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THE UNITY OF ARISTOTLE'S CATEGORY OF RELATIVES*

In *Categories* 7 Aristotle discusses relative terms, which he defines in the opening paragraph of this chapter as 'things as are said to be just what they are, *of* or *than* other things, or in some other way *in relation to* something else' (6a36–7).[1] In clarifying this definition, he presents two lists of examples; the first contains 'greater' and 'double' and the second contains 'states', 'conditions', 'perception', 'knowledge' and 'position' (6a38–b3). The terms of the second list seem to be foreign to this discussion. The definition of relatives and the terms presented in the first list suggest that relatives are incomplete predicates or relational attributes,[2] but states, conditions, perception, knowledge and position are complete predicates. Linguistic usage does not *require* these terms to be followed by a preposition. The difficulty involved in understanding the place of conditions and states in the category of relatives extends beyond linguistic considerations. Other linguistically complete predicates are included in Aristotle's category of relatives, but their categorial status seems pretty obvious. 'Slave', for instance, is a linguistically complete term, but it can easily be construed as implicitly referring to the correlative 'master': that is, the proposition '*x* is a slave' may be construed as implying the proposition '*x* is a slave of *y* (when *y* stands for *x*'s master). Similarly, the term 'large', though linguistically complete, implies (as Aristotle says in *Categories* 6) that its subject is larger than other things of its kind (5b15–20). By contrast, the categorial status of conditions and states remains uncertain, even if their correlatives are supplied, because they seem to be internal dispositions of their subjects rather than relational attributes.

The inclusion of conditions and states in the category of relatives gives rise to the question in what sense these terms are relative. It is thus unclear whether Aristotle's treatment of relatives is based on one notion, which holds equally for both numerical relatives and conditions and states, or whether his treatment implicitly differentiates the class of numerical relatives from the class that comprises conditions and states. In addressing this question, I argue here against the commonly held view, in which conditions and states are not relatives in the strict sense, that Aristotle's notion of relativity is a unified notion, which holds for all of the terms presented in the two lists of examples. In so doing, I examine his examples of relatives in light of the two criteria for relativity found in his writings. The first criterion, known nowadays as 'Cambridge change', denies alteration or change for terms belonging to the category of relatives because an entity can acquire and lose its relative attributes without undergoing any intrinsic change (*Physics*

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[1] Ackrill's translation.

[2] For this interpretation see J.L. Ackrill, *Aristotle's Categories and De Interpretatione* (Oxford, 1962), 98; M. Mignucci, 'Aristotle's definition of relatives in *Categories* 7', *Phronesis* 31 (1986), 101–29, at 103–4.

5.2.225b11–13; *Metaphysics* 14.1.1088a29–35).[3] The second criterion, which David Sedley calls 'the principle of cognitive symmetry', appears in *Categories* 7 and states that a definite knowledge of a relative term entails a definite knowledge of its correlative (8a35–37).[4] This criterion follows from Aristotle's revised definition of relatives, in which 'relatives are those things for which being is the same as being somehow related to something' (*τὸ εἶναι ταὐτόν ἐστι τῷ πρός τί πως ἔχειν*) (8a31–32) and, in his view, it prevents secondary substances of organic parts, such as head or hand, from being considered relatives. Regarding the first criterion (Cambridge change), I analyse Aristotle's arguments found in *Physics* 7.3 to the effect that states are not subject to alteration because they are relatives. This analysis leads to the following conclusions: (1) conditions and states are relatives in being dependent on activity and passivity; (2) the distinction between external and internal attributes is irrelevant to Aristotle's notion of relativity; (3) they do not differ in this respect from numerical relatives. In light of these conclusions, I discuss in the subsequent section whether conditions and states are also relatives according to the second definition of *Categories* 7 and the principle of cognitive symmetry that follows from it. By interpreting *Categories* 7 in the light of other discussions of relatives found in *Topics* 6.4, the *Sophistical Refutations* 31 and *Physics* 7.4, I answer this question in the affirmative. I argue that the relatives that satisfy the second definition belong to a specific class of homonymous terms: that is, to terms whose exact meaning depends on the exact meaning of their correlatives. I further show that conditions and states belong to this class and hence satisfy the second definition and the principle of cognitive symmetry.

Although my argument is primarily aimed at accounting for the unity of the category of relatives, it has wider implications. First, it offers an alternative answer to a question that has puzzled Aristotle's commentators since late antiquity: what is the difference between the two definitions of relatives formulated in *Categories* 7. Second, it shows that Aristotle's inclusion of conditions and states in the category of relatives is grounded in his conception of change. Finally, by implying that his notion of relatives is not significantly narrower in scope than Plato's notion of relativity, my argument offers a plausible account of Aristotle's motivation for marking off relatives by means of the principle of cognitive symmetry. Specifically, it suggests that this principle, which denies that relatives have a definite meaning when abstracted from their correlatives, may have emerged from Aristotle's attempt to undermine the explanatory worth of Platonic Ideas. Before I substantiate these contentions, I discuss the reasons that led Aristotle's ancient and modern commentators to question the categorical status of conditions and states as relatives.

I

The question whether conditions and states are relatives in the strict sense received two formulations. In one formulation, found in Philoponus' and John Ackrill's com-

[3] Peter Geach coined this expression in characterizing the view, held by several Cambridge philosophers, that a thing may change merely on acquiring or losing properties, regardless of whether it undergoes an intrinsic change. P. Geach, *God and the Soul* (London, 1969), 71–2.

[4] D. Sedley, 'Aristotelian relativities', in M. Canto-Sperber and P. Pellegrin (edd.), *Le style de la pensée* (Paris, 2002), 324–52, at 327.

mentaries on the *Categories*, conditions and states are relative to their subject; that is, knowledge is of the knower and virtue is of the virtuous.[5] This suggestion, as both Philoponus and Ackrill point out, renders Aristotle's notion of relativity wide enough to include all attributes in the category of relatives. Just as knowledge and virtue are *said of* their subjects, so the quantitative attribute two cubits long and the qualitative attributes whiteness or generosity would be relatives because they are said of their subjects.[6] Another and more accurate formulation of this difficulty is found in Sedley's interpretation of *Categories* 7. According to his analysis, conditions and states are not relatives in the strict sense (in his terms they are soft relatives) because, in addition to their being related to something, they are internal attributes of their subjects. Knowledge, for instance, does not consist purely in the relation between the knower and the known, as it is in addition an internal disposition of the soul. By contrast, 'greater' and 'double' are relatives in the strict sense (hard relatives in Sedley's terms) because they cannot be identified with a certain internal attribute, distinct from their relation to other things;[7] 'double', for instance, is nothing more than the relation between two quantities that stands in the proportion 2:1.

