Relative Concepts

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1 Introduction

Many relative concepts are philosophically interesting: love, knowledge, perception, and thought. You might ask what concept of love we find in Plato, what concept of knowledge we find in Aristotle, what concepts of thought we find in the Stoics. In this chapter, I address a prior question: what are relative concepts according to ancient philosophers?

A concept is a mental item which is involved in thought. Items which relate things are usually called 'relations'. I call 'relatives' the things that relations relate, although some scholars use the term 'relata'. For example: four is double two. In this case, 'four' and 'two' name the relatives and 'double' names a relation between them. The thought 'four is double two', or 'a double is double of half', each involves a relative concept, the concept double.

We can now distinguish two questions about relative concepts. We could focus on mental items, like the concept double, and ask how philosophers analysed those mental items. Or we could wonder about the worldly items, the relatives, and ask how philosophers conceived of those worldly items that bear relations. We will see in this chapter that ancient philosophers often treat these two questions at once. How ancient philosophers analysed relatives influenced how they analysed relative concepts and vice versa.

Scholars have typically held that either: ancient thinkers had no clear concept of relatives; or conceived of relatives in a way that is a trivial

variation on Frege's treatment of relative concepts as doubly incomplete. In this chapter, I argue that, in fact, Plato, Aristotle, and the Stoics have a clear concept of relatives, distinct from incompleteness approaches. I call the ancient view 'constitutive relativity'. The core idea of constitutive relativity is that the relation it bears to an exclusive correlative constitutes a relative. Thus, love is what it is because it is love of a beloved and only of a beloved; knowledge is what it is because it is knowledge of what is knowable and only what is knowable; thought is what it is because it is thought of what is thinkable and only thinkable.

In Section 1, I discuss Plato's view in more detail. I show that in his examination of Agathon in the *Symposium*, Socrates understands relative concepts in general, and love in particular, on the constitutive model. Aristotle presents an official discussion of relative concepts, which has clear roots in Plato. In Section 2, I explain how Aristotle's concept of relatives in *Categories* 7 draws on Plato, but Aristotle addresses a worry that Plato did not: relative concepts might be vacuous. The Stoics focused on concepts as mental items and in Section 3, I show what Stoic relative concepts may have been. As with Plato and Aristotle, exclusivity plays a key role in Stoic relativity, and so a Stoic relative concept is the concept of a relative that relates exclusively to a correlative. Section 4 looks at a sceptical argument put forward by Sextus which raises a worry about any conception of relativity where relatives relate exclusively to their correlatives.

2   Plato

Russell astringently assesses Plato's conception of relatives:

> Plato is perpetually getting into trouble through not understanding relative terms. He thinks that if A is greater than B and less than C, that A is at once great and small, which seems to him a contradiction. Such troubles are among the infantile diseases of philosophy. (Russell 1946: 143)[1]

Russell is not alone. Many older scholars argue that Plato lacks a clear concept of relatives.[2] More recent scholars are more optimistic, but typically attribute to Plato a post-Fregean concept of relatives.[3] These scholars hold that Plato views relative concepts as incomplete. A relative concept, like 'larger', has, so to speak, two gaps. First, the concept applies to a

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[1] Cf. Russell 1946: 164.
[2] Hackforth 1955: 155; Cornford 1939, 78; Moravcsik 1962: 54 n.1; Cross and Woozley 1966: 156–57.
[3] For Frege's influential view that concepts are 'unsaturated', see Frege 1984b; Frege 1984a.

subject. The concept 'larger' applies to 'Hector', to give the judgement 'Hector is larger'. But 'Hector is larger' is not a complete thought: Hector is larger *than what*? A relative concept must take a *second* subject, say, 'Paris'. Thus, on this view, the concept larger is doubly unsaturated: the concept larger has two subject places. Filling both of these subject places forms a relative judgement, for example, that Hector is larger than Paris.

