

ARISTOTLE ON COMPARISON

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Few human creatures would consent to be changed into any of the lower animals, for a promise of the fullest allowance of a beast's pleasures. . . It is better to be a human being dissatisfied than a pig satisfied; better to be Socrates dissatisfied than a fool satisfied. And if the fool, or the pig, is of a different opinion, it is because they only know their own side of the equation. The other party to the comparison knows both sides.

J. S. Mill, *Utilitarianism*¹

According to common semantic terminology, comparability obtains between two things just in case there is a gradable adjective that ranges over them or, in Aristotelian terms, a predicate that admits of 'the more and the less'. The contemporary philosopher Ruth Chang calls this a 'covering value'.² This linguistic consideration has led many writers to infer that comparable entities must possess the relevant property in the same way. This is claimed both for evaluative predicates and for simple descriptive adjectives. For example, when we attempt to compare the sharpness of a pair of knives, we do so under the assumption that the property of sharpness is the same for each. In other words, if *a* is more *F* than *b*, it seems that we are licensed to infer that *a* and *b* are *F* in just the same way:

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¹ J. S. Mill, *Utilitarianism* (London, 1863), 12.

² See R. Chang, 'Introduction', in ead. (ed.), *Incommensurability, Incomparability, and Practical Reason [Incommensurability]* (Cambridge, Mass., 1997), 1–33. Note that the mention of gradability is in reference to the *linguistic term* (the adjective) that applies to the comparanda, not to an underlying and homogeneously gradable *property* to which that term refers. That is, gradability here is a semantic, not a metaphysical notion. For a contemporary linguistic overview of the semantics of comparative adjectives, see C. Kennedy, 'Semantics of Comparatives', in K. Brown (ed.), *Encyclopedia of Language and Linguistics*, 2nd edn (Oxford, 2003), 68–71.

that they are univocally or synonymously *F*.³ However, should we try to compare the sharpness of a knife and that of the note one semitone above *F*, the enterprise seems bound to fail. For ‘sharp’ means something different when applied to blades and musical notes.

Aristotle is thought explicitly to make this inference from comparability to synonymy. Or as Christopher Shields puts it, ‘Aristotle introduces synonymy as a condition for commensurability.’⁴ This inference, however, is flawed, and, just as importantly, Aristotle does not commit himself to it.⁵ It wrongly presupposes a dichotomous view of synonymy and homonymy, and as a consequence extends the prohibition on comparison too widely. Provided Aristotle grants that there are terms which are neither synonymous nor homonymous, as I shall argue—in contrast to much recent scholarship on Aristotle’s theory of meaning—then he can permit comparisons in some cases where the terms are not synonymous, even while holding that homonymy rules out comparison. And in fact he repeatedly does just this throughout the corpus. In particular, non-synonymous comparison is crucial for establishing a cosmic hierarchy of beings. Thus, far from being concerned with terminological precision—important as this may be—the proposal put forward in this paper brings some of Aristotle’s more technical views in line with some of his best-known doctrines. For once we see that Aristotle does *in fact* develop a mechanism for comparison using terms that are not synonymous, we can then ask *why* he

³ G. E. Moore, in the *Principia Ethica* (Cambridge, 1903), §§47–8, relies on a principle like this to argue for value monism. Outside philosophy, it remains a basic theoretical assumption of many economists. But see A. Sen, *Collective Choice and Social Welfare*, rev. 2nd edn (London, 2017).

⁴ C. Shields, ‘Fractured Goodness: The *summum bonum* in Aristotle’ [‘Fractured Goodness’], in R. Bader and J. Aufderheide (eds.), *The Highest Good in Aristotle and Kant* (Oxford, 2015), 103. Like many contemporary philosophers, Shields uses commensurability interchangeably with comparability. It is important to keep them separate, however, for reasons discussed below.

⁵ Part of the aim of this paper, then, beyond the narrower question of what position to ascribe to Aristotle, is to figure out how well grounded this intuition is, or whether things may not be so simple. Michael Stocker recounts the following anecdote about questioning (a version of) the principle that comparability entails synonymy: ‘The order of strength and naturalness seems to be this: philosophers seem first to hold that comparisons require common features. They then seek arguments to support this thought. It is not a thought they need to be led to by arguments, and the strength of that thought seems given to those arguments, not derived from them’ (*Plural and Conflicting Values* (Oxford, 1997), 177).

should be concerned to do so. The answer, in short, is that non-synonymous comparison is integral to his overall picture of the cosmos and its ordering.

In Section 1, I consider the two main texts where Aristotle seems to assert that comparison requires synonymous predication (*Topics* 1. 15 and *Physics* 7. 4). I show that while both passages explicitly state that *homonymy* rules out comparison, they are silent on whether terms that are not *synonymous* are similarly incomparable (Sections 1.1–2). In *Physics* 7. 4, I argue this on the basis of textual considerations. This is so because terms that are homonymous and those that are not synonymous are not coextensive for Aristotle: despite some scholars' claims to the contrary (surveyed in Section 1.3), homonymy and synonymy are not divided dichotomously (Section 1.4). However, even if one rejected both my reading of *Physics* 7. 4 and maintained a dichotomous division between homonymy and synonymy (and hence accepted that Aristotle requires synonymy for comparison on at least one occasion), this should not lead one to suppose that Aristotle requires synonymy for comparison throughout his works. For even if *Physics* 7. 4 is compatible with a synonymy requirement (because it is silent on the issue), there are other texts where it is explicitly rejected.

In Section 2, I introduce the *pros hen legomena*, literally 'things said with reference to a single thing'. Note I use the transliterated Greek terminology rather than the more common terms of art 'focal meaning', 'core-dependent homonymy', or 'connected homonymy' in order to preserve the ambiguity that will form the focus of Sections 1.3–4, namely that if Aristotle classifies these as homonyms at all, he does so inconsistently. (The literal English translation 'things said with reference to or towards one thing' is rather opaque—presumably why recent scholars have introduced their own terminology.) First, in Section 2.1, I sketch a general account of this special class of non-synonymous terms whose differing meanings nevertheless enjoy a principled connection and which are the best place to look for comparison where a term is used with different senses. Aristotle himself does just this in a passage from his fragmentary *Protrepticus*, which I analyse in Section 2.2. Finally, in Section 2.3, I consider the possibility of comparisons using terms that are not synonymous but are analogically predicated, which, on the basis of a reading of *Politics* 3. 12, I show are not promising.

Section 3 concludes the paper by considering an apparent tension in Aristotle's thought. Aristotle is often ascribed the view that 'good' is not synonymous between various domains: not only inter-categorially but also intra-categorially. Particularly important is the claim that each kind of living being is good in its own way and has an account of the good life particular to its species. On the principle that comparability requires synonymy, it would seem that Aristotle, then, must reject inter-species comparisons in terms of their goodness. Yet Aristotle draws precisely such comparisons. Though they are often brief and allusive, they are frequent enough and in central enough positions in the corpus that they cannot be ignored. I suggest that the model of non-synonymous comparison developed in the paper allows for this apparent tension to be resolved.

A brief note on terminology: I speak throughout of *comparability* and *comparison* rather than *commensurability* and *commensuration*. Comparison is simply the ranking of one item above, below, or equal to another along some axis; commensuration requires cardinal values, that is, the possibility of quantifying the precise degree to which each term being compared possesses a common property. Contemporary writers often use the term 'incommensurable' to denote the impossibility of comparison or ranking in general, but Aristotle's Greek has both words: his *sumblētos* denotes the possibility of comparison generally, while *summetros* is used for the more mathematically precise sense of commensurability. Keeping these separate is important, since two items can be incommensurable while still being comparable.

1. Aristotle's (apparent) claim that comparison requires synonymy

1.1. *The Topics on homonymy and comparability*

In the *Topics*, Aristotle provides a number of tests for identifying homonymy, which is taken to be either co-extensive with or a particularly prominent kind of non-synonymous term (how one ultimately answers this question will be important and will demand our direct attention shortly in Section 1.3). Among these, he includes the non-comparability of (at minimum) two instances of

a term, which he argues indicates that the term is being used homonymously:

ἔτι εἰ μὴ συμβλητὰ κατὰ τὸ μᾶλλον ἢ ὁμοίως, οἷον λευκὴ φωνὴ καὶ λευκὸν ἱμάτιον, καὶ ὀξεὺς χυμὸς καὶ ὀξεῖα φωνή· ταῦτα γὰρ οὐθ' ὁμοίως λέγεται λευκὰ ἢ ὀξεῖα, οὐτε μᾶλλον θάτερον. ὥσθ' ὁμώνυμον τὸ λευκὸν καὶ τὸ ὀξύ. τὸ γὰρ συνώνυμον πάντων συμβλητόν· ἢ γὰρ ὁμοίως ῥηθήσεται ἢ μᾶλλον θάτερον. (*Top.* I. 15, 107^b13–18)⁶

Further, [one ought to examine] whether terms are not comparable with regard to being more [or less] than, or similar to, one another: for example, a bright voice and a bright garment or a sharp taste and sharp sound. For these [the items in each pair] are not said to be similarly bright or sharp, nor is one more than the other. Therefore, bright and sharp are homonymous. For every synonymous item is comparable. For either they will be said similarly or one more than the other.

Which is sharper, three-year-old cheddar or F#? The question is absurd. It is important to note, however, that this does not mean the two items can *never* be compared. We compare very different things all the time. It may, for example, be intelligible to claim that F# is more *something* than old cheddar—more pleasurable for a lactose-intolerant musician, say. The insistence on a covering term is not just pedantry, but allows us to see the force of Aristotle's examples: if two items, *a* and *b*, are both said to be *F*, but cannot be compared in terms of their *F*-ness, then *F* is homonymous as applied to *a* and *b*. This expanded formulation must be kept in mind: the argument from incomparability to homonymy neither requires that the subjects of predication must be incomparable in all instances nor shows that the homonymous predicate is always homonymous between any two of its instances. 'Bright', for example, is predicated homonymously of the sun and students, but synonymously of the sun and moon.

The *Topics* is a handbook of applied logic that compiles argumentative and rhetorical techniques, and in this section Aristotle is concerned with determining whether terms are being used homonymously in order to identify opponents' fallacious inferences. Comparability thus enters into the picture only insofar as it bears on determining homonymy. As we have seen, incomparability is held to be sufficient for homonymy, that is, any case of incomparability

⁶ W. D. Ross, *Aristotelis Topica et Sophistici elenchi* (Oxford, 1958). Unless otherwise noted all translations are my own.

provides grounds for judging that homonymy obtains. But Aristotle does not state the converse principle in *Topics* 1. 15, that homonymous terms cannot be compared, nor does it follow from what he does say (as some have suggested).⁷ As we shall see, there is in fact one passage in which Aristotle may seem to unambiguously endorse the mutual entailment of homonymy and incomparability. But in the course of textual examination, we shall see that this is not a ground for supposing that synonymy is required for comparison, even if homonymy rules comparison out; for Aristotle does not consistently hold that anything that is not synonymous is thereby homonymous and therefore that there is nothing intermediate.

1.2. *Physics* 7. 4 on synonymy and comparability

The second major text that has led readers to impute to Aristotle the view that comparisons require synonymy is from *Physics* 7. 4, which is concerned with the comparability of changes of different sorts—growth, movement from place to place, qualitative transformation, and so on.⁸ Aristotle opens the chapter by asking ‘whether every change is comparable [*συμβλητηή*] with every other, or not’ (*πότερόν ἐστι κίνησις πάσα πάσῃ συμβλητηή ἢ οὐ*, 7. 4, 248^a10). His answer, ultimately, seems to be negative, though the chapter is highly compressed and aporetic, so definitive answers are hard to come by. Wardy characterizes the stretch of text as containing ‘Aristotle’s thorny, inconclusive, and obscure musings on comparability’.⁹ Nevertheless, it also contains at least one relatively clear passage that connects the physical subject matter to the semantic theme of comparability that we have been discussing. That passage exists in two variants:

Version α

οὐδ’ ἄρα αἱ κινήσεις, ἀλλ’ ὅσα μὴ
συνώνυμα, πάντ’ ἀσύμβλητα. οἷον διὰ τί
οὐ συμβλητὸν πότερον δξύτερον τὸ
γραφεῖον ἢ ὁ οἶνος ἢ ἡ νήτη; ὅτι ὁμώνυμα,
οὐ συμβλητά. (7. 4, 248^b6–9)¹⁰

Version β

οὐδ’ ἄρα αἱ κινήσεις. ἀλλ’ ὅσα μὴ
ὁμώνυμα, πάντα συμβλητά. οἷον διὰ τί
οὐ συμβλητὸν, πότερον δξύτερον τὸ
γραφεῖον ἢ ὁ οἶνος ἢ ἡ νήτη; ὅτι
ὁμώνυμα, οὐ συμβλητά. (7. 4, 248^b6–9)

⁷ Shields, ‘Fractured Goodness’, 103.