These difficulties may seem inconsequential when Aristotle's inclusion of conditions and states in the category of relatives is viewed in its context. At the end of *Categories* 7 he questions the tenability of the above definition of relatives, on the grounds that it may render secondary substances of organic parts, such as head or hand, relatives. To avoid this consequence he introduces another definition: 'relatives are those things for which being is the same as being somehow related to something' (*τὸ εἶναι ταὐτόν ἐστι τῷ πρός τί πως ἔχειν*) (8a31–32). Although this definition is introduced to exclude secondary substances of organic parts from the category of relatives, it may reasonably be understood as aimed at excluding conditions and states too. Both Philoponus and Sedley adopt this strategy. The former, who construes the difference between the two definitions of relatives in terms of the distinction between being and linguistic usage,[8] argues that Aristotle presents virtue and vice, knowledge and ignorance, as examples of relatives in order to discredit (*κακίσαι*) the first definition (108.31–35 Busse). In his view, the introduction of these terms brings to light the fact that linguistic usage is too

[5] Ackrill (n. 2), 99, also examines the possibility that states and conditions are relative to the objects that specify them. This suggestion implies that generic terms belonging to other categories will also be counted as relatives. The interpretation that I offer in section III below indicates that, although relative genera may indeed be relative to the objects that specify them, the expansion of the category of relatives to all genera does not follow.

[6] Philoponus *In Cat.* 109.2–7 Busse; Ackrill (n. 2), 99.

[7] Sedley (n. 4), 334–5.

[8] This interpretation is widespread among Aristotle's ancient commentators (see, for instance, Simplicius *In Cat*. 198.12–199.16 Kalbfleisch; and Philoponus *In Cat.* 108.31–109.31 Busse), but it seems that it has not been generally endorsed. In his commentary on the *Categories* Simplicius reports that Syrianus and Porphyry held that the two definitions mark the same class of relatives. Regarding Porphyry's view, Simplicius says that he argued that relatives were 'said to be just what they are [*ἅπερ ἐστίν*], *of* or *than* other things' for no other reason than that their being is identical with being somehow related to something (*In Cat.* 199.17–35 Kalbfleisch). Among modern interpreters who hold this interpretation are Ackrill (n. 2), 101–2; K. Oehler, *Aristoteles: Kategorien* (Berlin, 1984), 248; F. Morales, 'Relational attributes in Aristotle', *Phronesis* 39 (1994), 255–274, at 260. It is rejected by Mignucci (n. 2), 107–8; F. Caujolle-Zaslawsky, 'Les relatifs dans les *Categories*', in P. Aubenque (ed.), *Concepts et catégories dans la pensée antique* (Paris, 1980), 167–195, at 185–7; and Sedley (n. 4), 332–3.

wide a criterion for marking relatives, because it would include all attributes in the category of relatives. According to Philoponus, then, the second definition does not hold for conditions and states, hence they are not relatives according to the second definition. Sedley's interpretation leads to the same conclusion, although it is based on a different understanding of the two definitions of relatives. He assumes that the first definition holds for soft relatives and the second for hard relatives, and therefore conditions, states, knowledge and perception are not relatives according to the second definition.

These interpretations, however, do not seem to provide a satisfactory solution to the problem of the categorial status of conditions and states. Regarding Philoponus' interpretation, the expansion of the category of relatives to quantities and qualities does not follow from the possibility that certain terms are relative to their subjects. In *Topics* 4.4 Aristotle claims that certain relatives, such as condition, state and symmetry, are necessarily found in the things to which they are related (125a33–37). This contention does not necessarily imply that condition, state and symmetry are relatives because they are predicated of their subjects, as their presence in a subject, and their relation to this subject, may be two distinct relationships. According to *Topics* 4.4, knowledge belongs to the class of relatives that *may* be related to their subject, when the object of knowledge happens to be the soul. In this case, knowledge is relative to the soul not because it is a disposition of the soul but because the soul is the object of knowledge. Here the soul plays two roles: it is a subject and an object. The same account undoubtedly holds for relatives that are necessarily present in their subject. In these cases, too, the subject may play two distinct roles: it may be both the substrate in which the relative attribute is present and the object to which it is related.

Sedley's interpretation gives rise to a different difficulty. In his interpretation numerical relatives, which are hard relatives, differ from soft relatives (conditions and states) in being subject to Cambridge change. Soft relatives, being intrinsic attributes of their bearers, are not subject to Cambridge change because their bearers undergo intrinsic change when they acquire or lose these attributes. Hard relatives are subject to Cambridge change because the acquisition and loss of such attributes does not involve an intrinsic change of their bearer. This characteristic does indeed distinguish soft from hard relatives but, in Aristotle's view, it does not distinguish numerical relatives, such as greater and double, from conditions and states. In *Physics* 7.3, which is his sole lengthy discussion of states as relatives, Aristotle argues in detail that they are not subject to alteration because they are relatives.[9] In light of this evidence, it seems advisable to reconsider the question of the categorial status of conditions and states, asking in what sense they are relatives: are they external or internal attributes and do they differ from numerical relatives in any respect?

[9] This chapter involves various difficulties, concerning its period of composition, the differences between its two versions and its role and place in the general scheme of *Physics* 7 and Aristotle's conception of change. I focus here only on issues that shed light on his notion of relativity. For discussions of the other difficulties, see B. Manuwald, *Das Buch H der aristotelischen 'Physik': Eine Untersuchung zur Einheit und Echtheit* (Meisenheim am Glan, 1971), 49–102; and R. Wardy, *The Chain of Change: A Study of Aristotle's Physics VII* (Cambridge, 1990), 152–239. It becomes clear in what follows that the question whether this book is earlier than the *Categories* has no bearing on my interpretation.