We can make this notion of a relative concept precise.[4] A relative concept is just a concept that corresponds to a predicate of the form '$R\alpha\beta$', that is, a predicate with two subject places, such as 'α is larger than β'.[5] An incomplete predicate has exactly one of the subject places filled with a name, for instance, 'α is larger than Paris'. Generalizing, one of those subject places may be filled with a variable bound to an existential quantifier, such as 'α is larger than someone'. Hence an incomplete predicate is a predicate of the form '$\exists y(R\alpha y)$' and a relative concept is a concept that corresponds to such a predicate.[6] Note that the incomplete predicate can be completed with the name of *any* item.

Often, ancient thinking about relativity focuses on things that relate, rather than predicates that have some semantic feature. The incompleteness reading, therefore, needs to specify a class of relative objects. If we define the incomplete predicates in the manner outlined above, then the class of relatives is the class of entities of which an incomplete predicate is true. The relatives are given by the following equivalence:

(Incompleteness) *a* is a relative iff '$\exists y(R\alpha y)$' is true of *a*.

Hector counts as a relative since '. . .is larger than Paris' is true of 'Hector'.[7]

We now have two readings of relative concepts in Plato on the table: (I) Plato misunderstands relative concepts; (II) Plato holds relative concepts to be doubly incomplete concepts. Before turning to Plato's texts, I want to outline a third view, which I have defended in detail elsewhere.[8] I call this the 'constitutive view'. Suppose you want to find out what the concept of a brother is. You might ask me: what is a brother? So asked, I may

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[4] Following Barnes 1988: 22–23.

[5] I use italic Greek letters as metavariables, indicating where a variable should feature in a schematic statement. Like some authors I also uses punctuation marks such as '. . .' or '()' Barnes 1988: 23.

[6] Cf. Mignucci 1988. Mignucci actually puts the point technically, using the concept-forming lambda-operator. Here I give an exposition of the incompleteness view without the logical technicalities, which draws on Barnes 1988.

[7] Owen 1957: 109; Barnes 1988: 22–23. Cf. Annas and Barnes 1985: 139–40. Baltzly 1997: 193–94 finds a similar view in Plato and Aristotle. Barnes 1988 takes the incompleteness view to be a commonplace in antiquity.

[8] Duncombe 2013; Duncombe 2015a; Duncombe 2020: ch. 1–4.

misinterpret the question. I might take you to be asking about my subjective concept of a brother. My subjective concept of a brother will depend on lots of contingent features about my life, for example, that brothers are younger, that brothers come in pairs, that brothers are brothers of brothers, not sisters, that brothers react to teasing with anger.[9] But generally if you're interested in the concept brother you are not interested in any of those features of my mental life or the features of my particular brothers.

To avoid that misinterpretation, you might ask a more specific question that invites a more abstract answer: what is a brother, just insofar as it is a brother? Asking this question focuses on the concept of a brother *as such*. You might call this the 'objective' concept of a brother. You want the most general concept of a brother, one which will include not only my brothers or yours, but which will include all and only brothers and, maybe, explain what brothers have in common. One answer is that a brother is simply a brother of something. So the objective concept of a brother is the concept of some thing that bears the '. . .is a brother of. . .' relation to something.

We need to say more about this account of relative concepts. 'Something' is a quantifier expression, but on this view we cannot replace the 'something' with some particular brother. The objective concept of a brother is not the concept of a brother of *Hector*; nor, indeed, is the objective concept of a brother the concept of a brother of a brother, rather than a sister. Given my life story, my subjective concept of a brother might be that a brother is brother of brothers. But the objective concept of a brother is the concept of a brother of some sibling. At least some brothers are brothers because they have a sister, so if the concept of a brother were the concept of a brother of *brothers*, those brothers that only have sisters would fall outside the concept. For the concept of a brother to cover all brothers, the concept cannot be so specific as to be the concept of a brother of brothers only. Nor indeed can the concept be so specific as to be the concept of a brother of sisters only. The objective concept of a brother is the concept of something with a generic correlative, a sibling.

Any relative concept has a generic correlative. The concept of a larger thing is the concept of a thing larger than a smaller thing; the concept of a larger thing is not the concept of a thing larger than a *small* thing, because at least some larger things are larger than medium-sized things. A relative concept is the concept of an item that bears its relation to a generic correlative. Thus, the relative concept will pick out all and only relatives

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[9] Dom and Pat: I'm sorry for everything.

of that sort. A relative is what it is relative to its proper correlative, and a relative relates exclusively to its correlative. We can summarize this with the principle of exclusivity:

(Exclusivity) A relative relates only to its proper correlative.