⁸ See R. Wardy, *Chain of Change: A Study of Aristotle’s Physics VII [Chain of Change]* (Cambridge, 1990) for a discussion of the textual issues and a comprehensive commentary on this book.

⁹ Wardy, *Chain of Change*, 291.

¹⁰ W. D. Ross, *Aristotle’s Physics [Physics]* (Oxford, 1936).

So neither are changes <comparable>; rather, whatever things are *not synonymous*, all those are *incomparable*. For example, why isn't a pencil or wine or the highest note in a scale sharper <than the others>? Because they are homonyms, they are not comparable.¹¹

So neither are changes <comparable>; rather, whatever things are *not homonymous*, all those are *comparable*. For example, why isn't a pencil or wine or the highest note in a scale sharper <than the others>? Because they are homonyms, they are not comparable.¹²

The differing sections amount to the following:

Version α: if *F* holds non-synonymously of *a* and *b*, then *a* and *b* are *not* comparable in terms of *F*.

Version β: if *F* holds non-homonymously of *a* and *b*, then *a* and *b* are comparable in terms of *F*.

Two main considerations speak in favour of Version β.

First, while the language of homonymy is abundant throughout *Physics* 7. 4,¹³ synonymy is mentioned only two other times in the *Physics* as a whole (234^a9; 257^b12), neither in 7. 4, which frames the rest of its inferences regarding comparisons exclusively in terms of homonymy and not of synonymy or non-synonymy.

Second, Aristotle entertains an objection to the claim that non-homonymy is sufficient for comparison slightly later in the chapter. At 248^b12–13, Aristotle asks 'Or, first of all, isn't this true, that if things are not homonymous, then they are comparable?' (ἢ πρῶτον μὲν τοῦτο οὐκ ἀληθές, ὡς εἰ μὴ ὁμώνυμα συμβλητά;). That is, he is raising the question of whether or not 'this', namely the principle stated at the opening of Version β, may be open to exceptions. The question makes much more sense here if the same phrasing has already been used at 248^b6 than if it is introduced abruptly here.¹⁴

¹¹ This is the reading adopted by Ross, *Physics* and Wardy, *Chain of Change*.

¹² This is the reading adopted by I. Bekker, *Aristoteles Opera*, vol. i (Berlin, 1831); H. Carteron, *Physique, Tome II (V–VIII)* (Paris, 1931); and P. H. Wicksteed and F. M. Cornford, *Physics II (V–VIII)* (Cambridge, MA, 1934).

¹³ Seven of the nine instances of ὁμώνυμον and its derivatives in the *Physics* are to be found in 7. 4; in general, there are about three times as many references to homonymy and its derivatives throughout the corpus as to synonymy and its derivatives (147 to 48).

¹⁴ As Wardy correctly notes, the context is of a 'highly tentative, dialectical character' (*Chain of Change*, 276). However, even if Aristotle did clearly mean to *reject* the claim that all non-homonymous terms are comparable, this need not restrict comparison only to synonymous ones.

However, the two versions may just reflect a distinction without a difference: in the final line of both versions, Aristotle writes that homonymy is sufficient for incomparability. He explains that while wine,¹⁵ a high note, and a pencil are all called ‘sharp’, none can be said to be sharper than any other: ‘because they are homonymous, they are not comparable’ (ὅτι ὁμώνυμα, οὐ συμβλητά). Now, if synonymy and homonymy are dichotomous, then the two variants do not differ in their consequences, since homonymy is just the same as non-synonymy.

Simplicius, who notes both variants, ends his discussion of the discrepancy by asserting that they ‘clearly all have the same sense’ (δῆλον δὲ ὅτι πάντα τὴν αὐτὴν ἔννοιαν ἔχει, *In Phys.* 1086. 25 Diels).¹⁶ That is, he reads Aristotle as drawing a dichotomous division between homonymy and synonymy. However, we shall see in Section 1.3 that it is far from clear that the division is dichotomous and that a non-dichotomous reading is in fact the more plausible. More importantly, if the division between homonymy and synonymy is *not* dichotomous, then the difference between Versions α and β is of great significance. Under such a view, Version α claims not just that homonyms are incomparable, but also that any intermediate items are too. And given the same view, Version β would seem to say precisely the opposite: that the intermediate items (which are neither homonymous nor synonymous) *can* be compared.

¹⁵ Wine turned to vinegar, presumably, as noted in the Arabic summary of Philoponus’ lost commentary on *Physics* 7 (P. Lettinck and J. O. Urmson (trans.), *Philoponus: On Aristotle Physics 5–8 with Simplicius: On Aristotle On the Void* (London, 2013) at 785. 1) and by Simplicius, who reads τὸ ὄξος at 248^b8 in place of ὁ οἶνος of the MSS (*In Phys.* 1085. 26 Diels).

¹⁶ Their presence in Simplicius confirms that the variants cannot be explained as a simple copying error introduced later in the process of transmission (e.g. during *metacharakterismos*). However, Simplicius’ commentary does give two pieces of circumstantial evidence in favour of Version β . First, he notes that Version β was the reading in Alexander of Aphrodisias’ (now lost) commentary on the *Physics* (ap. Simpl. *In Phys.* 1086. 21 Diels). Second, he also says that a third variant, substantially similar to Version β , was also in circulation: ‘But indeed, is everything that is not homonymous comparable?’ (ἀλλὰ ἀρά γε ὅσα μὴ ὁμώνυμα ἅπαντα συμβλητά; 1086. 24–5). It would appear, then, that in addition to being a better fit for the context, Version β also has stronger historical footing. Though he opts for Version α , Ross (*Physics*, 678) is nevertheless correct that the variation is likely to be due to the final alpha of πάντα being mistaken for an alpha-privative on the following συμβλητά (or vice versa) and then ὁμώνυμα being emended to συνώνυμα (or vice versa) in order for the text to make sense.

1.3. *Dichotomous and non-dichotomous divisions of homonymy and synonymy*

To determine the relationship between homonymy and synonymy, we should start by considering three possible cases. The first is straightforward synonymy, where some *a* and *b* are said to be *F* in just the same way—predicating ‘red’ of a Gala apple and a fire engine. The second case is of purely verbal or accidental homonymy: two items said to be *F* homonymously have merely the fact that they are called *F* in common—as when financial institutions and the edges of rivers are both called ‘bank’. Between these two extremes lie the terms that have provoked the most philosophical interest—‘being’ and, as we shall see, ‘good’—are neither synonymous nor (merely accidentally) homonymous but said ‘towards’ or ‘with reference to’ one thing (*pros hen legomena*).¹⁷

These three possibilities can be schematized as follows:

Synonymy: *a* and *b* are said to be *F* in just the same way, for example predicating ‘red’ of a Gala apple and a fire engine.

Homonymy: *a* and *b* are said to be *F* but merely have the fact that they are called *F* in common, while the account of *F* differs, for example ‘bank’ as it applies to the sides of rivers and to financial institutions.

Intermediate: *a* and *b* are said to be *F* and the account of *F* differs in each case, but the commonality doesn’t seem to be *merely* one of a common name, for example ‘healthy’ as it applies to antibiotics and people.

The question under immediate discussion can thus be formulated more precisely: how should this intermediate class of terms that are not said synonymously—which includes neither merely accidental homonyms nor unambiguous synonyms—be categorized? The obvious text with which to start is the opening of the *Categories*, where Aristotle offers definitions of homonyms and synonyms in turn:

Ὁμώνυμα λέγεται ὡν ὄνομα μόνον κοινόν, ὃ δὲ κατὰ τοῦνομα λόγος τῆς οὐσίας ἕτερος... συνώνυμα δὲ λέγεται ὡν τό τε ὄνομα κοινόν καὶ ὃ κατὰ τοῦνομα λόγος τῆς οὐσίας ὁ αὐτός. (*Cat.* 1^a1–7)¹⁸

¹⁷ C. Shields, *Order in Multiplicity: Homonymy in the Philosophy of Aristotle* [*Order in Multiplicity*] (Oxford, 1999), chs 5–9, analyses a variety of these cases, including, in addition to ‘being’ and ‘good’, ‘body’, ‘life’, and ‘one’.

¹⁸ L. Minio-Paluello, *Aristotelis Categoriae et liber De interpretatione* (Oxford, 1949).

Things are said to be homonyms which have only a name in common, while the accounts [*logos*] of the being corresponding to the name are different. . . things are said to be synonyms which have a name in common and the accounts of the being corresponding to the name are the same.

Because Aristotle mentions only homonyms and synonyms at *Categories* 1, it is not hard to suppose that these are meant to be dichotomous.¹⁹ If synonyms are those items that share a name and have the same account, then it seems natural to read Aristotle as saying that any items sharing a name but whose accounts diverge will be homonyms.²⁰ However, the definition of homonyms as having ‘only a name in common, while the accounts of the being corresponding to the name are different’ (*ὡν ὄνομα μόνον κοινόν, ὁ δὲ κατὰ τοῦνομα λόγος τῆς οὐσίας ἕτερος*) admits of two possible readings of the key term ‘different’:

Narrow Homonymy: homonyms have a common name and the accounts corresponding to the name are completely different (i.e. have *nothing* in common).²¹

Broad Homonymy: homonyms have a common name and accounts corresponding to the name are at least minimally different (i.e. do not have *everything* in common).²²

¹⁹ I am setting aside Aristotle’s apparent third class, paronyms (*Cat.* 1^a12–15), which are terms that differ in grammatical case, and hence orthogonal to the issues under discussion (as noted correctly by J. Ward, *Aristotle on Homonymy: Dialectic and Science [Aristotle on Homonymy]* (New York, 2008), 14–15).

²⁰ T. H. Irwin, ‘Homonymy in Aristotle’ [‘Homonymy’], *Review of Metaphysics*, 34 (1981), 530, suggests that there may be synonymous multivocals, but this does not imply a bifurcation of synonymy that would accommodate the intermediate class we are discussing. These synonymous terms that are nevertheless said in many ways are what Aristotle calls ‘amphibolous’, terms that have different references but the same sense or—in a contemporary register—have different extensions but the same intension (e.g. ‘the best kind of ice cream’ may refer either to chocolate or vanilla according to individual taste, but means the same thing for everyone). The contemporary reader should note, then, that synonymy is distinguished from homonymy in terms of *sense*.

²¹ Proponents of Narrow Homonymy include W. D. Ross, *Aristotle’s Metaphysics [Metaphysics]*, 2 vols. (Oxford, 1953), i. 256; H. Cherniss, *Aristotle’s Criticism of Plato and the Academy [Aristotle’s Criticism]* (Baltimore, 1944), 358, 361, esp. n. 270; J. Hintikka, ‘Aristotle on the Ambiguity of Ambiguity’, *Inquiry*, 2 (1959), 137–51 and id., ‘Different Kinds of Equivocation in Aristotle’, *Journal of the History of Philosophy*, 9 (1971), 368–72; G. E. L. Owen, ‘Logic and Metaphysics in Some Earlier Works of Aristotle’ [‘Logic and Metaphysics’], in id., *Logic, Science and Dialectic: Collected Papers in Greek Philosophy [Logic, Science and Dialectic]*, ed. by M. Nussbaum (Ithaca, 1986), 180–200.

²² Broad Homonymy is the dominant view of the last few decades and includes Irwin, ‘Homonymy’; Shields, *Order in Multiplicity*; Ward, *Aristotle on Homonymy*; as well as C. Rapp, ‘Ähnlichkeit, Analogie und Homonymie bei Aristoteles’

Now if ‘homonymy’ means Narrow Homonymy, then this suggests that the *pros hen legomena*, where the various senses of a term have at least some connection, are not homonyms.²³ An initial hint in favour of this comes from the adverb ‘only’ (μόνον) in Aristotle’s definition that homonyms have ‘only a name in common, while the accounts . . . corresponding to the name are different’.²⁴ While terms said *pros hen* have at least partially different accounts, they share some overlap, so it is not *only* the name they have in common.²⁵

In addition to proposing a dichotomous reading of *Categories* 1, proponents of Broad Homonymy point to instances in which Aristotle explicitly proposes subspecies of homonyms. For example, in *Topics* 1. 15, Aristotle distinguishes between homonyms ‘in which the difference is clear at once’ (κατάδηλος ἐν αὐτοῖς εὐθέως ἡ διαφορά ἐστίν, 106^a24) and those in which the difference ‘slips in unnoticed’ (λανθάνει παρακολουθοῦν τὸ ὁμώνυμον, 107^b6–7). On its own, this need not presuppose a dichotomous reading: there may well be divisions within the class of homonyms *as well as* an intermediate class that is neither synonymous nor homonymous.²⁶

[‘Ähnlichkeit’], *Zeitschrift für Philosophie*, 46 (1992), 526–44 at 534–5. It is also found in L. Robin, *La théorie platonicienne des idées et des nombres d’après Aristote* (Paris, 1908), 153: ‘Neither Being, nor the One, nor the Good is a true homonym’ (‘ni l’Être ni l’Un ni le Bien ne sont de vrais homonymes’). Finally, P. Aubenque, *Le problème de l’être chez Aristote* (Paris, 1962), 179–98, maintains that Aristotle uses the term ‘homonymy’ in both ways at different times depending on the context and period of his career. Simplicius, summarizes ancient versions of Narrow Homonymy at *In Cat.* 32. 12–20 and of Broad Homonymy at 32. 24–33. Alexander of Aphrodisias, *In Metaph.* 241. 5–15, argues for a tripartite division, that is, for Narrow Homonymy, recognizing an intermediate class of terms that are neither synonymous nor homonymous.