II

In *Physics* 7.3 Aristotle sets out to establish the contention that he makes in *Physics* 7.2 (244b5–10) that only sensible qualities are subject to alteration (ἀλλοίωσις) by denying that other qualities, such as shapes and states, undergo alteration.[10] A substantial part of this discussion is devoted to arguing that somatic, psychic and noetic states do not undergo alteration because they are relatives. The argument for somatic excellences is the following:

> Further, we say that all excellences depend on being somehow related to something [ἐν τῷ πρός τι πῶς ἔχειν]. We hold that bodily excellences, such as health and fitness, depend on mixture and symmetry of hot and cold elements, either in relation to one another within the body or in relation to the surrounding. We regard beauty, strength and other excellences and defects in a similar way; for each of them depends on being somehow related to something and disposes its possessor well or badly with regard to [περί] its proper affections. Proper affections are those by which [the possessor] is naturally generated or destroyed. Thus, since relatives are neither themselves alterations nor subject to alteration, generation or any other change in general, it is clear that neither states nor the acquisition and loss of states are alterations, but it may be necessary that they are generated and destroyed, just like figure and shape, when other things, such as the hot, cold, dry and moist elements or whatever are the primary things in which states reside, undergo alteration. For each defect and excellence is said with regard to the things by which the possessor is naturally altered. Excellence makes [the possessor] either impassive [ἀπαθές] or passive [παθητικόν] in a certain way, while defect makes it passive or impassive in a contrary way. (*Ph.* 7.3.246b3– 20)[11]

According to this argument somatic excellences are themselves not subject to alteration, but their acquisition and loss depend on the alteration of sensible qualities, such as hot, cold, dry and moist.[12] Further, somatic excellences and defects are related, according to this argument, to proper affections, namely the affections on which the generation and destruction of the organism depends. The example that Aristotle presents in his parallel argument for psychic states clarifies the relationship between sensible qualities and proper affections. According to this argument, moral excellences and defects are concerned with (περί) bodily pleasure and pain (247a7–8) and their acquisition depends on the generation of pleasure and pain (247a14–15). Somatic and psychic states, then, are related to sensible qualities in the following ways: (1) although they are irreducible to sensible qualities, their presence or absence depends on the presence or absence of these qualities; (2) sensible qualities are the primary substrates in which states are present (246b16–17); (3) states dispose their possessor in a certain way with regard to these sensible qualities. It follows from this account that somatic and psychic states belong to the

[10] Aristotle's contention that states and shapes may seem typical subjects for alteration (245b6–7) can be understood, as Wardy (n. 9), 179–80, argues, as aimed at preventing an erroneous conclusion that one may draw from the treatment of qualities in *Categories* 8. From this treatment, which includes affective qualities, states and shapes under the category of quality, one may infer that all qualities are subject to alteration and therefore Aristotle explicitly states here that this is not the case.

[11] Unless stated otherwise, all translations are mine.

[12] Aristotle also argues here that states are not alterations, but it is not clear why he presents this possibility. It may reflect, as Manuwald (n. 9), 70, believes, a confusion between a process and its result or a denial of the assumption that the exercise of states is an alteration. For a different explanation see Wardy (n. 9), 210–11.

class of relatives that Aristotle characterizes in *Topics* 4.4 as being necessarily found in the things to which they are related. By virtue of the first two characteristics states are attributes of their subject, albeit dependent, while by virtue of the third characteristic they are considered relatives.

At first glance, understanding the third characteristic in light of Aristotle's contention that somatic states depend on mixture and symmetry may seem natural (246b4–5). This interpretation has the merit of decreasing the disparity between states and numerical relatives by suggesting that, like double and half, states are relatives due to certain numerical proportion, but it gives rise to several difficulties. First, although perhaps applicable to internal constitutions, it is not clear how this interpretation can be applied to relations between organisms and their surroundings; as organisms and their surroundings do not form mixtures, it seems more reasonable to understand their symmetry in terms of harmony or adaptedness rather than in terms of numerical proportion. Second, this interpretation hardly notices that Aristotle bases his argument on the qualitative features of the elements, not on their measurable or quantified features. These difficulties can be resolved if the relational character of states is understood in light of the concluding statement of the above passage: states make their possessor passive or impassive in a certain way. By this interpretation, the relation whereby states are relatives is activity and passivity. I argue that such an interpretation explains Aristotle's reference to the qualitative features of the elements, hot, cold, moist and dry; it accords with his contention that states depend on mixtures and harmonies; and finally it provides one explanation for both internal constitutions and relations between organisms and their surrounding.

One of the fundamental assumptions in Aristotle's physics is that the elements undergo transformation on combination, so that constituents do not persist in actuality when combined.[13] As a result, he does not conceive of the elements merely as material constituents endowed with the qualities hot, cold, dry, moist, heavy, light, soft and hard, but as having the capacity to act and to be acted upon. More specifically, he holds that the qualities hot and cold are active whereas the qualities dry and moist are passive.[14] Understood in light of this conception, Aristotle's contention that states depend on the mixture and harmony of the hot, cold, dry and moist elements implies that states depend on the relations of activity and passivity among these elements. This account holds for both internal constitutions and the relation between organisms and their surrounding. The internal constitution of an organism will be preserved or destroyed if the elements affect each other or are affected by each other in a certain way. Similarly, an organism will be preserved or destroyed depending on the interaction between the active and passive elements of which the organism and its surroundings consist.[15]

Aristotle's argument for denying alteration to psychic states also leads to the conclusion that ethical virtues and vices are not subject to alteration, but their coming about depends on the alteration of the sensible part of the soul – specifi-

[13] *Gen. Corr.* 1.10.327b22–31.

[14] *Gen. Corr.* 329b23–25 and *Mete.* 4.1.378b13; 4.5.382a32, 384b28; 4.10.388a24.

[15] Wardy (n. 9), 218, finds Aristotle's reference to mixtures problematic because mixtures, in Aristotle's view, do not arise from a relation between independently subsisting ingredients. The above interpretation, which accounts for the relativity of states in terms of activity and passivity, indicates that the reference to mixtures here is in keeping with Aristotle's conception of mixtures.

cally, of bodily pleasures and pains (247a6–7, 247a16–17).[16] This argument differs from the argument for somatic states in one crucial respect: version *α* contains no explicit reference to passivity and impassivity.[17] Nevertheless, as Robert Wardy points out, Aristotle's claim that psychic excellences dispose their possessor well with regard to its proper affections (247a3–4) suggests that passivity and impassivity do play a certain role in this argument.[18] This role may be reconstructed in light of his account of moral excellences in the *Nicomachean Ethics* 2.5 and 6. Here Aristotle argues that affections are neither excellences nor defects, because moral agents are not praised or blamed for their affections but for the way (*πῶς*) that they are affected (1105b28–1106a1). Feelings of pleasure and pain, according to the *Nicomachean Ethics* 2.6, are virtuous when they are felt at the right times, with reference to the right things, toward the right people or to a moderate extent (1106b21–23). Accordingly, ethical excellences may be understood as involving passivity and impassivity in the following way: a moral agent becomes virtuous when he is affected by pleasure and pain on the right occasions and remains impassive on the wrong occasions.