Notice that the incompleteness reading disobeys exclusivity. On the incompleteness view, a relative concept can be completed with any subject. The subject need not be the proper correlative. Thus, on the incompleteness reading, 'the larger thing is larger than something' could be completed with a subject like 'Paris'. But on the constitutive reading 'the larger thing is larger than something' cannot be completed with 'Paris' since the smaller thing and not Paris, is the proper correlative of the larger thing.

We are now in a position to turn to Plato's texts. Socrates' refutation of Agathon in the *Symposium* is a key text here.[10] The tragic poet Agathon has just argued that one should praise the god, Love, for his own features (195a2–3) and that Love is the beautiful (195a6–7; 197c2–3). Socrates questions whether Love is beautiful and undertakes to examine Agathon using the elenchus:

> **T1** Is Love such as to be a love of something or of nothing? I'm not asking if he is \<born\> of some mother or father, (for the question whether Love is love of mother or of father would really be ridiculous), but it's as if I'm asking about a father – whether a father is father of something or not (ἄρα 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 (ὑέος γε ἢ θυγατρὸς) that a father is the father. Wouldn't you?
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> 'Certainly', said Agathon.
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> 'Then the same goes for the mother?' He agreed to that also.
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> '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.
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> 'And he's of a brother or a sister, isn't he?' He agreed.
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> 'Now try to tell me about love', he said. 'Is Love the love of nothing or of something?'
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> 'Of something, surely!' (*Symposium* 199d1–199e8. Translation Nehamas and Woodruff).

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[10] The following paragraphs are adapted from my Duncombe 2020: section 2.2.1.

First of all, **T1** is evidence against those readers who hold that Plato has no concept of relatives. Socrates gives several examples of relatives: the father (relative to son or daughter), a mother (relative to son or daughter), and a brother (relative to brother or sister).[11] Moreover, Socrates identifies relatives as a class, namely those items that are 'of something', rather than 'of nothing'.[12] This adumbrates Aristotle's definition of relatives at *Categories* 7 (6a36) – on which see Section 2 – and also shows that relatives have something in common: each relative has a correlative.

Socrates isn't interested in Agathon's subjective concept of these relatives. In **T1**, Socrates explains that a father is a relative precisely because a father is father of something. A father isn't just of any old thing: a father is father of a son or daughter. But we could still wonder what 'a father' picks out. Does 'a father' pick out a token father, such as Priam? After all, Priam is indeed father of a son or daughter. Does 'a father' pick out some sort of father, such as a noble father? A noble father is also father of a son or daughter.

Socrates rejects both options. When he shifts to the example of a brother, Socrates gets Agathon to agree that a brother, 'just in so far as he is a brother, is brother of something' (199e2–4).[13] Socrates rules *out* thinking of some token brother, for example Hector, and rules *in* thinking of a brother as a generic type. Some token brothers may have a sister rather than a brother. But, as long as 'a brother is brother of brother or sister' is read *de dicto* rather than *de re*, the generic type brother is brother of a brother or sister (i.e., sibling). Similarly, Socrates rules out thinking of some specific sort of brother, say an older brother, because an older brother, as such, is not brother of a just a brother or sister. An older brother is brother of a *younger* brother or sister. For Socrates, a relative is the most generic type of a relative.

Socrates uses the expression 'just what it is' (*hoper estin*) to warn Agathon against taking 'a brother' as some token brother (e.g., Hector). Rather 'a brother' picks out brother in general, a brother as such. If we know that *x* is a brother as such, we know that *x* is a brother. But because we know that *x* is a brother, we also know that *x* has a brother or sister.

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[11] These relatives do also imply a non-relative property: a father is also male, for example. But not all the relatives in this passage imply a non-relative property, in particular, love.

[12] See also Allen 1966; Dover 1980: 133; Sandford 2010: 101; Meinwald 2016: 87.

