Aristotle's *Categories* 7 adopts Plato's view of relativity[1]

Since the 1960s, scholars have thought that the *Categories* is an anti-authoritarian work. Aristotle engages with Platonism, rather than straightforwardly rejecting or blindly adopting any element of it.[2] In particular, Owen argued that the *Categories* evinces an anti-Platonic linguistic theory.[3] That theory enables further objections against Plato's philosophy.[4] Owen stressed that Plato influenced Aristotle's early work and that

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[1] I am grateful to audiences in Durham and Oxford for feedback on this paper - especially Lesley Brown, George Boys-Stones, Luca Castagnoli, Phil Horky and Thomas Johansen – and to Mabel Duncombe and Robert Wardy for improvements to the final version. Most of all, I am grateful to David himself, for always supporting my work with characteristic insight, good humour and generosity. The paper originates in my doctoral work on relativity in Plato, which David supervised. Although he was particularly enthusiastic about Plato's influence on Aristotle, in the end, I barely touched on that theme in my thesis. So I am delighted that I can offer this piece for his *festschrift*.

[2] Owen (1966) gives the classic statement of this view. He reacts against Jaeger et al. (1962) 53, especially, but also De Vogel (1965), with critique by Düring (1966) and (Owen 1966, 128-130). Jaeger's view is part of a wider tendency to see Aristotle's work as emerging from Platonism. Jaeger (1962) and Case (1910); Case (1925) applied this reading primarily to Aristotle's *Eudemus*, *Protrepticus* and *On Philosophy, Metaphysics*, *Nicomachean Ethics* and *Eudemian Ethics*. For a similar suggestion with *De Caelo*, see Guthrie (1939) xxix–xxxi cited and developed by Ross (1957) 74–75. For this sort of treatment of the *Organon* as a whole, see Solmsen (1929). For the *Poetics*, see Solmsen (1935). More recently, Frede (1987) 27-28, argues for the view that species and genera in Plato's *Sophist*, *Parmenides* and *Philebus* exert a strong influence on the *Categories*. But even here Frede's claim is that Aristotle adapts, rather than adopts, the Platonic view, since Aristotle reverses the Platonic view which holds that the genera and species are primary. Menn (1995) 318-19 also connects the genera of the *Sophist*, but claims that the *Categories* give an exhaustive list of the highest genera for use in inquiry.

We should also be aware that scholars debate whether the *Categories* is a single work and whether it is by Aristotle. Frede (1987) 13 has questioned whether the discussion of relativity at *Cat*. 11a20-37 is by the same author as the discussion of *Cat*. 6a36-8b24. To avoid tricky issues of authenticity and unity, I confine my claims to *Categories* 7 6a36-8b24, which is usually thought to be genuine Aristotle.

[3] For example, an anti-Platonic theory of predication, as Owen (1966) 134-9.

[4] See, for example, Owen (1966) 146; Owen (1960); Owen (1965).

Aristotle's account of predication in the *Categories* reacts against the Forms.[5] Plato influenced the *Categories*, not by his authority, but by setting the background against which Aristotle developed his theories.

On the micro-level of *Categories* 7, scholars take a similar anti-authoritarian attitude. After defining relatives at 6a36, Aristotle draws out some formal features of them: some relatives have a contrary (6b15-19); some come in degrees (6b19-27); all reciprocate with their correlatives (6b28-7b14); some are simultaneous with their correlative (7b15-8a12). Aristotle then raises a worry: some substances are relatives (8a13-28). A hand is a substance, since a hand is part of a secondary substance, but a hand is also a relative, since a hand is said of something. To address this worry Aristotle introduces a second account of relatives (8a31-2). He then describes a test for whether a relative falls under the second account (8a35-b21).

Some commentators argue that Aristotle rejected the first account in favour of the second, but neglect the possible influence of Plato on *Categories* 7.[6] Another group holds that Aristotle develops his views of relativity against a 'Platonic background', but decline to say whether Plato directly influenced Aristotle.[7] But many commentators hold that Aristotle sets up Plato's view of relativity in the first account, only to replace it with the second.[8] Against the first group, I argue that Aristotle takes the *Categories* 7 notion of

[5] Owen (1966) 134–9.
[6] See Husik (1904) 525; Ackrill (1963) 102; Mignucci (1986) 107–8.
[7] Jansen (2006); Harari (2011) 536. Hood (2004) 26 mentions the ancient view that Aristotle explicitly rejects Plato's view, but does not endorse it herself. Sedley (2002) 348–51 argues that *both* definitions originate in Academic debate.
[8] Simplicius *In Cat*. 159, 10-20 follows Boethus of Sidon in claiming that the first definition that Aristotle gives (*Cat*. 7 6a36) derives from Plato. Simplicius later reads Aristotle as rejecting the first definition and replacing it with a second definition (*Cat*. 7,

relativity from Plato. Against the second group, I argue that Aristotle takes the view directly from Plato. Against the third group, I argue that Aristotle cleaves to that Platonic position.