²³ My use of the terms Narrow and Broad Homonymy is analogous to Irwin’s Extreme and Moderate View and Shields’s Discrete and Comprehensive Homonymy (Irwin, ‘Homonymy’, 524; Shields, *Order in Multiplicity*, 14).

²⁴ *Cat.* 1, 1^a6–7 (Greek cited above). Cf. *Metaph.* K. 3, 1060^b33–5.

²⁵ Irwin (‘Homonymy’, 524–5) suggests that there is an ambiguity in the meaning of ‘only’ (μόνον) in the definition of homonymy that should incline us towards Broad Homonymy. He suggests that we are better off reading Aristotle as saying that two items *need* share only the name in order to count as homonyms. Though not impossible, this is by far the less plausible construal linguistically. In their discussions of *Categories* 1, neither Shields (*Order in Multiplicity*, 12) nor Ward (*Aristotle on Homonymy*, 16) accounts for the force of ‘only’.

²⁶ For example, it could be argued that some relatively obvious and uninteresting cases of homonymy are not merely accidental but are based on a relatively shallow similarity. For example, the sharpness of cheese, notes, and pencils might be said to affect the senses of taste, hearing, and touch in a way that feels similar to the perceiver, even though this does not reflect anything common between them. Many, if not all, metaphors rely on such homonyms.

Nevertheless, proponents of Broad Homonymy point to the fact that in *Topics* 1. 15 Aristotle classifies as less obvious cases of homonymy precisely the sort of terms that, in other works, he calls *pros hen legomena*, especially health (107^b8–12) and goodness (107^a5–12).²⁷ Moreover, given the explicit mention of the homonymy of goodness in the *Topics*, further evidence for a dichotomous division would seem to be found in the discussion of goodness at *Nicomachean Ethics* 1. 6, where Aristotle claims that the good ‘does not seem like homonyms by chance’ (οὐ γὰρ ἔοικε τοῖς γε ἀπὸ τύχης ὁμωνύμοις) but is rather said *pros hen* or by analogy (1096^b26–8).²⁸

Proponents of a dichotomous reading propose that the qualification of homonymy with ‘by chance’ is taken to imply that there is another kind of homonymy which is not by chance and that this ‘non-chance homonymy’ encompasses both analogy and the *pros hen legomena*. In isolation, this may seem the more plausible reading and thus seems to provide further evidence for Broad Homonymy. However, in the central texts where Aristotle not only mentions the notion of things that are said *pros hen*, but also explains what this amounts to, he clearly contrasts these terms with homonymous ones.

Moreover, it is also possible to read the sentence not as offering a qualification or division of homonymy, but as introducing a general characterization of homonymy and hence compatible with the denial that terms said *pros hen* or analogically are homonymous (since something which is not a homonym at all is, *a fortiori*, not a homonym merely by chance). That is, ‘by chance’ is a gloss on the notion of homonymy—pleonastic perhaps, but still meaningful—and serves as a reminder to the reader of what a homonym is, namely a common term applying to two different things merely by chance and which share ‘only a name in common’.²⁹ Though perhaps the (initially) less natural construal of 1096^b26–8, this is strengthened by another mention of chance homonyms at *Eudemian Ethics* 7. 2, where Aristotle describes the various types of friendship as ‘neither homonymous and related accidentally to one another

²⁷ Cf. Shields, *Order in Multiplicity*, 18–19.

²⁸ The Greek text is from I. Bywater, *Aristotelis Ethica Nicomachea* (Oxford, 1894). Cf. *Eudemian Ethics* 7. 2, 1236^a17, where Aristotle denies that friendship is ‘said entirely homonymously’ (πᾶμπαν λέγεσθαι ὁμωνύμως).

²⁹ Thanks to Gabriel Lear for this suggestion.

nor falling under a single species, but which are rather [said] towards one thing' (οὔτε ὡς ὁμώνυμοι καὶ ὡς ἔτυχον ἔχουσαι πρὸς ἑαντάς, οὔτε καθ' ἓν εἶδος, ἀλλὰ μᾶλλον πρὸς ἓν, 1236^b24–6).³⁰

Having seen the case for a dichotomous division—as well as some initial worries—we can now turn to these texts and show that the *pros hen legomena* are not homonyms.

1.4. Homonymy and non-synonymy are not the same

By far the best evidence for Narrow Homonymy—and hence a non-dichotomous division between synonymy and homonymy—comes from the two passages of the *Metaphysics* where Aristotle claims that 'being' is said *pros hen*. In both *Metaphysics* Γ. 2 and Ζ. 4, he uses a formulation that renders the division explicitly non-dichotomous:

τὸ δὲ ὄν λέγεται μὲν πολλαχῶς, ἀλλὰ πρὸς ἓν καὶ μίαν τινα φύσιν καὶ οὐχ ὁμώνυμως ἀλλ' ὥσπερ καὶ τὸ ὑγιεινὸν ἅπαν πρὸς ὑγίειαν, τὸ μὲν τῷ φυλάττειν τὸ δὲ τῷ ποιεῖν τὸ δὲ τῷ σημειῶν εἶναι τῆς ὑγείας τὸ δ' ὅτι δεκτικὸν αὐτῆς. (Γ. 2, 1003^a33–b1; my emphasis)³¹

Being is said in many ways, but rather with reference to [πρὸς] one thing and to some one single nature and *not homonymously* but rather as everything healthy is [said] with reference to health, one thing by preserving it, another by producing it.

And in the parallel discussion at Ζ. 4, Aristotle's language is much the same, with the substitution of 'healthy' (τὸ ὑγιεινόν) with 'medical' (τὸ ἱατρικόν):

τὸ γὰρ ὀρθόν ἐστι μῆτε ὁμώνυμως φάναι μῆτε ὡσαύτως ἀλλ' ὥσπερ τὸ ἱατρικὸν τῷ πρὸς τὸ αὐτὸ μὲν καὶ ἓν, οὐ τὸ αὐτὸ δὲ καὶ ἓν, οὐ μέντοι οὐδὲ ὁμώνυμως· οὐδὲ γὰρ ἱατρικὸν σῶμα καὶ ἔργον καὶ σκεῦος λέγεται οὔτε ὁμώνυμως οὔτε καθ' ἓν ἀλλὰ πρὸς ἓν. (*Metaph.* Ζ. 4, 1030^a34–b3)

It is correct that [being] is said *neither homonymously nor in the same way*, but rather as medical [is said] with reference to one and the same thing, though it [*sc.* the medical] is itself not one and the same thing, nor indeed is it said homonymously. For a body, an action, and an instrument are not said

³⁰ F. Susemihl, *Aristotelis Ethica Eudemia* (Leipzig, 1884). Irwin, 'Homonymy', 532, suggests that we may read the phrase as restrictive, with 'and' (καὶ) introducing a subset of homonym. However, the exegetical construal of the conjunction is far more plausible.

³¹ The text is from Ross's *Metaphysics*.

to be medical either homonymously or in the same way but with reference to one thing [*πρὸς ἓν*].

Unlike the passages discussed in Section 1.3, which all admit of at least some degree of ambiguity between and Narrow and Broad Homonymy, it is even more implausible to read either *Metaphysics* passage as classifying the *pros hen legomena* as homonyms. As a result, in precisely the place where these terms take centre stage, Aristotle clearly considers them a *tertium quid* between the non-dichotomous poles of homonymy and synonymy.

Understandably, proponents of Broad Homonymy have attempted to read *Metaph.* *Γ.* 2 and *Z.* 4 as dichotomous. Most notably, Shields claims that Aristotle ‘intends here only a contrast between being and non-associated homonyms, that is, discrete [i.e. Narrow] homonyms’.³² The rationale for this claim is that (as we have seen) Aristotle classifies ‘healthy’ as a homonym at *Topics* 1. 15, 107^b8.

Here we have two options. First, one can, as Shields does, read Aristotle’s contrast of *pros hen legomena* with homonyms in *Metaphysics* *Γ.* 2 and *Z.* 4 as concerned only with merely accidental homonyms. The second option is to say that his classification of ‘healthy’ (and ‘good’) in the *Metaphysics* differs from the *Topics* as a result of revising his views on synonymy, non-synonymy, homonymy, and their relation. The first option is unappealingly ad hoc; indeed, nothing in the context of either *Metaphysics* passages suggests a tacit narrowing of homonymy to mean only chance homonymy. If that is so, we may have good reason to think that the *Topics* and *Metaphysics* do indeed contain quite different notions of homonymy. Here we must confront the fraught question of Aristotle’s philosophical development.

1.5. *Developmental and other approaches*

The most obvious—and promising—way to explain this difference is to turn to chronological development and to claim that Aristotle’s

³² Ward, *Aristotle on Homonymy*, 106–8, makes a similar argument to that of Shields. Irwin, ‘Homonymy’, 532, claims that Aristotle is simply ‘relying on the context to show that by “homonymous” he means “completely homonymous”’. But Irwin does not show this and nothing in the context would suggest this. Alexander of Aphrodisias, *In Metaph.* 241. 21–4 Hayduck, suggests that those places where Aristotle draws a dichotomous division are ones where he is speaking ‘more commonly’ (*κοινότερον*), whereas in the *Metaphysics* he takes a ‘more careful’ (*ἐπιμελεστέραν*) approach.

views shifted from a dichotomous division in his early work (like the *Categories* and *Topics*) to a non-dichotomous, tripartite one in later works (like the *Metaphysics Γ* and *Z*). The appeal of this strategy is that it allows us to accept the most natural readings of both sets of texts—those that seem to have a dichotomous view, like *Categories* 1, and those that quite clearly posit a *tertium quid*.

The most thorough elaborator of such a view is G. E. L. Owen, who claims that Aristotle's early works, including the *Categories* and the *Topics*, do indeed contain dichotomous division between synonymy and homonymy.³³ But in the later period during which he produced *Metaphysics Γ* and *Z* and developed a single science of being (absent, according to Owen, in the *Categories*), Aristotle came to recognize the difference between terms like 'sharp' and those like 'being', 'healthy', and 'good'. Consequently, he reclassified these non-synonymous, yet related terms, taking them out of the genus of homonyms and placing them in a third, intermediate category.

Though Shields and Ward accept that Aristotle's views changed over time, they deny that the tension between the two sets of texts discussed in Section 1.3 reflects such a change. While developmental hypotheses always have something of a tenuous status,³⁴ this is a case where attempting to deny any significant tension between the two sets of texts is far more implausible. Moreover, allowing that there is tension between the two sets of texts will only strengthen the case for re-examining whether synonymy is necessary for comparison. For it is quite clear that not only *Topics* 1. 15, but also *Physics* 7. 4 looks very different from *Metaphysics Γ*. 2 and *Z*. 4. As we have seen, Aristotle calls health a homonym at *Topics* 1. 15 (107^b8) but denies this at *Metaphysics Γ*. 2 (1003^a33^b1; cf. *Z*. 4, 1030^a33^b3). Moreover, at *Topics* 1. 15 and *Categories* 1, Aristotle makes no mention, explicit or otherwise, of *pros hen legomena*, which he *contrasts* with homonyms in the *Metaphysics*. Finally, at

³³ See especially Owen, 'Logic and Metaphysics'; id., 'The Platonism of Aristotle' (in id., *Logic, Science and Dialectic*, 200–20); and id., 'Aristotle on the Snares of Ontology' (in id., *Logic, Science and Dialectic*, 221–45).

³⁴ This is due both to the relative lack of external evidence about the relevant dates during Aristotle's career and the inevitable changes to the texts during the long and complex process of editing and copying.