Although passivity and impassivity are not explicitly mentioned in the argument that denies alteration for noetic states, it does not differ in this respect from the two preceding arguments.[19] Like those, this argument is based on the assumptions that the possession of knowledge depends on being somehow related to something (*ἐν τῷ πρός τι πῶς ἔχειν*) and that, although there is no generation of noetic states, they come about as a result of the presence of something else (*τῷ ἄλλο ὑπάρξαι γίγνεται ἐπιστῆμον*), which Aristotle identifies with the particular object (*τὸ κατὰ μέρος*) (247b1–7).[20] This account is in keeping with Aristotle's analysis of perception and knowledge in *On the Soul* 2.5. Here he draws a distinction between two potential knowers: one who realizes his capacity by undergoing alteration from one state to another, and one who realizes his capacity in a different manner, when he exercises his knowledge (417a30–417b2). In keeping with this distinction, Aristotle draws a distinction between two senses of 'being acted upon' (*τὸ πάσχειν*): one that involves the extinction of one attribute by its contrary, and one that involves the preservation of the potential by the actual.[21] In his gloss on the second sense of 'being acted upon', Aristotle claims that it is either not an alteration or a different type of alteration (417b5–7), and towards the end of the chapter he regards his use of the terms 'alteration' and 'being acted upon' for both types of potentiality as unavoidably inaccurate (418a2–3). In this light, his contention that noetic states

[16] For the difference between this account of pleasure and pain and the account found in the *Nicomachean Ethics*, see W.D. Ross, *Aristotle's Physics: A Revised Text with Introduction and Commentary* (Oxford, 1936), 676.

[17] It appears in version *β* at lines 247a21–22 but is absent from the argument for somatic states.

[18] Wardy (n. 9), 221, n. 92.

[19] Aristotle supports this claim with further arguments. I do not discuss them here because they do not bear on the categorial status of states.

[20] The MSS are divided as to whether Aristotle claims here that the universal becomes known through the particular or vice versa. For the purposes of my argument, the difference between these readings is irrelevant, since it only requires the dependence of knowledge on a certain object.

[21] From Aristotle's gloss on this statement and the correspondence between this sense of 'being acted upon' and the second type of potentiality, it seems reasonable to understand the 'preservation of the potential' as referring to the stage at which the capacity of knowing is actualized.

depend on being somehow related to something seems to hold for the second type of potentiality: the stage at which a knower exercises his knowledge.[22] So understood, the dependence of noetic states on the presence of their objects is similar to the dependence of somatic and psychic states on the passivity or impassivity of proper affections with regard to the qualities, objects or circumstances that are apt to affect them. In thinking and perceiving, according to Aristotle, the soul is affected by the objects of thought and perception (429a13–18); thus, like somatic and psychic states, knowledge and perception are relative to their objects because they come about when the thinking or perceiving parts of the soul become passive by the agency of their objects.

This interpretation has several consequences for our understanding of Aristotle's notion of relativity. First, it implies that his discussion of relatives in *Categories* 7 is more closely related to his other extensive discussion of relatives, found in *Metaphysics* 5.15, than Christopher Kirwan maintains.[23] In this discussion Aristotle classifies relatives under the following three groups: (1) numerical relations that hold between that which exceeds and that which is exceeded. This class includes, in addition to terms such as 'double' and 'half', the terms 'equal', 'similar' and 'the same'; (2) the relation between the active and the passive, which is exemplified by the relation between that which can heat and that which can be heated, as well as the relation between father and son; (3) the relation between the measurable and the measure, which holds between the knowable and knowledge and between the object of sight and sight. Although Aristotle's discussion of relatives in *Categories* 7 is not as articulated as this discussion, they are not fundamentally different in regard to the scope of the category relatives. The list of examples that Aristotle presents in the opening paragraph of *Categories* 7 corresponds with the three classes of relatives presented in *Metaphysics* 5.15: 'greater' and 'double' belong to the first group of *Metaphysics* 5.15; conditions and states, according to the above interpretation, belong to the second group; and knowledge and perception, though depending on passivity and activity, according to the above analysis of *Physics* 7.3, belong to the third group, in being relative to their objects, whereas their objects are not relative to them.[24]

Second, the classification of states and conditions under the category of relative is in keeping with major Aristotelian theses, such as his conception of the elements and their mutual change, his account of perception and knowledge, and his distinction between motion and actualization. So it seems unlikely that the inclusion of states and conditions in the category of relatives belongs to an early or immature stage of Aristotle's philosophical development. Nor does it seem plausible that he wavers between a notion of relatives that includes conditions and states and a notion that excludes them. Accordingly, an interpretation of *Categories* 7 that entails that conditions and states are relatives in the strict sense is preferable to an interpretation that excludes them from the category of relatives.

Finally, Aristotle's denial of alteration to states does not necessarily imply that they are hard relatives. Understood in the light of the above interpretation, his claim that the acquisition and loss of states are not alterations seems to be motivated by his conviction that there is no motion of agent and patient, or more generally that

[22] This interpretation lends further support to Wardy's claim that this argument does not concern the original acquisition of knowledge. Wardy (n. 9), 232.

[23] C. Kirwan, *Aristotle: Metaphysics Books Γ, Δ, and E* (Oxford, 1993), 164.

[24] See also *Cat.* 7.7b22–8a12; *Metaph.* 5.15.1021a–1021b6, 10.6.1057a6–12.

there is no motion of motion.[25] According to *Physics* 7.3, states are acquired when bodily proper affections or cognitive faculties become passive or impassive with regard to other qualities or objects. The denial of alteration to states is tantamount to the claim that proper qualities or cognitive faculties do not acquire, through change, motion or alteration, their capacity to act or to be acted upon. Had Aristotle admitted alteration for states, he would have been committed to admit change of change or motion of motion; that is, he would have regarded motion or change as depending on another motion or change that made the objects or qualities active or passive. In such an account, when a certain object is heated, for example, it would have undergone two alterations: one that makes it passive and the other that makes it hot. In Aristotle's view, however, the capacity to act or to be acted upon is inherent in the agent and patient, so that activity and passivity come about as a result of actualization and not as a result of change in the strict sense. In other words, change into activity and passivity is rather an accidental change; it comes about epiphenomenally, when qualities or objects undergo change in the strict sense. Aristotle's contention in *Physics* 7.3 that the acquisition and loss of states are not alterations but depend on alterations is an expression of this view.