In part I, I argue Plato and Aristotle share a view of relativity. First, I give textual evidence that both share the 'intensional' view of relatives. Second, Aristotle's formal features have antecedents in Plato. In the second part of the paper, I argue that Aristotle draws directly on Plato's view. For relativity, there is neither a shared source nor an intermediate source. In the third part, I show that Aristotle retains the first account of relatives.

I. Plato and Aristotle share the intensional view of relatives

The term 'relativity' covers many sins. I begin with two distinctions to show how Plato's and Aristotle's views are alike. First I distinguish 'relatives' from 'relations'. Take a relational state of affairs: Achilles is faster than Hector. We can distinguish two types of item here. On the one hand, items that relate to something: Achilles and Hector. Call these 'relatives'. Proper names, like 'Achilles', can pick out relatives, but so can descriptions, such as 'the faster man'. 'The faster man is faster than the slower man' is true, if stilted. On the other hand, items that relate things: call these 'relations'. The relation 'being faster' relates Achilles to Hector. We pick out relations either with a gerund (e.g. 'being faster than') or with a schematic expression (e.g. '…is faster than…'). In principle, of course, relational expressions can have more than two gaps. For example,

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8a32-5), which he takes to be Aristotle's settled view on the matter (*In Cat*. 198,12-199,1). Bodéüs (2001) 117–18, 129 follows this ancient tradition.

'…is between…and…' picks out a relation. Ancient philosophers use relations often. But when analysing relativity Plato and Aristotle start from relatives, even though relations enter into the analysis. Plato and Aristotle use the notion of a relation, but share an analysis based on relatives.[9]

Second, I distinguish between extensional and intensional relatives. Some item is an extensional relative just when that item relates to something:

(EXT) *a* is a relative iff *a* relates to some *b*.[10]

On the extensional view, Achilles is a relative simply in virtue of being faster than Hector. Achilles is faster than Hector; so, Achilles relates to Hector; so, Achilles relates to something. So Achilles is a relative. The extensional account of relatives is permissive. EXT does not restrict which relation is invoked, so everything is a relative. After all, everything is the same or different relative to something. Moreover, under the extensional view, the same relative can bear different relations to different things. For example, Achilles can bear the relation '**…**is faster than**…**' to Hector and '**…**is the son of**…**' to Thetis. EXT allows a relative multiple relations.

The intensional view builds a specific relation into being a given relative entity:

[9] Relations, rather than relatives, ground 'analytic' treatments of relativity. Frege (1893) and Russell (1938) §§28-30, take relations as primitives in their formal systems. Several treatments of Plato also begin from relations: Castañeda (1972); Castañeda (1978); McPherran (1983). Criticism can be found in Matthen (1982) and Matthen (1984). For an alternative reading of Plato see Scaltsas (2013). Hood (2004) argues that Aristotle has a view of relations, rather than relatives.

[10] EXT is found in antiquity (DL iii 108-9) and Owen (1957) 109 detects this view in Plato. Barnes (1988) takes EXT to be a commonplace in antiquity.

(INT) *a* is a relative iff being *a* involves relating to some *b*.[11]

Take a relative like 'a brother'. Relating in some way to something does not suffice for being a brother. A brother must be *a brother* of something. Being a brother depends on bearing the '**…**is a brother of**…**' relation to something. A named individual brother, Hector, does bear the '**…**is a brother of**…**' relation to someone, Paris. But being a brother of Paris is not what it is to be a brother: Agamemnon is a brother, but not a brother of Paris. To avoid such counter-examples, we might specify that we are interested in being a brother *as such*, rather than some named brother. Plato and Aristotle (*Symp*. 199e3-4; *Parm.* 133c-134e; *Theaetet*. 204e11; *Cat*. 6a36) follow that strategy.

EXT contrasts with INT in the cases of named individuals. On EXT, Hector is a relative, since '…is a brother of someone' is true of Hector. However, on INT, Hector will not be a relative, since relating to something is not part of being Hector. The contrast also comes out in cases like a human. If we assume that 'a human' is defined as 'a rational animal', under EXT, a human can be a relative, since a human can relate to things. On INT, however, a human in not a relative, since bearing a relation to something is not part of what it is to be a human. A human can be a rational animal even alone in the universe. Furthermore, unlike on the EXT view, on the INT view, the same relative cannot be encountered in different relations. A brother, as such, is brother of something; a

[11] Compare INT with a certain notion of 'internal' relations. A relation, *R*, may be said to be 'internal' iff *Rxy* is essential to *x* and essential to *y*. This formulation is due to Yeats and Marmodoro (2016) 8), but the 'essentialist' reading of internal relations is found in Bradley (1897) 347; Ewing (1934) chapter 2; Bosanquet (1911) 277; Blanchard (1939) 452; Rorty (1967) 125 and Schaffer (2010) 349 from whom I took these citations. See also Mignucci (1986) and Mignucci (1988) which advocate a similar reading of relatives in Aristotle and Plato.

faster thing, as such, is faster than something. No scope here for a brother, as such, being faster than something.