Physics 7. 4, Aristotle omits any explicit mention of either *pros hen legomena* or any of the particular terms—like ‘health’, ‘good’, and ‘being’—which he says in *Γ.* 2 and *Z.* 4 fall into this category. Rather, all the homonyms he mentions there are accidental homonyms. Indeed, on the basis of these considerations, Wardy speculates that *Physics* 7. 4 is an early work, especially in relation to the *Metaphysics*. Most importantly, whatever its date, *Physics* 7. 4 is ultimately silent on the crucial question of whether synonymy is necessary for comparison. This is abundantly clear if we accept Version β , which asserts only that homonymous terms are incomparable and doesn’t say anything about whether homonymous terms include all those that are not synonymous. However, even if we accept Version α , the passage is still silent on whether synonymy is required for comparison. In this version he writes that ‘whichever things are not synonymous, all those are incomparable’. Nevertheless, neither Version α nor Version β make the tripartite division between synonymy, homonymy, and *pros hen legomena*: Version α rules it out and explicitly relies on Broad Homonymy, while Version β is simply non-committal on the matter. Yet, as we have seen, there are texts—probably later texts—where Aristotle does hold that there is some *tertium quid* between homonymy and synonymy, that is, where he explicitly espouses Narrow Homonymy. In short, *Physics* 7. 4 cannot settle the question of whether Aristotle believes that synonymy is necessary for comparison in all texts. To do that, we will need to look elsewhere—to the texts which discuss the *pros hen legomena*—and ask whether these terms, neither homonymous nor synonymous, indeed admit of comparison.

2. Comparison across ambiguity

2.1. *Introducing the pros hen legomena*

As we have already noted, Aristotle is not only (or even primarily) interested in the sorts of homonymy to which he adverts in *Physics* 7. 4. His most celebrated discussions of non-synonymy involve items that share names not simply by accident or on account of merely superficial resemblance, but on the basis of deep and significant overlap in their accounts. Aristotle’s standard example of health is instructive for understanding what it is for a term to be *pros hen legomenon*. We have seen in *Metaph.* *Γ.* 2 and *Z.* 4 that

‘being is said in many ways’ (τὸ δὲ ὄν λέγεται μὲν πολλαχῶς), but not homonymously (καὶ οὐχ ὁμωνύμως),³⁵ and that Aristotle tells us that it is said, like ‘healthy’, *pros hen*. Moreover, he helpfully explicates how the *pros hen* structure works in the case of health. The one thing with reference to which other things are called healthy is, perhaps unsurprisingly, *health*. Other things are called healthy because they bear a number of different relations to this one thing: kale might be called healthy because it *preserves* health; an exercise regimen might be so called because it *produces* health; a clear complexion is called healthy because it is *a sign of* health; and a body because it is *receptive of* health (1003^a35–^b1).

Health, meanwhile, the one thing with reference to which all these other things are called healthy, is not healthy because it stands in relation to anything else, but just because of what it is. This brings out the first crucial aspect of *pros hen legomena*: the peripheral ways in which a term is said refer to the core case, but not vice versa, that is, the relation is asymmetric. The definition of health will be referenced in the definition of ‘healthy’ as it is applied to green vegetables, exercise, scalpels, complexion, in addition to the specific details particular to that individual sense (productive of . . . , preservative of . . . , a sign of . . .).

We can now give the following schemes for how things are said to be healthy *pros hen*, which can form the basis for a more general account of terms said *pros hen*:

Health: different healthy things are said to be healthy with reference to (πρός) *health* because:

- i. the accounts of *healthy* as it is said of *different healthy things* include the account of *health* as well as further, distinct information (‘productive of . . .’, ‘preservative of . . .’, ‘a sign of . . .’);
- ii. the account of *health* does not include the account of *healthy* as it is said of *different healthy things*.

Pros hen: *a* and *b* are said to be *F* with reference to (πρός) *f* just in case

- i. the accounts of *F* as it is said of *a* and *b* include the account of *f* as well as further, distinct information;
- ii. the account of *f* does not include the account of *F* as it is said of *a* or *b*.

³⁵ Or, according to Irwin, Ward, and Shields, not a merely accidental homonym.

In addition to being asymmetric, the relation between the core and peripheral senses cannot be merely accidental. If *any* relation would do, then the senses even of merely accidental homonyms could be shown to be systematically related by constructing some cleverly concocted dummy relation.³⁶ The relation between the peripheral and the core items is first of all a case of what Aristotle calls priority in definition and may also be a case of causal or ontological priority.³⁷

2.2. Comparison using the *pros hen legomena*

With this framework established, we can now turn to the question of whether *pros hen legomena* can be compared. Recall that the examples of non-synonymous terms that could *not* be compared, both in the *Topics* and in *Physics* 7. 4, were all merely accidental homonyms. Aristotle never expresses himself directly on whether the injunction on comparison without synonymy extends to the class of *pros hen legomena* (whether these are counted as homonyms or not), so the discussion must remain somewhat speculative. But this does not mean that it is impossible.

The main piece of evidence for an exception to the supposed rule requiring synonymy for comparability comes from the reconstruction of Aristotle's *Protrepticus*.³⁸ Before moving to the text itself, it may be important to address another concern about chronology, namely that the *Protrepticus* is overwhelmingly thought by scholars to be an early work. And as we have seen (cf. Section 1.5

³⁶ Shields, *Order in Multiplicity*, 108, shows the inadequacy of focusing only on asymmetry by offering the disjunctive property 'being within several hundred miles of a river bank (and engaging in the relevant sort of financial transactions)' in order to turn 'bank' as applied to the edges of rivers and financial institutions, a paradigm of a merely accidental homonym, into a *pros hen legomenon*.

³⁷ Shields, *Order in Multiplicity*, ch. 4.4, following Cajetan, the late medieval Dominican philosopher, claims that there *must* be a causal relation between two instances of a term predicated *pros hen*. This is not essential to my argument, although Shields may well be right on this score, given that the central notion of priority for Aristotle is a causal one. See M. Peramatzis, *Priority in Aristotle's Metaphysics* (Oxford, 2011), 180–8, 267, which argues that priority is best understood causally; and also K. Meadows, 'Aristotle on Ontological Priority', PhD thesis (Stanford University, 2017), who focuses specifically on final causality.

³⁸ For a conclusive argument for the (historically questioned) authenticity of the text, see D. S. Hutchison and M. R. Johnson, 'Authenticating Aristotle's *Protrepticus*', *Oxford Studies in Ancient Philosophy*, 29 (2005), 193–294.

above), increasing attention to the difference between merely accidentally homonymous terms and the *pros hen legomena* (or between Broad and Narrow Homonymy) is also a feature of a standard account of Aristotle's philosophical development. But this need not lead us to reject the evidence of the *Protrepticus*, so long as we recall that necessarily rather speculative claims about philosophical development and their relations to the relative dates of texts should follow what those texts actually say and not vice versa. In short, if the *Protrepticus* both is an early work and argues that comparison does not require synonymy, then we have reason to call into question whether Aristotle *ever* held that synonymy is necessary for comparison.³⁹

There, Aristotle makes the following remarks, helpfully sticking with the by now familiar example of health and medicine:

οὐ γὰρ μόνον τὸ μᾶλλον λέγομεν καθ' ὑπεροχὴν ὃν ἂν εἶς ἦ λόγος, ἀλλὰ καὶ κατὰ τὸ πρότερον εἶναι τὸ δὲ ὕστερον, οἷον τὴν ὑγίαν τῶν ὑγιεινῶν μᾶλλον ἀγαθὸν εἶναι φάμεν, καὶ τὸ καθ' αὐτὸ τὴν φύσιν αἰρετὸν τοῦ ποιητικοῦ. καίτοι τὸν γε λόγον ὁρῶμεν ὡς οὐχ ἦ ἔστι κατηγορούμενος ἀμφοῖν, ὅτι ἀγαθὸν ἐκάτερον ἐπὶ τε τῶν ἀφελίμων καὶ τῆς ἀρετῆς. (B 82 Düring = 57. 6–19 Pistelli = fr. 14 Ross)⁴⁰

For 'the more' is said not only with regard to an excess of those things that have one account, but also with regard to [those things] being prior and posterior, for example, we say that health is more good⁴¹ than healthy things and that those things choiceworthy with regard to their own nature are more good than those which produce [them], though in fact we see that it is not insofar as the [one] account is predicated of both, in the case of beneficial things and virtue, that each is good.

Donald Morrison has argued on the basis of this passage that *pros hen legomena* form an exception to the rule against comparisons without synonymy. 'Normally', Morrison writes, 'one is not allowed to compare across ambiguity. But when the items to which the ambiguous predicate is applied are related to each other as prior

³⁹ This is a further reason to lean towards Version β of *Physics* 7. 4, in addition to those mentioned in Section 1.2. Recall that while Version α does require synonymy for comparison, Version β is silent. The former would thus imply a conflict between two early works, while opting for the latter would mean that *Physics* 7. 4 and the *Protrepticus* are perfectly compatible on this score, at least.

⁴⁰ The Greek text is from I. Düring, *Aristotle's Protrepticus* (Stockholm, 1961).

⁴¹ The awkwardness of the locution 'more good' reflects the Greek, which instead of the usual comparative adjective *beltion* uses the same unusual combination of adverb and positive-degree adjective.

and posterior, then comparison is allowed.⁴² Indeed, some have identified a stronger Aristotelian principle underlying this point, namely that when a predicate is applied to two or more terms which are ordered in terms of prior and posterior, then that predicate is *always* homonymous as it is applied to them.⁴³ However, the only explicit articulation of that principle comes in the course of Aristotle's polemic against unnamed, though clearly Platonic adversaries at *Nicomachean Ethics* 1. 6, where he writes that 'Those who introduced this doctrine [*sc.* the theory of Ideas] did not posit ideas [of things] in which they said there was priority and posteriority; and this is why they did not construct an idea of numbers' (οἱ δὲ κομίσαντες τὴν δόξαν ταύτην οὐκ ἐποίουν ἰδέας ἐν οἷς τὸ πρότερον καὶ ὕστερον ἔλεγον, διόπερ οὐδὲ τῶν ἀριθμῶν ἰδέαν κατεσκευάζον, 1096^a17–19; cf. *EE* 1. 8). The positive Platonic doctrine referenced here is obscure.⁴⁴ And even more importantly, one cannot infer, given its dialectical and *ad hominem* context, whether this represents Aristotle's own views.⁴⁵

⁴² D. Morrison, 'The Evidence for Degrees of Being in Aristotle', *Classical Quarterly*, 37 (1987), 382–401 at 398. For a contrary reading of the *Protrepticus* passage, see E. de Strycker, 'Prédicats univoques et prédicats analogiques dans le "Protreptique" d'Aristote', *Revue Philosophique de Louvain*, 66 (1966), 597–618. Strycker argues that *mallon* should be read here as meaning 'rather' ('πλὴτὸτ ou de préférence', 608) as opposed to 'more' ('plus' or 'davantage'), such that the passage is not making any claims about comparability at all. However, it seems to fit poorly with Aristotle's examples—e.g. an awake person is not living *rather than* a sleeping person (which would mean that the sleeping person is not alive—and indeed at *DA* 2. 1, 415^b25 Aristotle explicitly claims that *both* being awake and being asleep imply the existence of *psuchē*).

⁴³ A. C. Lloyd, 'Genus, Species and Ordered Series in Aristotle', *Phronesis*, 7 (1962), 67–90, defends the principle as genuine Aristotelian doctrine, though not exclusively on the basis of its appearance at *NE* 1. 6. F. Lewis, 'Aristotle on the Homonymy of Being', *Philosophy and Phenomenological Research*, 68 (2004), 1–32, is also sympathetic, though more tentative.

⁴⁴ See J. Cook Wilson, 'On the Platonist Doctrine of the ἀσύμβλητοι ἀριθμοί', *Classical Review*, 18 (1904), 247–60. Cf. Cherniss, *Aristotle's Criticism*, Appendix VI, 513–24.

⁴⁵ This principle, however, seems also to be reflected in the discussion of the two non-synonymous senses of 'living' and 'seeing' slightly earlier in the *Protrepticus*, where he writes 'one must say that a waking person is more alive than a sleeping person, someone exercising this capacity in their soul more than someone who merely possesses it' (57. 19–21). Aristotle also uses 'seeing' as an example of a homonymous term at *Topics* 1. 15. However, given the discrepancy in terminology discussed at *Topics* 1. 15, 106^b14–20 and the absence of any mention of homonymy in the *Protrepticus* fragments, we need not take this to imply that Aristotle revises his judgement that homonymy blocks comparisons, since we need not assume that he considers 'seeing' to be homonymous (rather than merely non-synonymous) in the *Protrepticus*.