This account suggests that Aristotle's denial of change to states does not arise from considerations of whether they are intrinsic or extrinsic attributes. It further implies that, although the acquisition and loss of states depend on their relation to certain qualities or objects, states are not strictly speaking extrinsic attributes; they come about as a result of the actualization of the capacities to act or to be acted upon, which are intrinsic to their subjects. Numerical relatives seem to be subject to Cambridge change for the same reasons. In *Metaphysics* 5.15 Aristotle says: 'Numerical relatives are not actualizations, except in the sense that has been stated elsewhere, but actualizations in the sense of motion do not hold for them' (1021a19–21). What discussion Aristotle refers to here is not clear,[26] but it is clear that he regards both numerical relatives and states as depending on actualization. This comment, then, suggests that the distinction between extrinsic and intrinsic attributes does not capture Aristotle's account of both states and numerical relatives. Both types of relatives are subject to Cambridge change because they come about as a result of an actualization; accordingly, in Aristotle's view, all relative attributes are neither extrinsic nor intrinsic; they potentially inhere in their subjects but their actualization depends on interaction with external objects. Having established these conclusions, I shall now consider whether the criterion of Cambridge change and the principle of cognitive symmetry yield the same class of relatives.

[25] *Ph.* 5.2.225b10–16.

[26] Ross suggests that Aristotle is referring to *Metaphysics* 9.1, where he says that potentiality and actuality extend farther than the sphere of motion (1046a1) and to *Metaphysics* 9.6, where potentiality is also said to hold not only for the capacity to move something else (1048a25–b9). In this interpretation, numerical proportions are latent in the magnitudes or multitudes, and they are brought to actuality when these entities stand in a certain relation to each other. W.D. Ross, *Aristotle's Metaphysics: A Revised Text with Introduction and Commentary* (Oxford, 1924), 1.329–30. Adding to these references *Metaph.* 9.9.1051a21–31, we may state further that numerical relatives are brought to actuality by intellection.

III

The ontological considerations just reviewed do not feature in Aristotle's discussion of relatives in *Categories* 7.[27] Aristotle appeals here to another criterion – the principle of cognitive symmetry, in which definite knowledge of a relative term entails definite knowledge of its correlative. This principle follows from the second definition of relatives, and it serves Aristotle in explaining why this definition does not hold for secondary substances of organic parts; yet it may also imply that conditions and states are not relatives according to this definition. His account of why secondary substances of organic parts do not satisfy the second definition leaves open two crucial questions. First, it is not clear in what way the principle of cognitive symmetry does not hold for secondary substances of organic parts; specifically, it is not clear whether it is *impossible* to have definite knowledge of the correlatives of head or hand, as the transmitted text suggests, or if it is merely *unnecessary* to have a definite knowledge of these correlatives, as Ackrill's emendation implies.[28] Second, it is not clear why secondary substances of organic parts do not satisfy the principle of cognitive symmetry. Organic parts depend for their being on the whole to which they are related and, although they are defined in reference to their function, this function is subordinated to the end of the whole.[29] Therefore it is not clear why one need not or cannot know definitely the correlatives of organic parts. Answers to these questions may be reconstructed from Aristotle's discussion of the appropriate correlatives of organic parts and other relatives at 6b36–7b14. According to this discussion, the correlatives of wing and head are not bird and animal but 'the winged' (*πτερωτόν*) and 'the headed' (*κεφαλωτόν*) (6b36–7a18). Interpreting the principle of cognitive symmetry in light of this contention, Sedley argues that the correlatives of secondary substances of organic parts do not satisfy the principle of cognitive symmetry, as formulated in the transmitted text: that is, they *cannot* be subjects of definite knowledge because terms such as 'the headed' and 'the winged' are inherently indefinite.[30] It follows from this interpretation that

[27] I follow here Julia Annas and Jonathan Barnes in characterizing accounts that explain relativity in terms of change and existential dependence as ontological. J. Annas and J. Barnes, *The Modes of Scepticism: Ancient Texts and Modern Interpretations* (Cambridge 1985), 134–5.

[28] The transmitted text reads: 'But as for head and hand and each thing of this kind which are substances, it is possible to know definitely [*ὡρισμένως ἔστι εἰδέναι*] what the very thing is, but it is not necessary [to know] the thing in relation to which it is said. *For it is not possible to know definitely of what this head or hand is* [*τίνος γὰρ αὕτη ἡ κεφαλὴ ἢ τίνος ἡ χείρ οὐκ ἔστιν εἰδέναι ὡρισμένως*]' (8b15–19). The italicized sentence seems patently false: on seeing a head or a hand, one can surely know to what whole it belongs. This difficulty led Ackrill (n. 2), 23, to add the adjective 'necessary' (*ἀναγκαῖον*) after the negation word *οὐκ*, thereby offering the translation: 'For whose this head is, or whose the hand, it is not necessary to know definitely'. Sedley (n. 4), 329, convincingly argues that this emendation does not provide a satisfactory answer to the question why the second definition does not hold for secondary substances of organic parts. The difficulty that Ackrill tries to avoid concerns the possibility of knowing through perception the correlatives of head and hand. However, Aristotle's concern is the categorial status held by secondary substances of organic parts, hence both the difficulty and its solution are irrelevant to this discussion.

[29] *Part. an.* 1.5.645b15–20.

[30] Accordingly, Sedley (n. 4), 330, argues that the received text does not require an emendation but merely a warranted change in the breathing and accentuation, which results in reading *αὐτή* instead of *αὕτη*. In this reading, the sentence that Ackrill emends says: 'For it is not possible to know definitely to what it is that head or hand *as such* belongs'. Ackrill's emendation, however, can be defended independently of the interpretation of the principle of cognitive symmetry.

there are at least certain conditions and states that do not satisfy the principle of cognitive symmetry either. The correlatives of 'knowledge' and 'perception', like the correlatives of organic parts, are the indefinite terms 'the knowable' and the 'perceptible', hence they cannot be subjects of definite knowledge.[31]

This interpretation has significant advantages over other interpretations, which retain conditions and states in the category of relatives. It makes sense of the transmitted text; it interprets the principle of cognitive symmetry as offering to dispel the very concern that made Aristotle introduce the second definition of relatives, by applying to secondary substances alone; and it is based on evidence found in *Categories* 7 itself, thereby implicitly accounting for the absence of an explicit specification of the notion of definite knowledge.

