing’ that is predicated, but if we predicate many accidental characteristics of a given subject, even if we designate these characteristics by a single indefinite name, they make up something that is only kind of (πῶς) one. Hence the absurdity of supposing that there are Platonic Forms even of negations.

Returning to our passage, now, Aristotle’s point is that at least some qualified affirmations can be rephrased as unqualified affirmations because the scope of the

negative predicate adjective it contains has been restricted so that it designates one thing. This is the case with privations like being unclothed because being unclothed is a negation that is ‘taken along with’ that which is receptive of the thing it is a privation of, i.e., the class of things that can be clothed (1055b8-11). And for this reason, it is possible to rephrase ‘unclothed’ as ‘naked’ to create an unqualified affirmation. If the negative predicate adjective were ‘not-clothed’ instead of ‘unclothed’ this would not be possible.

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## NOTES

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<sup>1</sup> W. D. Ross, *Aristotle's Physics, A revised text with introduction and commentary*, (Oxford, 1936), 3.

<sup>2</sup> This commentary is dedicated to my mentor and teacher, Alexander Mourelatos, who has long been guiding me and other εὐθύφρονες through difficult texts like this.

<sup>3</sup> Translations of Aristotle in this commentary are, with modifications, from J. Barnes (ed.), *The Complete Works of Aristotle: The Revised Oxford Translation*, (Princeton, 1995).

<sup>4</sup> Hermann Bonitz, *Index Aristotelicus* (Berlin, 1870), 797-799.

<sup>5</sup> W. D. Ross, *Aristotle's Physics, A revised text with introduction and commentary*, (Oxford, 1936), 616-617.

<sup>6</sup> I follow Nuchelmans and De Rijk here. G. Nuchelmans, *Theories of the Proposition, Ancient and Medieval Conceptions of the Bearers of Truth and Falsity*, (Amsterdam, 1973) p. 35. L.M. de Rijk, 'The Anatomy of the Proposition. Logos and Pragma in Plato and Aristotle', in L.M. de Rijk & H.A.G. Braakhuis (eds.), *Logos and Pragma, Essays on the Philosophy of Language in Honour of Professor Gabriel Nuchelmans*, (Nijmegen, 1987), 36.

<sup>7</sup> L. M. de Rijk, 'The Anatomy of the Proposition. Logos and Pragma in Plato and Aristotle', in L. M. de Rijk & H. A. G. Braakhuis (eds.), *Logos and Pragma, Essays on the Philosophy of Language in Honour of Professor Gabriel Nuchelmans*, (Nijmegen, 1987), 46.

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<sup>8</sup> P. Crivelli, *Aristotle on Truth*. (Cambridge: Cambridge University Press, 2004), 49-50.

<sup>9</sup> The text reads, Τὸ ψεῦδος λέγεται ἄλλον μὲν τρόπον ὡς πρᾶγμα ψεῦδος, καὶ τούτου τὸ μὲν τῷ μὴ συγκεῖσθαι ἢ ἀδύνατον εἶναι συντεθῆναι (ὥσπερ λέγεται τὸ τὴν διάμετρον εἶναι σύμμετρον ἢ τὸ σὲ καθῆσθαι· τούτων γὰρ ψεῦδος τὸ μὲν ἀεὶ τὸ δὲ ποτέ· οὕτω γὰρ οὐκ ὄντα ταῦτα). (1024b17-21) Depending on the way one reads οὕτω in the last sentence, Aristotle either says that false πράγματα are non-existent either always or sometimes (which is how the Oxford translation takes it) or are not in the sense of being false (which is how Crivelli takes it).

<sup>10</sup> Τίς μὲν γὰρ γένεσις ἐκ μὴ ὄντος τινός, οἷον ἐκ μὴ λευκοῦ ἢ μὴ καλοῦ, ἢ δὲ ἀπλῆ ἐξ ἀπλῶς μὴ ὄντος. (317b3-5)

<sup>11</sup> Here, the articular infinitives would seem to represent predications and not states of affairs since what they represent are said to belong (ὑπάρχειν, 51b39; 52a4) to things. That is, when τὸ μὴ εἶναι λευκὸν belongs to something, it is true to say οὐκ ἔστι λευκὸν, and when τὸ εἶναι μὴ λευκὸν belongs to something, it is true to say ἐστὶν οὐ λευκὸν (51b41-52a9).

<sup>12</sup> The phrase τὸ μὴ ὄν may be taken either as an abstract noun, i.e., ‘non-existence’, or it can be taken as a substantive, i.e., ‘something not existing’. I take it in the latter sense.

<sup>13</sup> C.W.A. Whitaker, *Aristotle's De Interpretatione: Contradiction and Dialectic*, (Oxford: Oxford University Press, 1996), 31-32.

<sup>14</sup> P. Crivelli, *Aristotle on Truth*. (Cambridge: Cambridge University Press, 2004), 121-125.

<sup>15</sup> Cf. *Metaph.* Λ 4, 1070b10-21 which deploys the same triad of principles.

<sup>16</sup> See also *Physics* 6.9, 240a16 ff., which argues that substantial generations in general are not alterations, but are necessarily accompanied by alterations.

<sup>17</sup> Translated by Ian Mueller, *Alexander of Aphrodisias, On Aristotle Prior Analytics* 1.32-46, (London, 2006), p. 98.

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<sup>18</sup> Translated by William E. Dooley, S.J., *Alexander of Aphrodisias, On Aristotle Metaphysics I*, (London, 1989), p. 117.