As for the *Protrepticus*, which, on Morrison's reading, instantiates the principle found in the *Ethics*, Shields has raised severe doubts about the cogency of its example, claiming that Aristotle's own example seems to switch from a non-synonymous predicate ('healthy') to a synonymous one ('good') in terms of which health and healthy things are being compared.⁴⁶ Aristotle's claim is that health (the core) and healthy things (the periphery) are (i) ordered in terms of prior and posterior, (ii) called 'healthy' as *pros hen legomena*, and (iii) nevertheless comparable. However, when it comes time to compare them, Aristotle (Shields claims) fails to deliver, telling us that 'health is *better* than healthy things', whereas for this to truly be a case of comparison with covering terms that are not synonymous, we would need them to be compared in terms of *health*, not of goodness.⁴⁷ Though 'healthy' may be predicated *non-synonymously* of health and exercise regimes, 'even so', Shields reminds us, "pleasant" may apply to them *synonymously*, as may "desirable" or "choiceworthy". For each of these cases, it may be possible to judge that health is worthier of being chosen than is a regimen.⁴⁸ So, according to Shields, even if Aristotle means to argue for an exception to the stricture on homonymous covering terms, the argument he gives is a rather implausible one.

However, Shields is too quick to dismiss Aristotle's argument. That is because the non-synonymous predicate in terms of which health itself and healthy things are being compared is not 'healthy' but 'good'. In order to see that this is the case, recall that in *Protrepticus* B 81–2, Aristotle mentions not just health and healthy things as an example of comparable terms that are nevertheless not synonymous. In addition to health and healthy things, he gives us the more general example of things that are 'choiceworthy according to their own nature' (τὸ καθ' αὐτὸ τῆν φύσιν αἰρετόν) and things that are choiceworthy in an instrumental way insofar as they

⁴⁶ Shields, *Order in Multiplicity*, 62.

⁴⁷ Compare Chang on choice: 'The switching of choice values is a common deliberative ploy. We often switch from one choice situation to another when we lack the facts we need to make a relevant comparison. You may, for instance, have to choose between a Hitchcock thriller and a Bach concert for the weekend's entertainment. What matters is pleasurable-ness, but since you do not know how you will like the Bach Inventions tinkled out on wine glasses, you may shift the choice value to ease your decision making. The choice situation has changed, and your choice will be justified or not relative to that new choice value' ('Introduction', 9).

⁴⁸ Shields, *Order in Multiplicity*, 263; my emphasis.

produce these. This second pair is, of course, a more abstract characterization of the health–healthy things pair. Take someone faced with making the somewhat improbable choice between yoga classes (assuming these produce health) and health *simpliciter*. Clearly the practically rational thing to do is to just choose health, rather than these means towards, let alone signs of, health. And health is not only better than healthy things but, more importantly, the account of what *makes* health good—and hence choiceworthy—is different from what makes healthy things good. Briefly, health is good because it is simply goodness of a bodily sort, while healthy things are healthy, and hence good because they produce health (among other reasons; see Section 2.1 and cf. Section 1.4; cf. also *Metaph.* Γ. 2, 1003^a34–^b4; Z. 4, 1030^a35–^b2). So Shields is wrong that health and healthy things are synonymously good.

The final pair in *Protrepticus* B 81–2 confirms that Aristotle is concerned throughout the passage with the non-synonymy of the term ‘good’ as well of of ‘health’: ‘though in fact we see that it is not insofar as the [one] account is predicated of both, in the case of beneficial things and virtue, that each is good’ (καίτοι τὸν γε λόγον ὀρώμεν οὐχ ἢ ἔστι κατηγορούμενος ἀμφοῖν, ὅτι ἀγαθὸν ἐκότερον ἐπί τε τῶν ὠφελίμων καὶ τῆς ἀρετῆς, Düring B 82 = Pistelli 57. 19 = fr. 14 Ross). Like health and healthy things, virtue and beneficial things are another case of things choiceworthy—because good—in themselves versus through another.⁴⁹ In short, Aristotle is not comparing health and healthy things in terms of how *healthy* they are, but rather giving them as one of three examples of items that are, not synonymously, yet nevertheless comparably, said to be *good*. So we have now shown that synonymy is not a requirement for comparability.

Instances of final and instrumental goods seem like a particularly promising case to find comparability without synonymy. At the opening of the *Nicomachean Ethics*, Aristotle distinguishes between two kinds of end that we pursue: one that is an activity and another that is something *produced* by that activity.⁵⁰ Moreover, he says that in ‘these cases, the products are by nature *better* than the activities’ (ἐν τούτοις βελτίω πέφυκε τῶν ἐνεργειῶν τὰ ἔργα, *NE* 1.

⁴⁹ Not *all* beneficial things, of course, are choiceworthy insofar as they are instrumentally valuable for virtue. All that is necessary in the present context is that some are.

⁵⁰ There are also situations with only one end, because some activities are ends in themselves and do not aim at producing anything outside themselves.

1, 1094^a5–6). However, Aristotle also says that ‘good’ is not a synonymous term both at *Nicomachean Ethics* 1. 6 (1096^b26–8) and, as we’ve just seen, in the *Protrepticus*.

Indeed, final and instrumental goods seem to exemplify the relationship between peripheral and core instances of *pros hen legomena*.⁵¹ The end is that which is called good *simpliciter*; hence Aristotle’s consistent equation of ends and goodness throughout the corpus.⁵² That which is for the sake of an end, meanwhile, is good *because* of the end. As its final cause, (the goodness of) an end is prior to and explanatory of (the goodness of) those things which are for its sake.⁵³ Moreover, the account of ‘good’ when predicated of the instrumental goods will include the account of ‘good’ when said of the end plus the information about how the instrumental good is for the sake of the *telos*, but not vice versa. So, all the criteria for *pros hen legomena* are fulfilled; yet comparison is also possible.

2.3. Analogical comparisons?

So far, we have focused exclusively on comparisons between instances of *pros hen legomena*. In the particular case of goodness, this is congruent with the suggestion at *Nicomachean Ethics* 1. 6 that goodness is said *pros hen*. But that is not the only alternative Aristotle considers to the merely accidental homonymy of goodness. For analogy is another instance where terms are neither synonymous nor homonymous. However, in this case comparison is not permitted, at least between individuals of which the same term is predicated analogically. It is worth pausing to see in more detail why this is so, not just for the sake of completeness, but most importantly because Aristotle’s reasons for denying comparability in the case of analogy are directly tied to the function of non-synonymous comparison—between terms said *pros hen*—in his system more broadly.

⁵¹ Recall also that in the *Metaphysics*, where Aristotle emphasizes the non-synonymy of good in terms of inter-categorical variation, he uses the example of ‘health’ and that which produces health (e.g. instruments and their products) to exemplify the *pros hen* relation.

⁵² e.g. *Phys.* 2. 2, 194^a33; 2. 3, 195^a25; *Somn.* 2, 455^b16; *PA* 1. 1, 639^b19; 4. 10, 687^a16; *IA* 2, 704^b17; 8, 708^a9; *GA* 1. 4, 717^a16; *EE* 1. 7, 1218^b9; *Metaph. A.* 2, 982^b4–10; *Pol.* 1. 2, 1252^b34–1253^a1.

⁵³ Cf. *Metaph. A.* 10, 1075^a15.

After his anti-Platonic polemic at *Nicomachean Ethics* 1. 6, Aristotle asks: ‘How is [the good] said?’ (ἀλλὰ πῶς δὴ λέγεται; 1096^b26), if not synonymously. In answer to this question, he tells us that the good ‘does not seem like those chance homonyms. Are things rather [said to be good] by being from one thing or by being directed towards one thing or rather by analogy?’⁵⁴ We have not only seen that terms said *pros hen* are comparable but also seen this borne out in the case of goodness. What about analogy? Might terms that are not synonymous and unified by analogy also, like those said *pros hen*, admit of comparisons?

Analogy, which Aristotle suggests is the weakest form of unity (*Metaph.* Δ. 6, 1016^b31–17^a2), is narrowly defined as a four-place relation or a relation between a pair of two-place relations: ‘As this thing is in this thing or related to this thing, so that thing is in or related to that thing’ (*Metaph.* Θ. 6, 1048^b7–8).⁵⁵ The conventional way of noting analogies $a : b :: c : d$, represents the claim that there is some relation R , such that a stands in relation R to b and c to d , that is, aRb & cRd .⁵⁶

Particularly relevant to the present subject is a passage from the *Politics* in which Aristotle argues against the analogical comparability of goods. Given the teleological presuppositions of his practical philosophy, individuals are said to be good insofar as they exhibit the relevant excellence of their kind. The passage is concerned with the distribution of political offices within the city and Aristotle’s aim is to show that these cannot be allocated on the basis of an individual’s excellence in some activity considered independently of the value of that activity:

⁵⁴ *NE* 1. 6, 1096^b26–8: οὐ γὰρ ἔοικε τοῖς γε ἀπὸ τύχης ὁμονύμοις. ἀλλ’ ἀρά γε τῷ ἀφ’ ἑνὸς εἶναι ἢ πρὸς ἕν ἅπαντα συντελεῖν, ἢ μᾶλλον κατ’ ἀναλογίαν;

⁵⁵ ὡς τοῦτο ἐν τούτῳ ἢ πρὸς τοῦτο, τόδ’ ἐν τῷδε ἢ πρὸς τόδε. Aristotle says at *NE* 5. 3, 1131^a32 that analogy must involve four terms at a minimum.

⁵⁶ At *NE* 1. 6, Aristotle gives as an example of analogy sight in the body and reason (*νοῦς*) in the mind (1096^b29; cf. *DA* 2. 1, 412^b18); other examples of analogical pairs are bone : land animals :: spine : fish and feather : bird :: scale : fish (*HA* 486^b18). For more on Aristotelian analogy, see Rapp, ‘Ähnlichkeit’, as well as M. Hesse, ‘Aristotle’s Logic of Analogy’, *Philosophical Quarterly*, 15 (1965), 328–40; T. M. Olszewsky, ‘Aristotle’s Use of *Analogia*’, *Apeiron*, 2 (1968), 1–10; G. E. R. Lloyd, ‘The Unity of Analogy’, in id., *Aristotelian Explorations* (Cambridge, 1999), 138–59.

ἔτι κατὰ γὰρ τοῦτον τὸν λόγον πᾶν ἀγαθὸν πρὸς πᾶν ἄν εἶη συμβλητόν. εἰ γὰρ ἐνάμιλλον τὸ τί μέγεθος, καὶ ὅλως ἄν τὸ μέγεθος ἐνάμιλλον εἶη καὶ πρὸς πλούτων καὶ πρὸς ἐλευθερίαν· ὥστ' εἰ πλείον ὀδὶ διαφέρει κατὰ μέγεθος ἢ ὀδὶ κατ' ἀρετὴν, <εἰ> καὶ [πλείον] ὑπερέχει ὅλως ἀρετῇ μεγέθους, εἶη ἄν συμβλητὰ πάντα. τοσόνδε γὰρ [μέγεθος] εἰ κρείττον τοσοῦδε, τοσόνδε δῆλον ὡς ἴσον. ἐπεὶ δὲ τοῦτ' ἀδύνατον, δῆλον ὡς καὶ ἐπὶ τῶν πολιτικῶν εὐλόγως οὐ κατὰ πᾶσαν ἀνισότητ' ἀμφισβητοῦσι τῶν ἀρχῶν. (*Pol.* 3. 12, 1283^a3–11)⁵⁷

Moreover, by this principle all goods would be comparable with all others. For if some one height could be measured against some one instance of wealth or freedom, then height in general could be so measured. Consequently, if this person were taller than this person was virtuous, even if virtue were altogether better than height, all things would be comparable. For if some amount is greater than some other amount, then clearly some other amount must be equal. But since this is impossible, clearly it is reasonable that people do not dispute offices on the basis of any and all inequalities.

If high achievement alone, regardless of the activity in question, were enough to qualify someone for an office, then all sorts of potentially irrelevant excellences could ground claims for political pre-eminence. Rather than assign responsibility to the most virtuous person, we might assign it to a very tall person so long as he was further along the scale of tallness than the virtuous person was along the scale of virtue. The argument Aristotle makes against such a procedure takes as its crucial premise the idea that if x is more F than y is G —if I am taller than you are virtuous—then in principle it is possible for x to be F and y to be G equally, that is, for x to be F to the same degree that y is G .⁵⁸

In the case of height and virtue, part of the (rhetorical) force of this point lies in the sense that something is simply confused about saying that person a is as tall as person b is virtuous. The principle Aristotle derives from this case is that if F is better than G as a kind, then no instance of G can be equal to an instance of F .⁵⁹

⁵⁷ The Greek text is from W. D. Ross, *Aristotelis Politica* (Oxford, 1957).

⁵⁸ Note that nothing in this passage should lead us to think that Aristotle has in mind the possibility of cardinal rankings (which would mean he rejects analogical *commensurability*). In general, the fact that two things are equally F does not require there to be some precise number of F -units that they share.