Nevertheless, this interpretation seems unsatisfactory because it takes for granted that 'the headed' and 'the winged' cannot be subjects of definite knowledge and that 'the knowable' or 'the perceptible' are analogous to these correlatives. The fact that there is no definite word, such as 'master', for the correlative of 'wing' does not imply that 'the winged' does not have a definite meaning; just as 'master' signifies the property by virtue of which human beings enslave other entities, so 'the winged' signifies the property of having wings. Both 'master' and 'the winged' correspond in their generality to 'slave' and 'wing' and they can be further specified correspondingly with the specifications of these terms. Just as 'master' can be further specified into 'master of chattel slaves' and 'master of helots', so 'the winged' can be specified into 'having wings suitable for flitting' and 'having wings suitable for soaring'. The 'knowable' admits a similar account, although Aristotle contends that the species of knowledge are not relatives. True, the specification of the object of knowledge results in a species, which is not a relative term, but, as Aristotle says in *Categories* 8, this species may be relative by virtue of the genus (*κατὰ τὸ γένος*); that is, grammar is knowledge of something – for example, of letters – but it is not grammar of something (11a24–28). Thus, Aristotle's contention that the species of knowledge are not relatives does not necessarily imply that, when 'the knowable' is specified, 'knowledge' does not retain its categorial status as a relative. Instead, this contention may imply that the genus 'knowledge' is relative to *its* various objects, whose sum total is denoted by the term 'the knowable', but its species are not relative to *their* objects.[32]

Moreover, the specification of 'the knowable' by its objects does not render knowledge a quality. Admittedly, particular conditions and states, as Aristotle says in *Categories* 8, are not relatives but qualities (11a24; a31–2). Yet, as Sedley points out, Aristotle's concern in *Categories* 7 is the categorial status of genera and species and not of particular instances; hence it is rather the particular cognitive

Aristotle's answer to why secondary substances of organic parts do not satisfy the principle of cognitive symmetry opens with the statement that it is not necessary to have definite knowledge of the wholes of organic parts. The *γάρ* in the emended sentence indicates that it is meant to be a gloss on this statement, but in Sedley's reading it strengthens the statement rather than explains it.

For a different interpretation of the principle of cognitive symmetry, see Mignucci (n. 2), 119. I do not discuss this interpretation here because it has no consequences for the categorial status of conditions and states.

[31] Sedley (n. 4), 331 and 335.

[32] Even if 'the knowable' cannot be further specified because its species are not relatives, Sedley's account does not exclude all states from the category of relatives. 'The perceptible' can be further specified without turning into a non-relative species. Perception is of the perceptible, and its species sight, for instance, is relative to colour (*Metaph.* 5.15.1021a33–1021b2).

capacity of knowledge and not the genus 'knowledge' that turns into a quality when it is supplied with an object. Thus, Aristotle's designation of certain correlatives by indefinite words, such as 'the headed' and 'the knowable', does not provide a satisfactory account of the principle of cognitive symmetry. In the light of these queries, I attempt in the following to offer an alternative interpretation of the principle of cognitive symmetry that retains the advantages of Sedley's interpretation but also answers these queries. As *Categories* 7 does not seem to provide other clues as to the exact significance of the principle of cognitive symmetry, I turn to *Topics* 6.4, where the following formulation of this principle is found:

> It should not escape our notice that it is perhaps impossible to define certain terms differently, for example the double without the half and all those terms that are by themselves called relatives. For in all these cases being is identical with being somehow related to something [τὸ εἶναι τῷ πρός τί πως ἔχειν], so that it is impossible to know the one without the other. Consequently, it is necessary to include the one in the definition of the other. (*Top.* 6.4.124a26–31)

According to this passage, relatives satisfy the principle of cognitive symmetry because they cannot be defined without their correlatives. It therefore supports Sedley's observation that the principle of cognitive symmetry is meant to be applied to secondary substances alone, by indicating that the cognitive dependence of relatives on their correlatives does not concern perceptual acquaintance with particular instances of relative attributes but rather their definitions. Nevertheless, this passage does not significantly enhance our understanding of this principle. It merely implies that secondary substances of organic parts are not defined in reference to terms that belong to other genera; this implication is tantamount to the contention that organic parts are defined like substances and not like relatives. Further, understanding Aristotle's notion of relativity merely in terms of definitional dependence would render other terms relatives. Aristotle recognizes a class of terms whose definitions must include the subject of which they are predicated; among the examples of such terms are 'snub', whose definition includes its subject 'nose', and 'odd', whose definition includes its subject 'number'. In the *Sophistical Refutations* 13, he says explicitly that these terms are not relatives (173b5–11).[33] The above passage, then, does not explain why the genera and species of organic parts are defined like substances, nor does it provide a sufficient criterion for distinguishing relatives from other terms.

Answers to these questions may be found in the *Sophistical Refutations* 31. Here Aristotle says that relative predicates do not signify anything by themselves when they are separated from their correlatives (οὐ δοτέον τῶν πρός τι λεγομένων σημαίνειν τι χωριζομένας καθ' αὑτὰς τὰς κατηγορίας), and, if they do, the meaning that they have in separation is not identical with the meaning that they have in combination (181b25–35). This characterization can be better understood in comparison with Aristotle's treatment of 'concave' in this chapter. Regarding this term, Aristotle claims that it does not have the same meaning in separation and in a phrase (ἐν τῷ λόγῳ); in 'concave nose' it means 'snub', whereas in 'concave bone' it means 'crooked'. Yet 'concave', in his view, has a common meaning, which equally holds for 'nose' and 'bone', so that the expressions 'concave nose' and

[33] Fabio Morales (n. 8), 273, claims that 'snubness' is a relative on the grounds that it is specified by 'nose'. The difference between 'snubness' and relative terms becomes clear below.