[13] ἀδελφός, αὐτὸ τοῦθ' ὅπερ ἔστιν, ἔστι τινὸς ἀδελφὸς. Dover suggests rendering this as 'brother *qua* brother is brother of something' Dover 1980: 134. If '*qua*' picks out the object as such, Dover's gloss is right. For uses of ὅπερ ἔστιν to pick out an object as such, see *Symposium* 199e3; *Charmides* 167b11; *Parmenides* 139c1; *Philebus* 54a8–9. Cf. Shorey 1935: 393. In Aristotle, the language of 'just what it is' (ὅπερ ἔστιν) recurs in the context of relativity. See Section 2.

We know that the brother as such has a correlative. However, since *all* we know about *x* is that *x* is a brother we don't know who *x* is. So we don't know whether *x* has a male or female sibling. We know that has an exclusive and exhaustive correlative. A sibling as such is the only possible correlative. We have this, only this, information about the correlative of *x*, because all we know about *x* is that *x* is a brother. The qualifier 'just what it is' (*hoper estin*) is the mechanism by which Socrates ensures that Agathon considers only the proper correlative.

Back at the elenchus, Agathon has agreed that love is a relative, since love is love of something (199e5–200a1).[14] Socrates proceeds to argue that love is not beautiful (Symposium 200a2–201c7). This argument reiterates that relatives relate exclusively to their correlative. This is bad news for the incompleteness account of relative concepts. If relatives are incomplete, each relative need not relate exclusively to its correlative. However, Plato's Socrates assumes that relatives relate exclusively to their proper correlative. Here is a summary of Socrates' argument:

1. Love is desire for its object (200a2–3)   [Premise]
2. Beauty is the object of love (201a4–5. Cf. 197b3–5)   [Premise]
3. Love is desire for beauty (201a4)   [From 1,2]
4. For all x and for some y, if x desires y, x does not possess
   y (200a5–b1. cf. 186b5–7)   [Premise]
5. Love does not possess beauty (201b4)   [From 3,4]
6. For all x, x is F if x possesses F-ness   [Suppressed Premise]
7. So, love does not possess beauty   [From 5,6]
8. So, love is not beautiful (201b9–c7)   [From 6,7]

The argument can be construed as valid only if love relates exclusively to its correlative. If love relates non-exclusively to its correlative, then the argument would be vulnerable to the following counterexample. Suppose we argue that love is not *feminine* (an object to which love is sometimes directed and sometimes not, so a non-exclusive correlative of love) by a parallel argument:

1. Love is desire for its object   [Premise]
2. Femininity is the object of love   [Premise]
3. Love is desire for femininity   [From 1,2]
4. For all x and for some y, if x desires y, x does not
   possess y   [Premise]

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[14] See section 2.1.1.

5. Love does not possess femininity   [From 3,4]
6. For all x, x is F if x possesses F-ness   [Suppressed premise]
7. So, love does not possess femininity   [From 5,6]
8. So, love is not feminine   [From 6,7]

Since love does not only have femininity as its object, but sometimes the non-feminine, applying the same reasoning again shows that love cannot be non-feminine either. But love must be either feminine or non-feminine. So if the object of love is non-exclusive, we can generate a contradiction with Socrates' argument.[15] Thus, Socrates' argument works only if the object of love is exclusive. If the object of love is exclusive, then the argument is valid. Otherwise, the argument is invalid. Socrates' refutation needs exclusivity. Since love is a relative, this is good evidence that Plato's view of relativity includes exclusivity.

We can see how two features of constitutive relativity cooperate. The use of the 'just what it is' qualification when Socrates talks about relatives ensures exclusivity. When we understand a brother to be 'just what it is', we ignore all the other features that the brother has, except being a brother. A brother, so understood, is the brother of a sibling, but not of a sister or a brother. There is no fact of the matter whether a brother as such has a brother or a sister, although a brother as such does have a sibling. The 'just what it is' qualification ensures exclusivity.