⁵⁹ By denying that two individuals x and y can be equally F and G , respectively, if F in general is better than G , Aristotle need not commit himself to the proposition that any particular amount of F is better than any particular amount of G in any such case of token-level incomparability, but only that F itself is better than G .

However, analogical comparison of individuals entails the conceivability of their equality: to say that x is F to the same degree that y is G . This means that we cannot (i) hold that F is better than G in general and also (ii) analogically compare x and y in terms of how F and G they are. And because Aristotle is committed to the idea that virtue is better than height, he rejects the possibility that person a is as tall as person b is virtuous. Since analogical comparisons require that it be possible for x to be as F as y is G —or, in this case, for person a to be as tall as b is virtuous—Aristotle rejects analogical comparison.

This means comparability does not obtain between *all* terms that are neither homonymous nor synonymous. The different result about comparability in the case of *pros hen legomena* and analogical terms plausibly seems to be related to the fact that the former case requires there to be significant overlap in the accounts of each instance of the term, while this need not be the case for analogical predication. We have seen that Aristotle allows for comparison in terms of predicates said *pros hen* of their subjects and thus that synonymy is not required for comparison. But he does not allow for comparison in terms of predicates said *analogically* of their subjects.⁶⁰ However, this conclusion applies only to individuals, not to the kinds to which they belong. Indeed, Aristotle's argument *against* the analogical comparability of individuals in terms of their kind-relative goodness *presupposes* the comparability of those individuals' goods themselves.⁶¹

Moreover, we have already seen that ends and goodness are mutually constitutive (cf. Section 2.2), yet are not always synonymously good. But we have not yet asked whether the ends *themselves* are

Indeed, he can reject the possibility that x and y can be equally F and G while also rejecting the possibility of x being *more* F than y is G .

⁶⁰ The proposal that goodness is said analogically is not incompatible with different senses of 'good' being said *pros hen*. Despite the suggestion in the *Nicomachean Ethics* that goodness is said by analogy *rather* (*μᾶλλον*) than *pros hen*, the context makes it clear that Aristotle does not intend to give a settled view. Though he presents them as an answer to the question 'How is [the good] said?' (*ἀλλὰ πῶς διή λέγεται*; 1096^b26), the two alternatives for how senses of goodness that are not synonymous are unified are themselves posed in the form of a question. The force of 'rather', then, may be simply to mark off an alternative line of inquiry for a common account of goodness, whether in addition to or instead of its being said *pros hen*.

⁶¹ That is not to deny that x may be better than y because x is F and y is G and F is better than G —e.g. *any* virtue is better than *any* height. The incomparability that Aristotle is concerned with at *Pol.* 3. 12 regards *analogical* comparison.

good synonymously or not. I turn to this question in Section 3, which will provide an application of the account of non-synonymous comparison developed up to now. Drawing on Aristotle's account of the natural world, I show that the ends of different species are not good synonymously, that is, the account of goodness differs between natural kinds. At the same time, Aristotle consistently ranks species according to their goodness, claiming that certain types of being are better or worse than others. There is no contradiction here, because different species' differing accounts of goodness are not unconnected but rather said *pros hen*—specifically with reference to the goodness of the prime unmoved mover—and as such are comparable.

3. Broader implications: Aristotle's cosmological hierarchy

3.1. *Species specificity and non-synonymy of goodness*

We have already seen that ends and things for their sake are not good synonymously (Section 2.2). But in the case of natural organisms, Aristotle also holds that the account of goodness for each of them is not synonymous, insofar as it is tied to their species-specific ends. The reason for this is that his account of natural goodness is (at least partly) species-specific. What is conducive to the flourishing of a human life may be irrelevant or indeed counter to that which is good for the life of a fish. The variation in what is conducive or beneficial to different creatures—in what is good *for* them—in turn reflects a more basic variation in what flourishing means for each one: what it is for their lives to go well.

Aristotle makes this point explicitly in his account of teleological explanation in the *Physics*. In short, we explain why different kinds of things are the way they are—why they have the body parts they have, why they behave as they do, and so on—by showing how these are for the sake of the good, that it is better for them to be present. However, he is careful to specify that this good is indexed to the species in question. For example, say we are trying to explain why it is that a bull has horns, and we cite the function these play in the organism's self-protection (cf. *PA* 3. 2, 662^b32–663^a8). Aristotle says this explanation is a matter of saying that the organism has the feature in question 'because it is better this way, not

simply, but with reference to the nature of each thing' (διότι βέλτιον οὕτως, οὐχ ἀπλῶς, ἀλλὰ τὸ πρὸς τὴν ἐκάστου οὐσίαν, *Phys.* 2. 7, 198^b9).

Aristotle similarly appeals to the species specificity of goodness in *Nicomachean Ethics* 6. 7, as a crucial step in the argument that theoretical wisdom (σοφία) is superior to practical wisdom (φρόνησις) and political wisdom (πολιτική). The second and third concern the specifically human good: what is useful (τὰ ὠφέλιμα, 1141^a30), beneficial (τὰ συμφέροντα, 1141^b5), or good (ἀγαθόν, 1141^a31) for some subject. This good, moreover, differs between species: "healthy" and "good" are different for human beings and for fish' (ὄγιεινὸν μὲν καὶ ἀγαθὸν ἕτερον ἀνθρώποις καὶ ἰχθύσι, 1141^a22–3), because there is 'not a single good for all animals' (οὐ γὰρ μία περὶ τὸ ἀπάντων ἀγαθὸν τῶν ζώων, 1141^a31–2).⁶²

Interestingly, though, Aristotle considers an objection to his position that is germane to the issue of comparisons without synonymy. He imagines an interlocutor claiming that practical wisdom, dedicated to pursuing the *human* good, is indeed the best form of cognition, on the hypothesis that 'humans are the best kind of animal' (βέλτιστον ἄνθρωπος τῶν ἄλλων ζώων, 1141^a33–4). Aristotle responds to the objection by asserting that there are 'things much more divine in their nature than humans, most obviously, for example, that out of which the heavens are constructed' (καὶ γὰρ ἀνθρώπου ἄλλα πολὺ θεϊότερα τὴν φύσιν, οἷον φανερώτατά γε ἐξ ὧν ὁ κόσμος συνέστηκεν, 1141^a35–^b2). In light of our enquiry into comparison and non-synonymy, we can thus see clearly that *Nicomachean Ethics* 6. 7 contains a commitment to the idea that different species' goodness is not synonymous as well as to interspecies comparison.⁶³

⁶² Though Aristotle does not explicitly use the terminology of synonymy and non-synonymy at *Nicomachean Ethics* 6. 7, his language strongly echoes that of *Nicomachean Ethics* 1. 6, where he says, for example, that 'it is clear that the good could not be something common, universal, and single' (δῆλον ὡς οὐκ ἂν εἴη κοινόν τι καθόλου καὶ ἓν, 1096^a27–8); that 'the accounts [of goodness] are different and varying' (ἕτεροι καὶ διαφέροντες οἱ λόγοι, 1096^b24); and that 'the good is not something common corresponding to a single idea' (οὐκ ἔστιν ἅρα τὸ ἀγαθὸν κοινόν τι κατὰ μίαν ἰδέαν, 1096^b25–6).

⁶³ One might object that Aristotle here says that the heavens are 'more divine' (θεϊότερον), rather than 'better' (βέλτιον) than human beings. The rest of the passage, however, makes clear that in the present context, the two terms (along with 'excellent' (σπουδαίως) and its comparative and superlative degrees) are being used in such a way that being more divine entails being better. At the opening of the passage,

It is important, however, to note that the sort of non-synonymy at play in the case of different kinds of beings' goodness is different from that which we have seen earlier. It is a matter of *intra-* rather than *inter-*categorical variation. One might then ask: is a difference of meaning *within* a single Aristotelian category—in this case the category of substance—really a matter of non-synonymy? If so, someone might accept that comparison is possible without synonymy, but that this is not relevant to the case at hand, of cosmological hierarchy.

However, Aristotle explicitly argues that *intra-*categorical variation in accounts—and specially of different accounts of goodness—is a case of non-synonymy or 'things said in many ways'.⁶⁴ At *Nicomachean Ethics* 1. 6, he does so by noting that there are different sciences (*epistēmāi*) for different goods within a single category: 'But really there are many sciences even of the goods within one category, for example [the science] of the right time in war is generalship but in disease is medicine' (1096^a31–3).⁶⁵ There is no reason that we cannot detect a similar difference in accounts of goodness within the category of substance just as Aristotle does here in that of time; for plants this is a matter of the exercise of the nutritive soul capacity, for animals that of both the nutritive and perceptual capacities, and so on. As we shall see, Aristotle is concerned in a cosmological context at least, primarily with differences between broad swathes of the world—genera—rather than individual species themselves.

With this rather technical point addressed, we can now turn briefly to a brief survey of Aristotle's cosmological hierarchy. The claim Aristotle makes at *Nicomachean Ethics* 6. 7 about human inferiority in comparison with the heavens (which are, on his view and that of many Greek astronomers, living beings: *Cael.* 2. 3, 285^a29–30) crops up repeatedly throughout the corpus, along with claims about human *superiority* in relation to other animals and plants.

Aristotle provides a one-line summary of the argument as follows: 'It would be strange for one to suppose that political or practical wisdom were the most excellent, if human beings are not the best kind of thing in the universe' (*ἄτοπον γὰρ εἴ τις τὴν πολιτικὴν ἢ τὴν φρόνησιν σπουδαιοτάτην οἶεται εἶναι, εἰ μὴ τὸ ἄριστον τῶν ἐν τῷ κόσμῳ ἄνθρωπος ἔσται*, 1141^b20–2).

⁶⁴ On the both *inter-* and *intra-*categorical non-synonymy of 'good', including the goodness of different species, see also Shields, 'Fractured Goodness', 99–102.

⁶⁵ *νῦν δ' εἰσὶ πολλὰ [ἐπιστήμαι] καὶ τῶν ὑπὸ μίαν κατηγορίαν, οἷον καιροῦ, ἐν πολέμῳ μὲν γὰρ στρατηγικὴ ἐν νόσῳ δ' ἰατρικὴ.*

For example, at *Parts of Animals* 1. 5, Aristotle recommends the study of biology even though he admits that earthbound organisms are less ‘honourable’ (τίμιον) and ‘divine’ (θεῖον) than the celestial bodies (644^b25). At *Generation of Animals* 2. 1, and so also in a biological context, Aristotle distinguishes that which is eternal and divine from that which is not eternal and so can cease to exist and admits of imperfection⁶⁶ (731^b24–31). All sublunary organisms belong to this second class, while the heavenly bodies belong to the first. Hence, as in *Parts of Animals* 1. 5 and *Nicomachean Ethics* 6. 7, the heavens are superior to organisms. Similarly, at *De Caelo* 2. 12, Aristotle gives an extended and detailed argument for ranking broad classes of species (genera) on the basis of how eternal and divine they are (291^b24–8).

No one seriously denies that these passages and others like them refer to a cosmic hierarchy.⁶⁷ However, commentators—especially in the last fifty or so years—have been uneasy about ascribing to Aristotle a strong commitment to such rankings. What is really at issue is not the question of whether Aristotle sometimes *asserts* that some creatures are better than others, but whether his central philosophical and theoretical commitments are compatible with this hierarchical vision of the world. Arguments for dispatching an overall cosmic ranking can have a number of flavours. First, one might take a developmental route and class Aristotle’s speculations about cosmic hierarchy as the residues of an early Platonism.⁶⁸ Second, one could argue that claims about human superiority, in

⁶⁶ Aristotle is concerned at *GA* 2. 1 with explaining sexual differentiation: because individual organisms cannot exist eternally, they must reproduce in order to approximate immortality as a species, for distinct male and female specimens are required. Cf. the similar remarks at *DA* 2. 4, 415^a23–^b8. See D. Henry, ‘Aristotle on the Cosmological Significance of Biological Generation’, in D. Ebrey (ed.), *Theory and Practice in Aristotle’s Natural Science* (Cambridge, 2015), 100–18.

⁶⁷ Other relevant passages, besides the ones cited, include *GC* 2. 10, 336^b25–34; *GA* 2. 3, 736^b29–33; *PA* 2. 10, 648^a13–19; *NE* 10. 7–8.