'snub nose' have no different meanings (181b31–182a3). The concluding remark of this analysis clarifies how a term can have different meanings in separation and in combination and yet maintain one common meaning when it is applied to specific cases. Here Aristotle states that the terms to which 'concave' is applied should not be put in the nominative case, as in 'snubness is a concave nose' (ἐστι τὸ σιμὸν ῥὶς κοίλη), but in the genitive case, as in 'snubness is a certain affection of the nose' (ἐστι τὸ σιμὸν ῥινὸς τοδί, οἷον πάθος). In this account 'nose' does not serve as a subject and concave as an attribute, but it specifies 'concavity', so as to form the species 'concavity of the nose' (κοιλότης ῥινός) (182a4–6). It therefore suggests that 'concavity' is a genus, under which 'snub' and 'crooked' are subsumed. Aristotle's contention that, although 'concave' has a different meaning in separation, 'concave nose' and 'snub nose' have no different meanings suggests that the genus 'concave' is synonymously predicated of its species: that is, the definition of 'concave' equally holds for 'snub' and 'crooked', but it is still not identical in meaning with these terms because they are specific cases of 'concavity'. In this respect, 'concave' is no different from 'colour', which retains its common meaning when applied to 'white' and 'red', although 'colour' and 'red' do not have identical meanings.

Although Aristotle does not utterly reject the view that relatives are meaningful when they are separated from their correlatives, the above account does not hold for them. According to the *Sophistical Refutations* 31, even if relatives are meaningful in separation, they have no common or identical meaning when applied to specific cases (181b34–35). In light of this account of concavity, it seems that relatives differ from terms whose definitions include the subject of which they are predicated in being homonymous genera: that is, their definition does not equally hold for their specific cases. The following passage from Aristotle's aporematic discussion of comparability of motions in *Physics* 7.4 may explain in what way relative terms are homonymous:

> But even the definitions of certain terms are homonymous, for example, if one would say that 'many' is such an amount and more, 'such an amount' would have different meanings in different cases. 'Equal' is also homonymous, and 'one' too may be evidently homonymous. But if 'one' is, so is 'two'. (*Ph.* 7.4.248b17–20)

According to this passage, it is the homonymity of terms such as 'such an amount' and 'one' that renders quantitative relatives homonymous. These terms, which serve as units of measurement, are the correlatives of the terms 'many' and 'double': 'many', as *Categories* 6 implies, is equivalent to 'more than the standard amount appropriate for a certain class of things' and 'double' is a numerical relative that is measured by one. In the light of this passage, quantitative relatives are homonymous because their exact meaning depends on the exact meaning of their correlatives; in other words, their meaning varies with the specification of their correlatives. This account does not merely explain the cognitive dependence of relatives on their correlatives; it explains the specific requirement of mutual *definite* knowledge.[34]

[34] At 8a37–b Aristotle uses the verb 'to know' (εἰδέναι) without the qualification 'definite', and at 8b9–13 he argues that one who knows that something is more beautiful without knowing its correlative has not knowledge but supposition. Aristotle's wavering between 'definite knowledge' and 'knowledge' may be understood in light of his contention that relatives are either meaningless or have no common meaning in abstraction from their correlatives. By this

'Double', for instance, cannot be definitely known if its 'half' is not definitely known because its definition 'double of the half' or 'the proportion 2 : 1' contains ambiguous terms. Accordingly, if the exact unit of measurement (that is, the half) is left undetermined, the term 'double' is undetermined too. Stated in specific terms, one cannot know definitely that twelve is double if one does not measure it by *its* half – six; when the correlative of 'twelve' is not specified, it may just as well be 'triple', 'fourfold' or any other numerical proportion.

By contrast, the genera and species of organic parts are not homonymous. In the opening chapter of *Parts of Animals* Aristotle says that it is methodologically preferable to study the common characteristics of distinct species of animals because many identical characteristics are present in distinct species. For instance, flying, swimming, walking and creeping should not be studied separately because they are all species of animal locomotion (639a26–639b1). This methodological principle implies that the definition 'means of locomotion' has a common meaning when it is applied to distinct species such as birds and fish. Correspondingly, the organic parts that perform these functions have a common meaning when applied to distinct species: the meaning of 'wing', for instance, does not vary when it is applied to distinct species of winged animals, such as birds, insects or bats; the definition 'a means of locomotion in the air' has the same meaning regardless of the differences in the wings that these animals have. Consequently, the wholes to which organic parts belong may remain indefinite, while organic parts are known definitely.[35] Secondary substances of organic parts, then, do not satisfy the principle of cognitive symmetry, although organic parts bear their names homonymously when severed from their wholes, and although their definitions are not entirely independent of the definitions of their wholes.

This interpretation accommodates both Ackrill's and Sedley's readings of Aristotle's account as to why the principle of cognitive symmetry does not hold for secondary substances of organic parts.[36] It implies that one *can* know definitely what a head or hand is without knowing what the headed or the handed is, but it may also be understood as implying that it is *impossible* to have a definite knowledge of 'the headed' and 'the winged' because the exact specification of these terms does not feature in the definitions of organic parts. Further, it follows from this interpretation that 'the headed' and 'the knowable' are not analogous, as Sedley assumes them to be. In this interpretation, organic parts do not satisfy the principle of cognitive symmetry because they are not homonymous terms: that is, their exact meaning does not depend on the exact meaning of their wholes. Knowledge, by contrast, as Aristotle says in the *Sophistical Refutations* 31, does not have the same meaning in abstraction and in application to specific cases so its exact meaning depends on the exact meaning of its correlative: in other words, its definite meaning depends on and varies with the specification of the objects of knowledge.[37] Furthermore, this interpretation explains why the species

understanding, his omission of the qualification 'definite' in the above cases reflects his contention that relatives are meaningless when separated from their correlatives.

[35] This interpretation implies that master and slave are not relatives either. This implication is not surprising, considering that slaves, in Aristotle's view, are living instruments (e.g. *Pol.* 1.4.1254b27–31), hence analogous to organic parts.

[36] See n. 28 supra.

[37] Morales' interpretation (n. 8), 266, which characterizes relatives as indefinite terms, is vulnerable to the objection that all relational attributes would turn into non-relational attributes

of knowledge, such as grammar and geometry, are not relatives in Aristotle's view (11a25–28). 'Geometry', for instance, is a synonymous term; it retains its common meaning when it is applied to specific objects such as planes and solids.