Aristotle and Plato are committed to the intensional view of relatives. First, both use intensional language to discuss relatives. In particular, both thinkers use an expression (ὅπερ ἐστίν) to specify a relative 'as such', precisely what we would expect if the intensional view were in play. Aristotle uses ὅπερ ἐστίν extensively in *Cat*. 7, in particular in his initial definition at 6a36-b6:[12]

> (T1) We call relatives (πρός τι) all such things as are said to be just what they are (αὐτὰ ἅπερ ἐστίν) of or than other things (ἑτέρων) or in some other way in relation to something else. For example, what is called larger is called what it is than something else (it is called larger than something) (οἷον τὸ μεῖζον τοῦθ' ὅπερ ἐστὶν ἑτέρου λέγεται, τινὸς γὰρ μεῖζον λέγεται); and what is double is called what it is of something else (it is called double of something).

In this passage, Aristotle defines relatives:

> R1: *x* is a relative $=_{def}$ *x* is said to be what it is in relation to some *y* and *x* is different to *y*.[13]

Aristotle wants to pick out a class of items, rather than a class of properties of items, so focuses on relatives, rather than relations; on 'the larger thing' (τὸ μεῖζον) rather than the

[12] Translations of the *Categories* are taken from Ackrill (1963) unless otherwise noted.

[13] Aristotle calls R1 a definition at 8a28.

relation ‘being larger than’. Furthermore, Aristotle defines not entities that happen to relate, but rather relative entities as such. ὅπερ ἐστίν indicates this emphasis. The larger, as such, is called larger than something. Suppose that Ajax is larger than Achilles. Aristotle’s point is not that Ajax is called larger than Achilles (although this is no doubt true). Aristotle’s point is that the larger thing, in so far as it is a larger thing, is called larger than something. Ajax, as larger, is called larger than something. But, Ajax, as a larger thing, is not called larger than Achilles. Rather, Ajax, as a larger thing, is called larger than a proper correlative (the smaller).

The language Aristotle uses suggests the intensional view of relatives. We might choose qualifications such as ‘as such’ to mark out that the intensional view is being invoked. Aristotle uses Greek equivalents of this expression several times. T1 uses ἅπερ ἐστίν and ὅπερ ἐστίν: singular and plural forms of the same expression. The former means ‘the very things which are’ and the latter means ‘that very thing which it is’. In T1, Aristotle uses one to qualify ‘relatives’ (πρός τι) and the other to qualify ‘larger’ (τὸ μεῖζον). In the *Categories*, the only use of τοῦθ’ ὅπερ ἐστίν, or equivalents, in Aristotle is in *Categories* 7, discussing relatives (6a38, 6a39; 6b4).[14]

Further evidence that ὅπερ ἐστίν picks out an intensional relative is found when Aristotle says, at *Categories* 7, 6b4, that certain terms are of ‘other things’ (ἑτέρων) when specified as just what they are (τοῦθ’ ὅπερ ἐστίν) and not when specified as ‘something else’ (οὐκ ἄλλο τι). He then gives the example of knowledge (ἐπιστήμη). Knowledge,

[14] ὅπερ ἐστίν occurs only once within the *Categories*, but outside *Categories* 7, at *Cat*. 3b36. There, Aristotle says that substances ‘τοῦθ’ ὅπερ ἐστίν’ do not admit of a more or less. Even this uses τοῦθ’ ὅπερ ἐστίν in the context of relatives. Aristotle’s point is that a human, as such, is not more a human than another human, but a pale thing, as such, can be paler than another pale thing.

when specified as what it is (i.e. knowledge), is of something else. Knowledge, specified as something else (ἄλλο τι), say, a mental state, is not of something else. The τοῦθ' ὅπερ ἐστίν qualification focuses on taking the relative as the relative it is. That is, reading relatives in an intensional, rather than extensional, way.[15]

Plato also uses ὅπερ ἐστίν to specify intensional relatives. In the *Symposium*, after Agathon speaks in praise of Love (*eros*), Socrates poses the following question:

> (T2) Is Love such as to be a love of something or of nothing? …it is as if I were to ask the same about a father – is a father a father of something or not (ἆρα ὁ πατήρ ἐστι πατήρ τινος ἢ οὔ;)? You'd tell me, of course, if you wanted to give me a good answer, that it's of a son or a daughter (υἱέος γε ἢ θυγατρός) that a father is the father. Wouldn't you?
>
> "Certainly", said Agathon.
>
> "Then the same goes for the mother?" He agreed to that also.
>
> "Well, then," said Socrates, "answer a little more fully, and you will understand better what I want. If I should ask, "what about this: a brother just in so far as he *is* a brother (ἀδελφός, αὐτὸ τοῦθ' ὅπερ ἔστιν), is he brother of something or not?" He said that he was.
>
> "And he's of a brother or a sister, isn't he?" He agreed.
>
> "Now try to tell me about love," he said. "Is Love the love of nothing or of something?"