⁶⁸ For example, in discussing a number of passages that concern cosmic hierarchy—including *Cael.* 2. 12 and *NE* 6. 7—M. Nussbaum writes that they ‘do give evidence, from a wide variety of authentic contexts, that ethical Platonism of some sort exercised a hold over Aristotle’s imagination in one or more periods of his career’, which she approvingly characterizes as a ‘position to which Aristotle is in some ways deeply attracted, though he rejects it in the bulk of his mature ethical and political writing’ (*Fragility of Goodness* (Cambridge, 1986), 377). Cf. W. Jaeger, *Aristoteles: Grundlegung einer Geschichte seiner Entwicklung* (Berlin, 1923), the *locus classicus* for this general style of story of Aristotle’s development.

particular, reflect ‘popular prejudice’.⁶⁹ Third, one might simply throw up one’s hands and claim that Aristotle finds himself caught in a contradiction.⁷⁰

There are times when any one of these moves may be justified. But this is not one of those times. First, as we saw above, developmental claims always have something of a speculative and necessarily tentative status, but here in particular such an approach is simply untenable, since *Parts of Animals*, widely considered to be a late text, alludes to a cosmic hierarchy at *PA* 1. 5 (and indeed at 1. 1). Second, while allusions to cosmic hierarchy might be plausibly read as the expression of popular prejudice in certain passages taken on their own, this is not going to work for all of them. Given that there are passages where Aristotle gives extended arguments for his hierarchical views (as at *Cael.* 2. 12) or uses such views as premises in further arguments (as at *NE* 6. 7), this approach is not tenable. And finally, simply claiming that Aristotle flatly contradicts himself is surely an interpretative move to be made only when all else has failed. However, we are not at this point, for there is a clear and convincing way to reconcile the species specificity of goodness with interspecies comparison.

3.2. *Cosmic comparison without cosmic synonymy*

We have just now seen that Aristotle compares different species in terms of their goodness and also that they are not said to be good synonymously. In Section 1, we saw that while Aristotle claims that homonymous terms are not comparable, he does not require strict synonymy for comparison. Rather, as we saw in Section 2, in cases where a term is not said synonymously of different items and more specifically is a *pros hen legomenon* (when there is an overlap

⁶⁹ C. Osborne, *Dumb Beasts and Dead Philosophers: Humanity and the Humane in Ancient Philosophy and Literature* (Oxford, 2007), 111. Of the passages we have seen so far, Osborne discusses only *PA* 1. 5 and *Cael.* 2. 12, where she acknowledges there is a ranking, but points out that humans are not at the top of it (as mentioned above, they are below the heavenly bodies). No mention is made of either *NE* 6. 7 or *GA* 2. 1.

⁷⁰ This is Shields’s approach: ‘Aristotle faces a problem of his own making: a serious commitment to the homonymy [*sic*] of the good threatens genuine incommensurability among those very values Aristotle seems otherwise disposed to bring into ordinal rankings’ (‘Fractured Goodness’, 109).

in definitions between the core sense of a term and peripheral senses that depend asymmetrically on that core sense), we can use it to make comparisons.

We can now show that the goodness of different species is a case of this special kind of non-synonymy. To see this, we must turn briefly to the way in which the prime mover—Aristotle's divine first principle, upon which he claims that 'heaven and nature depend' (ἡρτηται ὁ οὐρανὸς καὶ ἡ φύσις, *Metaph. A. 7, 1072^b13*)—operates in his cosmos as a final cause. The following picture is no more than a sketch. Some of its claims are controversial and cannot be argued in full here. Nevertheless, it presents a direction for future travel.⁷¹

Every organism, in pursuing the actualization of its own internal form, also acts for the sake of the prime mover (*A. 7, 1072^b1–3*). Aristotle calls this divine principle an end, but the final causal connection between the prime mover and the organisms which act for its sake is not an instrumental means–end relationship.⁷² Nor is the prime mover the *beneficiary* of our (and other species') actions.⁷³ However, Aristotle is careful to clarify that these are not the only ways that things can be final causes. Most importantly for our purposes, an end can also be the standard to which we look when determining how to act.⁷⁴ In the *Eudemian Ethics* Aristotle compares the

⁷¹ Another promising direction would be to investigate the different ways of life within a single species, for Aristotle is both committed to the idea that the life of virtuous activity is better than that of pleasure, but also that these are good in different ways. Cf. G. Lawrence, 'Aristotle and the Ideal Life', *Philosophical Review*, 102 (1993), 1–34 and id., 'Nonaggregatability, Inclusiveness, and the Theory of Focal Value: *Nicomachean Ethics* 1. 7, 1097^b16–20', *Phronesis*, 42 (1997), 32–76. See also M. Pakaluk, 'Friendship and the Comparison of Goods', *Phronesis*, 37 (1992), 111–30, for a similar approach to Aristotle's various notions of friendship in *NE* 8.

⁷² That is, the kind discussed at both *Protr.* B 81–2 Düring and *NE* 1. 1 (Section 2.2).

⁷³ This is the traditional construal of the distinction drawn at 1072^b1–3 between two senses of 'that for the sake of which', indicated by the dative and genitive pronouns. Cf. *Phys.* 2. 2, 194^a35; *DA* 2. 4, 415^a23 and ^b20; *EE* 7. 15, 1249^b15. Cf. K. Gaiser, 'Das zweifache Telos bei Aristoteles', in I. Düring (ed.), *Naturphilosophie bei Aristoteles und Theophrast* (Heidelberg, 1969), 97–113; A. Graeser, 'Aristoteles' Schrift "Über die Philosophie" und die zweifache Bedeutung der "causa finalis"', *Museum Helveticum*, 29 (1972), 44–61; T. K. Johansen, 'The Two Kinds of End in Aristotle: The View from *De anima*', in D. Ebrey (ed.), *Theory and Practice in Aristotle's Natural Science* (Cambridge, 2015), 119–36; and J. Gelber, 'Two Ways of Being for an End', *Phronesis*, 63 (2018), 64–86.

⁷⁴ Cf. D. Sedley, 'Teleology, Aristotelian and Platonic', in J. G. Lennox and R. Bolton (eds.), *Being, Nature, and Life in Aristotle* (Cambridge, 2010), 5–29.

way god operates as a final cause of human action with the way a doctor looks towards a ‘certain standard’ (*τις ὁρος*) in determining the best course of treatment (*EE* 7. 15, 1249^a21). Acting for the sake of an end as a standard has traditionally been described in terms of imitation or approximation of that standard. Despite some recent objections,⁷⁵ there is nothing mysterious—let alone slightly mystical—about imitation. In the case under discussion, species act for the sake of the prime mover just insofar as it provides the standard for judging them to be successful in their various activities.⁷⁶ In this sense, Aristotle remains faithful to the conceptual core of Platonic paradeigmatism. However, each species does this in a particular and distinct way. These two notions must be held together—that the prime mover is a universal final cause and also that there is a diversity of ways in which kinds of beings act for its sake. In doing so, we shall begin to see a new sort of *pros hen* structure emerge for ‘good’.

The core sense of ‘good’, the one towards which the others are ordered, is the prime mover: Aristotle calls his divinity not only *good* and *best* (both adjectivally), but also *the good* (*Metaph. A.* 10, 1075^a11–22).⁷⁷ These species are themselves good in different ways insofar as they emulate the pure intellectual activity of the prime mover *differently*. At *Metaph. A.* 10, Aristotle discusses the way in which the various species in the cosmos depend for their goodness on the prime mover, using terminology that will be familiar from his discussions of non-synonymy and, more specifically, of *pros hen legomena*. Most importantly, when considering how the goodness of the various constituents of the cosmos is good, Aristotle

⁷⁵ E. Berti, ‘The Finality of the Unmoved Mover in *Metaphysics* Book 12, Chapters 7 and 10’, *Nova et Vetera*, 10 (2012), 863–76. Cf. id., ‘Teofrasto e gli Accademici sul moto dei cieli’, in M. Migliori (ed.), *Gigantomachia: Convergenze e divergenze fra Platone e Aristotele* (Brescia, 2002), 339–58; id., ‘Il movimento del cielo in Alessandro di Afrodisia’, in A. Brancacci (ed.), *La filosofia in età imperiale*, Atti del Colloquio, Roma, 17–19 giugno 1999 (Naples, 2000), 225–43. See also S. Broadie, ‘Que fait le premier moteur d’Aristote? (Sur la théologie du livre Lambda de la “*Métaphysique*”’, *Revue philosophique de la France et de l’Étranger*, 183 (1993), 375–411.

⁷⁶ For an extensive defence of imitation as a key form of Aristotelian final causation, see G. R. Lear, *Happy Lives and the Highest Good* (Princeton, 2004), ch. 4. Cf. also D. Sedley, ‘The Ideal of Godlikeness’, in G. Fine (ed.), *Plato 2: Ethics, Politics, Religion, and the Soul* (Oxford, 1999), 309–28.

⁷⁷ Cf. S. Menn, ‘Aristotle and Plato on God as *nous* and as the Good’, *Review of Metaphysics*, 45 (1992), 543–73.

maintains that while species—he gives fish, birds, and plants as examples—have coordinated accounts of goodness, these are not the same. Rather, he says that ‘all things are ordered together *with reference to one thing*’ (πρὸς μὲν γὰρ ἐν ἅπαντα συντέτακται, *Metaph.* Λ. 10, 1075^a22–3).

Recalling our schema for *pros hen legomena* from Section 2.2, we can now fill this in for the particular case of how species’ goodness is said with reference to the prime mover:

Different species are said to be *good* with reference to the *prime mover* because:

- i. the accounts of *good* for *different species* include the account of *the prime mover qua* good as well as further, distinct information;
- ii. the account of *the prime mover qua* good does not include the account of *good* for *different species*.

This in turn will allow for two kinds of comparisons, which we can call *direct* and *indirect* respectively.

Direct comparison. As the common end for each natural kind, the prime mover is *eo ipso* better than each of these—for ends generally are better than those things which are for their sakes. As with the more mundane cases of instrumentally related means and ends explored in Section 2.2, like health and things that produce health, the accounts of goodness applied to the prime mover and species acting for its sake are not the same. The prime mover is good *simpliciter*, while other things are, ultimately, good insofar as they approximate it. The account of the prime mover as a principle of goodness is the core with reference to which other species’ goodness is defined. So here is the first case of comparison across ambiguity at work in Aristotle’s account of how the cosmos contains the good.

Indirect comparison. But it is not only that the prime mover is good in a different way from those things that act for its sake. These things are themselves good in different ways insofar as they emulate the pure intellectual activity of the prime mover differently. That is, the definition of good for each species is not only different from that of the prime mover (the former is defined in terms of the latter), but also different from the definition of good for every *other* species. While the heavenly spheres act for the sake of the divine through eternal circular motion, sublunary creatures can only

partake of the 'eternal and divine' by reproducing and leaving behind offspring (*DA* 2. 4, 415^a23–^b8). Moreover, each sublunary species' reproduction and generation takes place within a *sui generis*, species-specific way of life.

Moreover, the prime mover's role as a common end for all of these species allows them to be ranked on the basis of how well their different ways of being *in general* come close to the pure actuality, in the form of undivided and self-reflexive intellect, of the prime mover. This is not a comparison of individuals based on how close each comes to their respective and species-specific ends. This would amount to the kind of *analogical* comparisons of individuals which we saw (in Section 2.3) that Aristotle rejects precisely because it is incompatible with comparison of the species to which these individuals belong. Rather, species' ways of life differ in how well they approximate the way of life of the prime mover. These varying degrees of success at approximating the prime mover ground a meaningful comparison of types.

In addition to more allusive passages like *De anima* 2. 4, *Generation of Animals* 2. 1 and *Parts of Animals* 1. 5, we get the most detailed picture of such a ranking in *De caelo* 2. 12, where Aristotle provides much finer-grained distinctions within the basic divide between that which is eternal and that which is not. Because they are, like the prime mover, eternal, heavenly bodies in general are superior to sublunary organisms. More specifically, however, the fixed stars (or first heaven) are better than the planets (the wandering stars) because the latter have more complex courses, which makes them slightly less like the utter simplicity of the prime mover (292^a22–8). On earth, where nothing can be numerically eternal, humans are better than non-human animals, which are in turn higher than plants. Inorganic elements finally round out the bottom of the ranking (292^b1–10).⁷⁸ More specifically, humans' special status among sublunary beings is picked up in *Nicomachean Ethics* 10. 7, where Aristotle seems to suggest that uniquely among animals, humans have a special connection with the divine, since reason (*νοῦς*) is both divine (1177^b30) and the most human part of us (1178^a8).

⁷⁸ For fuller details, see C. Rapp, 'Aristotle on the Cosmic Game of Dice: A Conundrum in *De Caelo* 2. 12', *Rhizomata*, 2 (2014), 161–86 and M. Leunissen, 'Explanation and Teleology in Aristotle's Cosmology', in A. C. Bowen and C. Wildberg (eds.), *New Perspectives on Aristotle's De Caelo* (Leiden, 2009), 215–38.