We can now see where Russell's criticism goes wrong, but also where it is right. Russell is wrong that Plato lacks an understanding of relative concepts: a relative concept is the concept of something that relates exclusively to its proper correlative. But Russell is right that Plato would deny that the larger is larger than one thing and smaller than another. But that is because Plato understands 'the larger is larger than the smaller' *de dicto*, that is, as mentioning the generic larger and the generic smaller. Russell does not give an argument against this concept of relatives; but we will see in Section 4 that Sextus does. Before that, however, I will continue to trace the constitutive concept of relativity through Aristotle and the Stoics.

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[15] Tamer Nawar has pointed out to me that one way to explain the problem here would be an ambiguity in (3), which is a generic statement. Generic statements can introduce ambiguities because it is unclear how quantifiers work in these cases. The problem here is that (3) is ambiguous because generic. My suggestion, that for Plato relatives relate exclusively, gives Plato the tools to specify how to understand the premise.

3 Aristotle

Aristotle is more explicit than Plato about relative concepts, but the constitutive view features in his discussions too. Aristotle characterizes relatives this way:

> **T2** We call relatives (pros ti) all such things (*toiauta*) as are said to be just what they are (*auta haper estin*) of other things (*heterōn*) or in some other way in relation to something else.[16] For example, the larger is called just what it is than something else (it is called larger than something) (οἶον τὸ μεῖζον τοῦθ' ὅπερ ἐστὶν ἑτέρου λέγεται, τινὸς γὰρ μεῖζον λέγεται); and the double is called what it is of something else (τὸ διπλάσιον ἑτέρου λέγεται τοῦθ' ὅπερ ἐστίν) (it is called double of something). (*Categories* 7 6a36–b2. My translation following Ackrill)

We can formulate the account given in **T2** this way:

> (Relativity₁) x is a relative = $_{def}$ x is said to be what it is in relation to some y, and x is different from y.

Aristotle's concept of relatives resembles Socrates' in the refutation of Agathon. Indeed, I have argued elsewhere that *Categories* 7 adopts much of Plato's conception of relatives.[17] For now, I note the linguistic similarity between Aristotle's explicit statement of his concept of relatives and Plato's discussion in the *Symposium*.

In Plato, we saw that to ask about the concept of a brother as such, Socrates used the *touth' hoper estin* qualification to focus on our concept of a brother abstracted from the concept of any particular brother. In **T2**, Aristotle uses *haper estin* and *hoper estin*: singular and plural forms of the same expression that Plato used. In **T2**, Aristotle uses one expression to qualify 'relatives' and the other to qualify 'larger'. In fact, throughout the *Categories*, Aristotle only uses *touth' hoper esti*, or equivalents, to tell us to understand relatives as such (6a38, 6a39; 6b4).[18]

This is a reason to think that Aristotle, like Plato, is interested in a relative as the relative it is. When he gives the examples (larger and double) Aristotle is not interested in the concept of some particular double (say,

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[16] Aristotle adds this second clause because not all correlatives are expressed in the genitive: some are expressed in the dative or the accusative (e.g., *Categories* 7 6b19–27).

[17] Duncombe 2018.

[18] *Hoper estin* occurs only once outside *Categories* 7, at *Categories* 3b36. There, Aristotle says that substances '*touth' hoper estin* do not admit of a more or less. I take it that the point is that a primary substance, a particular human, is more substance than a secondary substance (the species human) but that neither is more or less just what it is (i.e., human).

four). The concept four is or includes the concept being double of two. But that is not the abstract concept of double that concerns Aristotle here. Rather, Aristotle is interested in the concept of a double, just insofar as it is a double. A double, just insofar as it is a double, is double of something, namely, half. (*Categories* 7 6b28–35). The qualification focuses on the objective concept of a relative, in this case, the relative double. The objective concept double is the concept of a number that is double some other number, where that other number is half of the double.