[15] Cf. *Theaetetus* 204e11; *Sophist* 255d7; *Parmenides* 133c8. Although controversial, I think that the same idea can be found at *Sophist* 255c-d. Duncombe (2012) argues for this in detail. Duncombe (2015) discusses an occurrence of this expression at *Republic* 439a2. These two paragraphs, modified, appear in my Duncombe (2015).

"Of something, surely!"

(*Symp*. 199d1-199e8. Trans. Nehamas/Woodruff, modified, my brackets).

As Socrates tells us later (200e), (T2) aims to show that love is love of something. Love is a relative with a special sort of object, a correlative; all relatives are of, in some sense, their correlatives; so, all relatives are of something. Love is a relative entity, so, love is of something. Socrates gives two analogical examples. First, if *x* is a father, then *y* is the son or daughter of *x*. Second, if *x* is a mother, then *y* is the son or daughter of *x*. In these cases, the relative is a parent and the correlative an offspring. These are relatives under the INT account of relatives, since the fatherhood relation is part of what it is to be a father. On this reading what we know about the entity, *x*, and all we know about *x*, is that *x* is a father. Given that, we know that the father has a correlative (a son or daughter).

Socrates shifts to the example of 'a brother'. A brother, just in so far as he is a brother, is brother of something ('ἀδελφός, αὐτὸ τοῦθ' ὅπερ ἔστιν, ἔστι τινὸς ἀδελφός' (*Symp*. 199e2-4)). Language of 'ὅπερ ἐστίν' recurs in the context of relativity.[16] Here it specifies that Socrates does not mean some individual brother, e.g. Hector, with various properties, but rather a brother as such, a brother *qua* brother. There are various differences between Hector and a brother *qua* brother. First, a brother is essentially a brother, while Hector is only contingently a brother. Second, we know and are only able to know that a brother is a brother but are able to know a great deal more about Hector than that he is a brother. But, as with Aristotle, the language of ὅπερ ἔστιν specifies that a

[16] In Plato 'τοῦθ' ὅπερ ἐστίν' occurs without a 'λέγεται', unlike in Aristotle's *Categories* 7. However, Aristotle does use the expression without a 'λέγεται' at *De Anima* 430a23.

relative is intensional. Linguistic and conceptual similarity encourages us to think that Plato and Aristotle share a view. Shared formal features will give further evidence.

Each relative has a correlative. The most common example of a relative in Plato is larger (μεῖζον).[17] When larger is mentioned as a relative, larger always relates to smaller (ἔλαττον). Another common example, double (διπλάσιον), always comes with its partner, half (ἥμισυ).[18] In general, relative-correlative pairing uses a stable terminology. One common example of a relative, knowledge (ἐπιστήμη), always has a partner, but the label for that partner changes.[19] But clearly both Plato and Aristotle hold that each relative has a special correlative.

Not only that, but each relative has a correlative to which it exclusively relates. Aristotle discusses this at length in *Categories* 7 at 7a31-b9. A master should relate to a slave *not* to a human and when we 'strip away' all the features incidental to being a slave, such as being a human or being a biped, we will see that master relates only to slave. T2 shows correlativity in Plato. The correlative of father is offspring and the correlative of brother is sibling. Socrates chooses the disjunctive cases 'son or daughter' as the correlative of 'father' and 'brother or sister' as the correlative of 'brother'. These disjunctions should not be read as 'either a son or a daughter but not both' nor as 'either a son or a daughter or both' but as 'son or daughter, i.e., offspring'. The disjunctions indicate that the relative always relates to this correlative, no matter what.

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[17] *Charmides* 168b; *Republic* IV 438b; *Theaetetus* 155a; *Phaedo* 101a-d; 102c; *Statesman* 283-5. Large and small are given as a pair at *Rep*. vii 523-4; *Phaedo* 96d-e; *Statesman* 283d. Aristotle gives the example of larger and smaller at *Cat*. 7 6a36-b10.
[18] *Charmides* 168c; *Republic* IV 438b; *Cat*. 7 6a.
[19] Cf. *Charmides* 167c; *Parmenides* 133a-134a; *Parmenides* 142a. Aristotle coins a term for the correlative of knowledge, 'knowable' (*Cat*. 7), but Plato prefers natural language, even if it is not quite consistent.

This commitment to exclusivity confirms that relatives in Plato and Aristotle are intensional. After all, father *as such* does not relate to a son. There are some fathers who only have daughters. Similarly, a father as such does not relate to a daughter. There are some fathers who only have sons. Only the exhaustive correlative, 'offspring' or 'son or daughter' taken exhaustively, gives a correlative for a father as such.

Aristotle shares with Plato a commitment to reciprocity. Not only do relatives relate only to their proper correlative, but the correlative also relates to the relative. A master is called master of a slave and a slave is called slave of a master (7b6-7). Where *x* and *y* are a relative-correlative pair:

REC: if *x* relates to *y*, then *y* relates to *x*.

Aristotle makes the point explicitly:

> (T3) All relatives are spoken of in relation to correlatives that reciprocate. For example, the slave is called slave of a master and the master is called master of a slave; the double double of a half, and the half half of a double; the larger larger than a smaller and the smaller smaller than a larger and the rest too (Trans. Ackrill. *Cat*. 7, 6b28).