Aristotle makes these judgements despite holding that species are good in species-specific ways, and hence ways that are not synonymous. We have seen that, despite appearances, he does not endorse the principle that synonymy is required for comparison. I have argued that the text of the passage where he appears to do so (*Phys.* 7. 4, 248^b6–9) has been misread (Section 1.2) and does not, in fact, state this principle, but rather the (not altogether unrelated) principle that non-homonyms *are* comparable, while homonyms are not. And because homonyms and synonyms are not a dichotomous pair (Section 1.3), this does not entail the thesis that synonymy is required for comparison. Moreover, even if this line of argument were to be rejected, there would still be good reason to doubt, on the basis, in part, of developmentalist considerations, whether the thesis would hold throughout the corpus.⁷⁹

Let me briefly make two more tentative suggestions about the nature of the cosmic hierarchy that is grounded in indirect comparison and, in particular, its implications for thinking about our place as humans in the broader natural world.

First, it divides the world into broad swathes: plants, then animals, then humans, then the stars, then finally the prime mover. But we do not get anything like the perhaps more familiar fine-grained picture of certain non-human animals outstripping others—gorillas over goldfish, say. This distinction is crucial. Species within one of these swathes may have lives that look quite different from one another, but they are not, ultimately, good in different *ways*. Animals, insofar as they are possessed of both a nutrition and sensation, emulate the prime mover *in the same way*, even though their specific modes of reproduction, locomotion, and so on may differ significantly. Humans emulate the prime mover differently—and according to Aristotle, more successfully—than other animals not because we are better at doing things that we share with these creatures, but because we have a faculty—rationality—that is not shared. Similarly, the stars are better than humans (and other terrestrial beings) not because they are better at doing something common, but because they are doing something different.

Second, the ranking is non-instrumental. When we judge that one of these broad classes of species is better than another, this

⁷⁹ Though see Section 1.2 above.

judgement comes only through the intermediary of the prime mover. Aristotle has been read, particularly in the Abrahamic tradition, as giving philosophical weight to the (putatively) scriptural view of human dominion over nature.⁸⁰ There are, of course, moments when Aristotle expresses highly instrumental views towards non-human nature (especially *Pol.* 1. 8, 1256^b10–22), for which he has rightly come under scrutiny and critique. And even more notoriously, he seems to have held similar instrumentalist attitudes towards broad swathes of humanity, especially women and so-called natural slaves. Neither of these points can be easily excised from Aristotle's thinking, particularly from his ethical thought. Nevertheless, his justifications for both slavery and patriarchy are framed in terms alien to his cosmology, which, while hierarchical, is not instrumentalist.

At the cosmological level there are no relations directly between species themselves, and certainly not ones of subordination. This view does not *prohibit* the exploitation of the lower species by the higher, but it does not license it either. Interspecies comparison from a global perspective is essential to our theoretical endeavours, to getting as comprehensive a view of the cosmos and its structure as we can. But when it comes to *practical* philosophy, Aristotle never takes what Sidgwick famously called 'the point of view of the universe'. The fact that a certain state of affairs would make a higher species better off than another, lower one is simply not the form of ethical argument that Aristotle goes in for. What humans are permitted and forbidden from doing to other species must, as in all ethical discussions, come from the nature of a good *human* life itself.

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BIBLIOGRAPHY

- Aubenque, P., *Le problème de l'être chez Aristote* (Paris, 1962).
 Bekker, I., *Aristoteles Opera*, vol. i (Berlin, 1831).
 Berti, E., 'Il movimento del cielo in Alessandro di Afrodisia', in A. Brancacci (ed.), *La filosofia in età imperiale*, Atti del Colloquio, Roma, 17–19 giugno 1999 (Naples, 2000), 225–43.

⁸⁰ The standard references are Genesis 1:26–30; 2:19–20 and Qur'an 2:30–1; 17:70, though all, of course, admit of far more complex interpretations.

- Berti, E., 'Teofrasto e gli Accademici sul moto dei cieli', in M. Migliori (ed.), *Gigantomachia: Convergenze e divergenze fra Platone e Aristotele* (Brescia, 2002), 339–58.
- Berti, E., 'The Finality of the Unmoved Mover in Metaphysics Book 12, Chapters 7 and 10', *Nova et Vetera*, 10 (2012), 863–76.
- Broadie, S., 'Que fait le premier moteur d'Aristote? (Sur la théologie du livre Lambda de la "Métaphysique")', *Revue philosophique de la France et de l'Étranger*, 183 (1993), 375–411.
- Bywater, I., *Aristotelis Ethica Nicomachea* (Oxford, 1894).
- Carteron, H., *Physique, Tome II. (V–VIII)* (Paris, 1931)
- Chang, R., 'Introduction', in ead. (ed.), *Incommensurability, Incomparability, and Practical Reason [Incommensurability]* (Cambridge, MA, 1997), 1–33.
- Cherniss, H., *Aristotle's Criticism of Plato and the Academy [Aristotle's Criticism]* (Baltimore, 1944).
- Cook Wilson, J., 'On the Platonist Doctrine of the ἀσύμβλητοι ἀριθμοί', *Classical Review*, 18 (1904), 247–60.
- Düring, I., *Aristotle's Protrepticus* (Stockholm, 1961).
- Gaiser, K., 'Das zweifache Telos bei Aristoteles', in I. Düring (ed.), *Naturphilosophie bei Aristoteles und Theophrast* (Heidelberg, 1969), 97–113.
- Gelber, J., 'Two Ways of Being for an End', *Phronesis*, 63 (2018), 64–86.
- Graeser, A., 'Aristoteles' Schrift "Über die Philosophie" und die zweifache Bedeutung der "causa finalis"', *Museum Helveticum*, 29 (1972), 44–61.
- Henry, D., 'Aristotle on the Cosmological Significance of Biological Generation', in D. Ebrey (ed.), *Theory and Practice in Aristotle's Natural Science* (Cambridge, 2015), 100–18.
- Hesse, M., 'Aristotle's Logic of Analogy', *Philosophical Quarterly*, 15 (1965), 328–40.
- Hintikka, J., 'Aristotle on the Ambiguity of Ambiguity', *Inquiry*, 2 (1959), 137–51.
- Hintikka, J., 'Different Kinds of Equivocation in Aristotle', *Journal of the History of Philosophy*, 9 (1971), 368–72.
- Hutchison, D. S. and Johnson, M. R., 'Authenticating Aristotle's *Protrepticus*', *Oxford Studies in Ancient Philosophy*, 29 (2005), 193–294.
- Irwin, T. H., 'Homonymy in Aristotle' ['Homonymy'], *Review of Metaphysics*, 34 (1981), 523–44.
- Jaeger, W., *Aristoteles: Grundlegung einer Geschichte seiner Entwicklung* (Berlin, 1923).
- Johansen, T. K., 'The Two Kinds of End in Aristotle: The View from *De anima*', in D. Ebrey (ed.), *Theory and Practice in Aristotle's Natural Science* (Cambridge, 2015), 119–36.

- Kennedy, C., 'Semantics of Comparatives', in K. Brown (ed.), *Encyclopedia of Language and Linguistics*, 2nd edn (Oxford, 2005), 68–71.
- Lawrence, G., 'Aristotle and the Ideal Life', *Philosophical Review*, 102 (1993), 1–34.
- Lawrence, G., 'Nonaggregatability, Inclusiveness, and the Theory of Focal Value: *Nicomachean Ethics* 1. 7, 1097^b16–20', *Phronesis*, 42 (1997), 32–76.
- Lear, G. R., *Happy Lives and the Highest Good* (Princeton, 2004).
- Lettinck, P. and Urmson, J. O. (trans.), *Philoponus: On Aristotle Physics 5–8 with Simplicius: On Aristotle On the Void* (London, 2013).
- Leunissen, M., 'Explanation and Teleology in Aristotle's Cosmology', in A. C. Bowen and C. Wildberg (eds.), *New Perspectives on Aristotle's De Caelo* (Leiden, 2009), 215–38.
- Lewis, F., 'Aristotle on the Homonymy of Being', *Philosophy and Phenomenological Research*, 68 (2004), 1–36.
- Lloyd, A. C., 'Genus, Species and Ordered Series in Aristotle', *Phronesis*, 7 (1962), 67–90.
- Lloyd, G. E. R., 'The Unity of Analogy', in id., *Aristotelian Explorations* (Cambridge, 1999), 138–59.
- Meadows, K., 'Aristotle on Ontological Priority', PhD thesis (Stanford University, 2017).
- Menn, S., 'Aristotle and Plato on God as *nous* and as the Good', *Review of Metaphysics*, 45 (1992), 543–73.
- Mill, J. S., *Utilitarianism* (London, 1863).
- Minio-Paluello, L., *Aristotelis Categoriae et liber De interpretatione* (Oxford, 1949).
- Moore, G. E., *Principia Ethica* (Cambridge, 1903).
- Morrison, D., 'The Evidence for Degrees of Being in Aristotle', *Classical Quarterly*, 37 (1987), 382–401.
- Nussbaum, M. C., *The Fragility of Goodness* (Cambridge, 1986).
- Olszewsky, T. M., 'Aristotle's Use of *Analogia*', *Apeiron*, 2 (1968), 1–10.
- Osborne, C., *Dumb Beasts and Dead Philosophers: Humanity and the Humane in Ancient Philosophy and Literature* (Oxford, 2007).
- Owen, G. E. L., 'Aristotle on the Snares of Ontology', in id., *Logic, Science and Dialectic*, 221–45.
- Owen, G. E. L. 'Logic and Metaphysics in Some Earlier Works of Aristotle' ['Logic and Metaphysics'], in id., *Logic, Science and Dialectic*, 180–200.
- Owen, G. E. L., *Logic, Science and Dialectic: Collected Papers in Greek Philosophy [Logic, Science and Dialectic]*, ed. by M. Nussbaum (Ithaca, 1986).
- Owen, G. E. L., 'The Platonism of Aristotle', in id., *Logic, Science and Dialectic*, 200–20.

- Owens, J., *The Doctrine of Being in the Aristotelian Metaphysics* (Toronto, 1962).
- Pakaluk, M., 'Friendship and the Comparison of Goods', *Phronesis*, 37 (1992), 111–30.
- Peramatzis, M., *Priority in Aristotle's Metaphysics* (Oxford, 2011).
- Rapp, C., 'Ähnlichkeit, Analogie und Homonymie bei Aristoteles' ['Ähnlichkeit'], *Zeitschrift für Philosophie* 46 (1992), 526–44.
- Rapp, C., 'Aristotle on the Cosmic Game of Dice: A Conundrum in *De Caelo* ii.12', *Rhizomata*, 2 (2014), 161–86.
- Robin, L., *La théorie platonicienne des idées et des nombres d'après Aristote* (Paris, 1908)
- Ross, W. D., *Aristotle's Physics [Physics]* (Oxford, 1936).
- Ross, W. D., *Aristotle's Metaphysics [Metaphysics]*, 2 vols. (Oxford, 1953).
- Ross, W. D., *Aristotelis Topica et Sophistici elenchi* (Oxford, 1958).
- Sedley, D., 'The Ideal of Godlikeness', in G. Fine (ed.), *Plato 2: Ethics, Politics, Religion, and the Soul* (Oxford, 1999), 309–28.
- Sedley, D., 'Teleology, Aristotelian and Platonic', in J. G. Lennox and R. Bolton (eds.), *Being, Nature, and Life in Aristotle* (Cambridge, 2010), 5–29.
- Sen, A., *Collective Choice and Social Welfare*, rev. 2nd edn (London, 2017).
- Shields, C., *Order in Multiplicity: Homonymy in the Philosophy of Aristotle [Order in Multiplicity]* (Oxford, 1999).
- Shields, C., 'Fractured Goodness: The *summum bonum* in Aristotle' ['Fractured Goodness'], in R. Bader and J. Aufderheide (eds.), *The Highest Good in Aristotle and Kant* (Oxford, 2015), 83–111.
- Simplicius, *In Aristotelis Physicorum libros octo commentaria*, ed. by H. Diels (Berlin, 1895).
- Stocker, M., *Plural and Conflicting Values* (Oxford, 1997).
- Strycker, E. de, 'Prédicats univoques et prédicats analogiques dans le "Protreptique" d'Aristote', *Revue Philosophique de Louvain*, 66 (1966), 597–618.
- Susemihl, F., *Aristotelis Ethica Eudemia* (Leipzig, 1884).
- Ward, J. K., *Aristotle on Homonymy: Dialectic and Science [Aristotle on Homonymy]* (Cambridge, 2008).
- Wardy, R., *Chain of Change: A Study of Aristotle's Physics VII [Chain of Change]* (Cambridge, 1990).
- Wicksteed, P. H. and Cornford, F. M., *Physics II (V–VIII)* (Cambridge, MA, 1934).