Like Plato, Aristotle holds that each relative has a correlative. Like Plato, when that relative is considered just as the relative that it is, the relative relates exclusively to its correlative. In *Categories* 7, after he has introduced the point that all relatives have a correlative with which they reciprocate, Aristotle says:

> **T3** Furthermore if that in relation to which a thing is spoken of is properly presented, then, when all the other coincidental things (*sumbebēkota*) are stripped away (*periairoumenōn*) and only that in relation to which it is properly presented remains, it is always spoken of in relation to that. For example, if the slave is said in relation to a master, when absolutely all the things which are coincidental to the master – such as being a biped, being capable of knowledge, being a human – are stripped away and being a master alone remains, the slave is always spoken of in relation to it. For the slave is said to be slave of a master. (*Categories* 7 7a31–b1)

This idea of 'stripping away' appeals to coincidental features in a way that assumes exclusivity. Although 'coincidental' may refer to non–substantial attributes (*Topics* 102b; *Metaphysics* B.5 1002a14, Z.6 1031a19; *Posterior Analytics* 1.6 74b5–12), 'coincidental' cannot refer to such attributes here. In **T3**, we strip away being a human. But being a human is a substantial feature. So, **T3** calls a substantial feature 'coincidental'. Moreover, master is a relative, but is not stripped away. Relatives are non-substantial features of a thing; since we strip away all the 'coincidental' things, a master is not a coincidental thing.[19] So, 'coincidental' here does not mean 'non-substantial'. But if we cannot determine what to strip away by appeal to the non–substantial, how do we know what to strip away?

Any answer must appeal to exclusivity. You might put the point this way: the slave is slave of a master as such, not slave of a master as a biped, as a human, or as a knower. Being a biped, human, or knower are

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[19] Aristotle elsewhere uses 'coincidental' in ways orthogonal to the substantial/non-substantial contrast. Maybe most similar to **T3** is *Physics* 2.3, 195a32–35, where Aristotle discusses coincidental causation. For a helpful recent discussion, see (Huismann 2016).

coincidental features when determining the proper correlative of a slave. But those features are coincidental because the slave is slave of *the master*, rather than of a biped, of a human, or of a knower. That is, because the slave is slave only relative to the master. Which just appeals to exclusivity.

So far, Aristotle concurs with Plato.[20] But Aristotle differs on the question of aliorelativity, that is, whether any relatives relate to themselves. Where Plato's Socrates wondered whether any relatives relate to themselves (*Charmides* 169a1–5), Aristotle defines relatives as aliorelatives in **T2**: no relative relates to itself because relatives are all such things as to be what they are of other things (ἑτέρων). This is puzzling because Aristotle gives similar as an example of a relative: 'the similar is said to be similar to something' (*to homoion tini homoion legetai*).[21] The relative, similar, is said to be just what it is relative to a correlative. Aristotle himself does not articulate the correlative of 'similar'. But we know from Aristotle's discussion of reciprocity that a relative reciprocates with its correlative (*Categories* 7 6b28–7b14). Given what Aristotle says, the correlative of similar should be the similar. If the relative and correlative are similar, not all relatives relate to something else. *Categories* 7 6b22 gives unequal as a relative, which presents the same problem. In the face of such obvious reflexive relatives, why does Aristotle assert that all relatives are aliorelative?

I think the answer is that reflexive relative concepts might be vacuous, and vacuity might result in a regress. According to Plato and Aristotle, to define a relative concept you say what the correlative is by saying that the relative relates exclusively to the correlative. You might think that the easiest way to do this is to mention the correlative using a periphrastic expression of the form 'whatever the relative is relative to'. For example, you might define 'knowledge' as 'knowledge is whatever knowledge is of' (Cf. *Metaphysics* Δ.15 1021a26–b2). Plato's Socrates appears to pursue this approach on a few occasions in *Republic* 4 438d–e. But this, Aristotle points out, begins a regress of definitions: the *definiendum*, 'knowledge', appears in the *definiens*, 'whatever knowledge is of'.

Aristotle draws out this regress of definitions in his discussion of the babbling fallacy in the *Sophistical Refutations*. At 173a32–b1, Aristotle describes how to induce the fallacy. If the opponent agrees that it makes

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[20] As noticed in antiquity: Simpl., *in Cat.* 159, 10–15.