Although Plato does not rely on this principle in the *Symposium* (T2), reciprocity operates at a crucial point in Plato's *Parmenides*. Between 133c and 134e, Parmenides raises what he calls the 'greatest difficulty' with the Theory of Forms. One step in Parmenides'

argument is that at least some relatives hold only between Forms and never between Forms and things in our realm. The class picked out is 'all the Ideas which are what they are in relation to each other' (ὅσαι τῶν ἰδεῶν πρὸς ἀλλήλας εἰσὶν αἵ εἰσιν) (*Parm*. 133c8–d2).[20] Similarly, the corresponding items in our realm are what they are in relation to each other (*Parm*. 133d2-5).

The central examples are master, slave, knowledge and knowledge's object, truth. Parmenides' point is that each item in pairs is what it is relative to the other. Master is what it is in relation to slave; slave is what it is in relation to master.[21] Knowledge is what it is in relation to its object, the object of knowledge is what it is in relation to knowledge. But these pairs reciprocate only within either the Form realm or our realm. With this agreed, Parmenides proceeds with a *reductio*, which I will discuss further below. But for now, I stress that reciprocity is a key part of the greatest difficulty.

In short, Plato and Aristotle share some core commitments about relativity. For both: analysis of relativity starts from relatives; relatives are intensional; each relative has an exclusive correlative; each relative reciprocates with its correlative. However, this does not yet show that Plato directly influenced Aristotle. Both could be drawing on a

[20] Relatives, taken intensionally, are in play here: notice the use of εἰσὶν αἵ εἰσιν, simply another variation on ὅπερ ἔστιν, this time a feminine plural. To specify reciprocity, Plato uses πρὸς ἄλληλα. Plato often uses the expression πρὸς ἄλληλα to describe a relation that things that are the same have to each other, especially things that are of the same kind (for example: *Theaetetus* 195c8-d1; *Sophist* 228c4, 253a2 and 253b9; *Parmenides* 136b1 and 158d2), even when the specific ideas of correlative are not at stake. Plato uses the expression πρὸς ἄλληλα to specify the reciprocal feature of relatives in the *Statesman*: 'we must not say, as we said a little while ago, that [greater and smaller] are only relative to each other [πρὸς ἄλληλα], but rather that, on the one hand, they are relative to each other [πρὸς ἄλληλα], while, on the other hand, relative to the measure' (*Statesman* 283e). The third comes from an alternative manuscript reading of the *Sophist* at 255c14. I defended this as the correct reading in Duncombe (2012).

[21] cf. Aristotle *Cat*. 7 6b28-7a21. Aristotle is clear that relatives reciprocate (6b28–35) and even uses as examples master and slave (6b29–30) and knowledge (6b34–5).

shared tradition or there could be an intermediate source between the two. The next part of the paper eliminates these possibilities.

II. Plato directly influenced Aristotle

As well as some core ideas about relatives, Plato and Aristotle also share a key set of examples of relative entities. Alone, shared examples do not show that Plato influenced Aristotle.[22] However, these examples of relatives serve particular philosophical purposes in Plato. Since Plato introduced these examples to serve his philosophical needs, it is unlikely that Plato is drawing on another source for his views of relatives and hence likely that Aristotle draws on Plato.[23] I will discuss two sets of examples. First, master, slave and knowledge (*Parmenides* 133d7- 134b1. Cf. *Cat*. 7 6b1-3; 6b28-b35). Second, desire (*Rep*. IV 437c. Cf. *Topics* 146b12; *SE* 173a39-40; 173b4-5).

To see the case of master, slave and knowledge, I need to return to the 'greatest difficulty'. We saw above that the basic strategy is a *reductio*. The Forms, as outlined by the young Socrates, lead to absurd consequences, when combined with some further plausible premises.[24] In particular, when we posit Forms corresponding to certain relative entities, absurd consequences follow. The examples chosen for the *reductio* are relatives, but are not chosen at random. Parmenides draws out three absurd consequences.[25] The

[22] Cf. Owen (1966) 144). Owen points out that Plato (in the later dialogues) and Aristotle share a suspicion of over-simplification, but declines to draw the conclusion that Plato influenced Aristotle.
[23] David Sedley suggested this line of argument to me.
[24] There is consensus on the general *reductio* strategy of the argument, although the details are controversial. For discussion see my Duncombe (2013).
[25] For this reading see my Duncombe (2013) 48–49 .

first absurd consequence is epistemic. The Forms cannot be known (133b4-6, 134b11-c2).[26] The second 'astonishing' (θαυμαστός) (134e7) consequence is that the divine, or the gods, could not know human matters (134e5-6).[27] Parmenides draws one further absurd consequence, often overlooked in the literature on the greatest difficulty, namely, that the gods cannot be our masters (134d9-e1).[28]

So Plato does not choose the examples of relatives used in the *reductio* at random. Plato chooses master, slave and knowledge precisely because these examples give rise to the unacceptable consequences just mentioned. Master, slave and knowledge are given as examples of relatives because they do philosophical work in Plato's text, namely, showing that the inchoate Theory of Forms has absurd consequences. So Plato does not simply adapt from some outside source.