A similar account holds for 'perception' and other conditions and states. Perception is a relative because its correlative 'the perceptible' is not a synonymous term; rather, 'the perceptible' is a general term that holds for generically distinct objects, such as colour and sound. Accordingly, perception, like knowledge, satisfies the principle of cognitive symmetry because it has one definite meaning in relation to one object and another definite meaning in relation to another object. Unlike knowledge, the species of perception are also relatives: sight is relative to colour and hearing is relative to sound; like the species of knowledge, however, particular perceptions are not relatives: sight is not relative to particular colours, such as red and blue. Similarly, health, for instance, does not have a common or identical meaning in different circumstances, in relation to different affective qualities, or when applied to animals of different bodily constitutions. Accordingly, definite knowledge of what health is requires definite knowledge of the circumstances, bodily constitutions and affective qualities in relation to which an organism is said to be healthy.[38] Further, the definition of health, like the definition of double, includes the homonymous term 'symmetry', whose exact meaning depends on the exact meaning of the quantities or qualities that manifest symmetry.[39] Psychic conditions and states are relatives for the same reason: pleasure, pain or actions are virtuous when these are felt or done in the right (i.e. mean) measure, at the right time or toward the right people and objects.[40] The exact meaning of the term 'virtue' varies in different circumstances; hence definite knowledge of what virtue is entails definite knowledge of the circumstances in which an agent is said to be virtuous.

This interpretation offers a solution to the problem of the exact difference between the two definitions of relatives presented in *Categories* 7. By this interpretation, the first definition holds for terms whose being or definition depends on other objects. Quantitative relatives, conditions, states and secondary substances of organic parts satisfy this definition: they depend for their being on their correlatives. By the second definition, the scope of the class demarcated by the first definition is narrowed down to terms whose exact meaning depends on the exact meaning of their correlatives. This definition excludes secondary substances of organic parts and holds for quantitative relatives, conditions and states.

By this interpretation, the scope of Aristotle's category of relatives is thus wider than the class of incomplete or relational attributes. According to the discussion of relatives in *Physics* 7.3, Aristotle's category of relatives includes terms such as health, fitness, beauty and strength, and it covers internal constitution as well as

when their correlatives were determined. Attempting to avoid this consequence, he suggests that Aristotle is aware of a distinction between accidental (i.e. external) and essential (i.e. internal) relations, which corresponds respectively to the distinction between relatives that retain their categorial status on specification and relatives that can turn into non-relative attributes. By contrast, in my interpretation, relatives do not turn into non-relatives when their correlatives are determined because they depend on their correlatives for their exact meaning. Knowledge, for instance, would retain its categorial status when its object was specified because its exact meaning varies with the specification of its objects.

[38] *Hist. an.* 8.18.601a25–27.

[39] *Top.* 6.2.139b21–23.

[40] *Eth. Nic.* 2.5.1106b18–24.

relations between organisms and their external surrounding.[41] The inclusion of these attributes in the category of relatives suggests that his notion of relativity is not significantly narrower in scope than Plato's notion of relativity.[42] In the *Phaedo*, for instance, Plato treats the terms 'equal', 'greater' and 'smaller' on a par with the terms 'beautiful', 'good', 'just' and 'pious' (75c7–d1). Similarly, he states in the *Philebus* that shapes constructed by means of rule and compass, unlike other shapes, are not beautiful in relation to something but are beautiful by themselves (51c6). Likewise, in the *Charmides* and *Republic* 4, knowledge and perception are listed together with double, half and comparative attributes, such as lighter and slower (*Chrm.* 168b1–e1; *Resp.* 4.438c1–d3). The parallelism between the terms that Aristotle and Plato consider relatives may suggest that Aristotle's notion of relativity was formed against this Platonic background. If this assumption is correct, Aristotle's account of relatives may be better understood as an alternative to Platonic accounts of homonymity or ambiguity rather than as an analysis of relational attributes or incomplete predicates. Placed in this context, the principle of cognitive symmetry, which presupposes that relatives have no definite meaning in abstraction from their specific correlatives, may be understood as reflecting Aristotle's doubts about the tenability of Plato's attempt to account for the homonymity of certain attributes by positing separate Ideas, such as 'the equal' and 'the great' as well as 'the beautiful' and 'the good'.[43]

In this light, the principle of cognitive symmetry does not merely prevent certain Aristotelian substances from being relatives but implies that Platonic Ideas cannot explain propositions such as 'Simmias is taller than Socrates and shorter than Phaedo' because 'tallness' and 'shortness' have no definite meaning when they are separated from their correlatives. By placing Aristotle's notion of relativity in this context, this interpretation accounts for the internal coherence of Aristotle's notion of relativity and it contributes to our understanding of the unity of the *Categories* as a whole. It shows that Aristotle's treatment of relatives in *Categories* 7 presupposes the distinction, drawn in *Categories* 1, between homonymous and

[41] See above, p. 526.

[42] Plato's interpreters disagree as to whether he was aware of the problems arising from relative attributes. For instance, Christopher Kirwan argues that there is no evidence that Plato posited Ideas in order to account for incomplete predicates: C. Kirwan, 'Plato and relativity', *Phronesis* 19 (1974), 112–29. But H.-N. Castañeda and Mohan Matthen argue, albeit in different ways, that Plato did have a theory of relational statements: H.-N. Castañeda, 'Plato's *Phaedo* theory of relations', *Journal of Philosophical Logic* 1 (1972), 467–80; M. Matthen, 'Plato's treatment of relational statements in the *Phaedo*', *Phronesis* 28 (1983), 298–306. The issue of the relationship between Plato's and Aristotle's notions of relativity is also controversial. In their interpretations of the argument from relatives, G.E.L. Owen and Gail Fine argue that Plato's notion of relativity is wider than Aristotle's: G.E.L. Owen, 'A proof in the *Peri Ideōn*', in M. Nussbaum (ed.), *Logic, Science, and Dialectic* (Ithaca, NY, 1986), 165–79, at 173; G. Fine, *On Ideas: Aristotle's Criticism of Plato's Theory of Form* (Oxford, 1993), 174. The above interpretation supports Dirk Baltzly's account of the argument from relatives, in showing that the scope of Plato's notion of relatives is not significantly wider than the scope of Aristotle's category of relatives: D. Baltzly, 'Plato, Aristotle and the *ΛΟΓΟΣ ΕΚ ΤΩΝ ΠΡΟΣ ΤΙ*', *OSAPh* 17 (1997), 179–206, at 188–95 and 202–6.

[43] Regardless of whether relativity indeed motivated Plato to develop the theory of Ideas, the argument from relatives found in Alexander's report on Aristotle's *Peri Ideōn* suggests that Aristotle understood the theory of Ideas as resulting from considerations regarding the homonymity of relative terms. Although the details of this argument are problematic, it is clear that it is based on the assumption that 'equal' is not synonymous in one of the three senses specified at the beginning of the argument (Alexander, *In Met.* 82.11–83.6 Hayduck).

synonymous entities and that it is closely related to Aristotle's rejection of Plato's ontology, which underlies the *Categories*' account of substance and predication.

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