Aristotle, on the other hand, does adapt the examples of master, slave and knowledge merely as examples of relatives which do no philosophical work. This is not to say that master, slave and knowledge play no philosophical role at any point in Aristotle. Masters and slaves are key to Aristotle's discussion in *Politics* I. 4-6 (1253b25-1255b15) and I. 13 (1259b15-1260b25); knowledge relates to demonstration at *Posterior Analytics* 72b5-23 and the cognitive psychology of *De Anima* III. 4, 429a9–10. The difference is that Plato introduces master, slave and knowledge as relatives, but also as playing a key philosophical role, while Aristotle, in the *Categories* treats them as merely relatives, while elsewhere as having a philosophical role. We can tell this because master,

[26] Many scholars note this consequence: Forrester (1974) 233; Peterson (1981) 1; Rickless (2007) 90.

[27] Also noted by: Lewis (1979) 120–23; McPherran (1999) 55–71; Rickless (2007) 90-93.

[28] A similar thought is found in *Phaedo* 62d2–3 where we are the possessions (κτήματα) of the divine.

slave and knowledge appear indifferently as items on a list of examples of relatives. For instance, at T3 above, master, slave (Cf. *Cat*. 7 6b1-3; 6b28-b35) and knowledge (Cf. *Topics* 114a17-18; 121a1; 146b2; 149b4-15; *SE* 181a35-6) appear as examples of relatives that exhibit reciprocity.

Unlike Plato's *Parmenides*, master, slave and knowledge in the *Categories* do duty only as examples of relatives. In Aristotle the examples are interchangeable, as they appear on a list with larger, smaller, double, half, perception and percept (*Cat*. 7 6a36-b10). In Plato, the examples are not interchangeable, since Parmenides runs a *reductio* precisely based on worries about mastery and knowledge. Plato has a philosophical reason to employ master, slave and knowledge, but Aristotle does not. Hence, it is likely that Plato originates the examples and Aristotle adopts them.

Desire is a further case where a certain example of a relative plays a philosophical role in Plato's text, but serves only as an example of a relative in Aristotle. At *Rep*. 436b9-439c9, before arguing that the soul has exactly three parts, Socrates argues that the soul has at least two parts.[29] Socrates argues that the soul has parts because it sometimes relates in opposite ways to the same item (436b9-c2). This suffices for an item to have parts, in particular the soul. Socrates then instantiates this principle with the examples of desire and rejection: desiring and rejecting are opposite relations (437b1-c9). But, as a matter fact, humans do sometimes desire and reject the same item (439c3-5). So the human soul has parts. Along the way, it becomes clear that Socrates thinks of desire as a relative. At 438a7-b2, Socrates puts desire in the class of things that are 'such as to be of

[29] Socrates calls the elements in the soul 'εἶδη' at 435c5, 435e1, 439e1, 'γένη' at 441c6, 443d3 and 'μέρη' at 442b10 and 442c4. These are cited by Brown (2012) 53.

something', which foreshadows Aristotle's own formulation, that 'all things are said to be just what they are of other things' (*Cat*. 7 6a35).

The example of desire as a relative cannot here have been picked at random. Although the argument sketched above only establishes that the soul has parts, not what parts there are, it is ultimately crucial to Socrates' argument that one of the parts performs the function of desiring (439d-e) so that there is a desiring part that corresponds to the money-making class in the city (440e-441a). No other example of a relative could do. So it is highly unlikely that Plato draws this example of a relative from an external source.

Aristotle, on the other hand, likely adopts the example of desire from Plato. Aristotle mentions desire as a relative at *Topics* VI 8, 146b12, when outlining how to test the adequacy of a given definition of a relative term. Aristotle makes the point that when defining a relative term, we should select a correct correlative. Aristotle has a range of examples here, each of which would exemplify his point equally well. Aristotle has just been discussing 'wish' (*boulesis*) as a relative (*Top*. VI 8, 146b3), which could have made the same point. A further use of 'desire' as an exemplification of relativity arises when Aristotle discusses the 'babbling' fallacy at *SE* 8 173a30-b17. The babbling fallacy can occur with any term, especially any relative term, as Aristotle notes (173a1-2). In the *Topics* and *SE* discussions, 'desire' does no particular work as a relative, so there is no reason to think that Aristotle originates the example. But, as we saw in Plato, the example of desire does play a key role in Socrates' discussion of the parts of the soul, which is reason to think that the example originates with Plato and is adopted by Aristotle, rather than both drawing on a common source.

Finally, I rule out the possibility that Plato indirectly influenced Aristotle's view of relatives. Could there have been an intermediate source influenced by Plato and who influenced Aristotle? There are only two known, if unlikely, candidates for such an intermediary: Xenocrates and Hermodorus. These are rough contemporaries of Aristotle, for whom a view about relatives is attested. Their precise relation to Aristotle is uncertain, but even assuming that either figure was active in the right context to be an intermediary, I argue that neither was an intermediary.

First, Simplicius reports that Xenocrates had a two-category scheme of 'absolute' (καθ' αὐτό) and 'relative' (πρός τι), and rejected the Aristotelian ten-category scheme as having too many categories.[30] Two categories suffice because everything is either an independent item, e.g. Achilles, or it relates in some way to an independent item, for example, by belonging to it. Thus, being a brother would be a relative, since a brother is brother of some one but being pale would also be relative, since being pale belongs to some one. If this is right, Xenocrates had a view of relatives more permissive than the INT view of Plato and Aristotle. Otherwise, items like being pale could not be relatives. But since Plato and Aristotle share the INT view of relatives, as I have been arguing, Xenocrates cannot be an intermediary.[31]

Simplicius also reports that Hermodorus of Syracuse, another first generation Academic, has a notion of relativity:

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[30] Simp. *In Cat.* 63, 22 Kalbfleisch (=Fr 12 H/95 IP). Citation from Dillon (2003) 151.
[31] As an aside, Xenocrates' view would also be less permissive than the EXT view. The EXT view allows, but Xenocrates blocks, substances from being relatives. Thus, Xenocrates' view has an extension strictly between INT and EXT.

(T4) He says, 'Amongst beings, some are absolute (καθ' αὑτά), such as man and horse, others are relative to others (πρὸς ἕτερα) and of these some are relative to opposites (πρὸς ἐναντία), such as good to bad, while others are relative to something (πρός τι) and of these, some are definite and some are indefinite'. (Hermodorus, Simp. *In Phys*. IX 248, 2-18. =Hermodorus Fr 7 Isnardi Parente).[32]

Hermodorus divides 'relative to others' into 'relative to opposites' and 'relative to something' (πρός τι), but this seems impossible to reconcile with Aristotle's stated view. Hermodorus' relatives (πρός τι) are a sort, amongst other sorts, of things relative to something else (πρὸς ἕτερα). So Hermodorus' relatives (πρός τι) are not identical to, or even co-extensive with, the things in relation to something else. But for Aristotle, a relative (πρός τι) is said to be what it is relative to other things (ἑτέρων) (T1). Aristotle's relatives are identical to things relative to something else. Aristotle contradicts Hermodorus.

III. Aristotle does not reject R1 in favour of R2

Plato and Aristotle share the intensional view of relatives and Aristotle took the view of relatives directly from Plato. However, my reading now faces an objection. Aristotle gives two accounts of 'relatives' in *Cat*. 7, R1 and R2. A common reading since antiquity claims that Aristotle rejects R1 in favour of R2. For my argument to stand, I must rebut this reading. Scholars often think that Aristotle rejects R1 in favour of R2 because R1

[32] For discussion of this fragment see Cherniss (1962) 286–87; Krämer (1959) 284–87; Isnardi Parente (1982) 439–44; Dillon (2003) 203–4, who cites these authorities.

seems to Aristotle to allow some substances, such as parts of secondary substances, to be relatives. Aristotle, the thought goes, rejected the possibly Platonic R1 for the extensionally narrower R2. Scholars point to some explicit evidence that Aristotle intends to switch definitions.[33] After outlining the extensional adequacy objection, Aristotle says (*Cat.* 7, 8a32-5, trans. Ackrill, modified):

> (T5) If it [R1] was not adequate, and if [R2] those things are relative for which being is the same as being somehow relative to something (τὸ εἶναι ταὐτόν ἐστι τῷ πρός τί πως ἔχειν), perhaps some answer may be found. The previous definition (ὁ δὲ πρότερος ὁρισμός) does, indeed, apply to all relatives, yet this – their being called what they are, of other things – is not what their being relative is (Trans. Ackrill).[34]

Despite the traditional reading, Aristotle claims neither (a) there are two definitions nor (b) the earlier account has a wider extension than the later. Aristotle does mention one definition. But he does not call it a 'first' definition. πρότερος can mean 'first', but the basic meaning is 'earlier', a sense conveyed by Ackrill's translation. Aristotle simply refers to an earlier definition, at 6a36-7 (T1). If there is no a first definition, only an

[33] Mignucci (1986) 101–7; Morales (1994) 250; Bodéüs (2001) 129; Sedley (2002) 332; Harari (2011) 535. Ackrill (1963) 101 avoids committing himself by calling what we find at 8a33-5 a 'criterion'.

[34] Phil Horky pointed out that we find πρός τί πως ἔχειν in Arcytas in the 1st century BC. For further discussion of the later history of this expression, see Sedley (2002).

earlier one, the account given at 8a31-2 may not be a definition at all. Indeed, if R2 were intended as a definition, the *definiens* would contain the *definiendum*.[35]

Secondly, and more importantly, Aristotle does not assert that the earlier definition (R1) covers more items than the later account of relatives (R2). He says that the earlier definition covers all relatives and that it is not what being relative is. But this does not imply that R1 has an extension strictly wider than R2, merely that R1's extension is at least as wide as R2's. This, of course, leaves open the possibility that R1 and R2 co-extend.[36]

Aristotle, then, does not tell us that he abandons R1 for R2. Just as well, since Aristotle moves back and forth between R1 and R2 throughout his corpus.[37] In particular, Aristotle wavers in the *Categories*. He apparently forgets R2 in the immediately following chapter of the *Categories*. At *Cat.* 8, 11a20-23 Aristotle worries that the category of quality might contain some relatives, such as states and conditions. He then gives an argument (11a23-36) that, although some genera, like knowledge, may be relatives, their species, such as grammatical knowledge, are not, strictly speaking,

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[35] The circularity of R2 has been recognised since ancient times: Porphyry, *in Cat*. 123.35-124.1 Busse; Simplicius, *in Cat*. 201.34-202.3 Kalbfleisch. Among modern commentators, Bodéüs (2001) 129 presses the circularity.

[36] Mignucci (1986) 107 misses this point, and asserts that R2 is strictly narrower than R1; Erring in the other direction, Frede (1987) 23, in a throwaway remark, asserts that '*pros ti*' is narrower than '*pros ti pos echein*'. Ackrill (1963) 101 is more cautious, committing himself only to the claim that 'whatever satisfies the second criterion also satisfies the first'. Cf. *Topics* 1.5, 101b37-102a31, where Aristotle distinguishes 'definition' from 'unique property'. These two have the same extension – they pick out all and only items that fall under a term – but definition picks out the essence, while 'unique property' does not. The above four paragraphs are taken, modified, from my Duncombe (2015).

[37] In *Nicomachean Ethics* 1.12, 1101b13; *Physics* 7.3, 246b8; *Topics* 6.4, 142a26-31 and 6.8, 146a36, Aristotle uses the characteristic R2 expression πρός τί πως ἔχειν to describe relatives, but in *Metaphysics* 5.15, Aristotle's other official discussion of relatives, they are called simply πρός τί.

relatives.[38] Aristotle intends to defuse the worry about cross-categorical items. But if the traditional reading of *Categories* 7 were correct, Aristotle's move here would not make sense. Aristotle could preserve the integrity of the categories of quality and relative simply by saying that state, condition and knowledge are relatives according to definition (R1) but not according to the later, strict definition (R2). State, condition and knowledge would, strictly speaking, just be qualities.

When Aristotle writes *Topics* 6.8, he denies that R2 is narrower than R1. Aristotle discusses how to test whether a relative has been correctly defined. He explains at 146b3-4 that 'for each of the relatives (πρός τι), being is the same as being somehow relative to something (πρός τί πως ἔχειν)'. This statement first picks out all relatives, using πρός τι, the characteristic designation of R1 relatives. But then Aristotle asserts that being an R1 relative is the same as being somehow relative to something. This latter expression designates R2 relatives (as in T2). So Aristotle asserts that being an R1 relative is the same as being an R2 relative which entails that R1 and R2 co-extend.

I have defended elsewhere a reading which makes R2 compatible with R1.[39] Briefly, I suggest that R1 tells us what it is to be a relative, while R2 tells us what it is to be a specific relative. Take the example of a master. R1 tells us that a master is a relative. A master is said to be what it is of something, so a master is a relative. However, R1 does not tell us how to distinguish within the class of relatives. For example, how would one distinguish between a master of students and a master of slaves? A master of students is said to be just what it is of something, and a master of slaves is said to be just what it is of

[38] Scholars acknowledge this crux (e.g. Ackrill (1963) 108–9), but none press it as an objection to the traditional reading.

[39] See my Duncombe (2015).

something. R2 tells us how we distinguish between the former and the latter case. R2 stresses that being, for a master, just is being relative to something, a correlative. So to distinguish between a master (of students) and a master (of slaves) one must specify what the correlative is.

This also explains how R2 relates to the so-called 'Principle of Cognitive Symmetry' (8a35-37): If someone knows definitely a relative, that person knows definitely its correlative.[40] I know definitely a master, when I can distinguish it from other similar items. To distinguish a master of slaves from a master of students, I need to know what the correlative is. That is, I need to know whether slaves or students are the correlative in question. When I know definitely which the correlative is, I know definitely which sort of master the relative is.[41]

Conclusion

In sum, Aristotle engages with Platonic views of relativity, but, given the arguments I have made here, Aristotle's attitude is direct adoption, rather than critical engagement. Indeed, where we find in Plato a set of thoughts about relativity, in Aristotle we find those ideas repeated in a more coherent and explicit form. But Aristotle expresses the same ideas in the same language. Even if the *Categories* as a whole is anti-authoritarian, *Categories* 7 adheres closely to Plato's views of relativity.

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[40] Sedley (2002) coins the expression. This principle has proved rather worrisome: Ackrill (1963) 103; Morales (1994) 263; Mignucci (1986) 109; Bodéüs (2001) 131–32.

[41] There is much more to be said to make this reading convincing. See my Duncombe (2015).

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