[21] Aristotle gives 'similar' as a relative at *Categories* 7 6b22 *Metaphysics* Δ.15 1021a10; *Physics* 7.3 247a1. Cf. *Metaphysics* Δ.15 1021a9–1021a13 where Aristotle gives the equal, the similar and the same as 'numerical' relatives. In *Categories* 7 we don't find equal or same as relatives. However, we do find unequal (*Categories* 7 6b22), and equal is given as an example of a relative by Aristotle in *Metaphysics* Δ.15 1021a9; 1021b7. Cf. *Parmenides* 149e3–7.

no difference whether we use a term or its definition in a statement, then we can substitute the latter for the former in a way that can be iterated indefinitely. In Aristotle's example, 'double' is defined as 'double of half'. Substituting the 'double of half' for 'double' in the *definiens*, we arrive at 'double of half of half', which is obviously false. What is more, this substitution move can be reiterated indefinitely. This shows that the definition of term 'double' cannot contain the term 'double'. Likewise, on a conceptual level, our concept of double cannot simply be 'double is double of whatever double is of', since that concept is vacuous and will simply lead to a regress.

Adding the aliorelativity condition that relatives are said to be just what they are relative to something *else* blocks vacuous concepts of this sort. Double must be conceived of as double of some correlative, but that correlative cannot itself be picked out using the concept 'double', because to do so would violate the condition that all relatives relate to something else. Adding the aliorelativity condition, as Aristotle explicitly does, blocks us from picking out the correlative using the relative concept and so blocks this sort of regress.[22]

Plato and Aristotle so far agree on much in their concept of relatives. In particular, they agree that each relative relates exclusively to a correlative and that relation constitutes the relative. Aristotle adds aliorelativity to this picture to rule out vacuous relative concepts. But Plato and Aristotle do not emphasise the mental aspect of relative concepts, while, in the Stoics relative concepts as mental items comes to the forefront.

4   The Stoics

As with Plato and Aristotle, the Stoics conceive that a relative relates exclusively to its correlative. This feature of the concept of relatives follows Stoic views about concepts generally and relative concepts in particular.

Stoic concepts – and not just relative concepts – are generic items. As early as Zeno, Stoics distinguished between *conceptions*, mental acts of

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[22] Towards the end of *Categories* 7, Aristotle worries that relativity₁ might over-generate relatives and allow some substances to be relatives (8a13–28). To rule out this possibility, Aristotle introduces a second account, relativity₂ (8a31–2), which addresses over-generation. A great deal of the literature on Aristotle's concept of relativity focuses on the relationship between these two accounts. For example Ackrill 1963: 102; Mignucci 1986: 107–8; Morales 1994: 266; Bodéüs 2001: 129; Sedley 2002: 334; Hood 2004: 38; Rini 2010; Harari 2011: 535; Duncombe 2015b; Duncombe 2020: ch. 6. You might wonder whether the second account of relativity drops or weakens Aristotle's commitment to exclusivity. But I have argued elsewhere that Aristotle retains his commitment to exclusivity throughout *Categories* 7 and beyond Duncombe 2015b; Duncombe 2020: ch. 6.

conceiving, and *concepts*, mental items needed for or resulting from those acts.[23] Conceptions (*ennoia*) are thoughts, which are mental acts.[24] Some conceptions arise from our own cognitive acts, while others – 'preconceptions' – arise without our intervention. These thoughts are stored.[25] In a non-relative case, a conception of a human might be a general thought about humans: I conceive that a human is an animal. In a relative case, a conception would be a general thought about a larger thing: I conceive that a larger thing is larger than a smaller thing.

Concepts (*ennoēmata*) are the content of such thoughts (Sedley 1985: 89).[26] Scholars usually think that the content of concepts is propositional (Brittain 2005: 174), although some hold that the content of a concept is a predicate (M. Frede 1987: 154–56). If the content of a concept is propositional, my concept of human has the content 'a human is a rational animal': the content is complete. If the content of a concept is a predicate, my concept of human has the content '...is a rational animal': the content is incomplete. Resolving this dispute is beyond my scope here, but we will see that when it comes to Stoic relative concepts, the view that the content of a relative concept is propositional makes sense.

Whatever their content, Stoic concepts are generic. When I conceive that a human is an animal, my thought connects my concept of human to my concept of animal in a certain way. Similarly, when I conceive that a larger thing is larger than a smaller thing, my thought connects my concept of a larger thing with my concept of a smaller thing. Because concepts are the contents of general thoughts, concepts are themselves generic: concepts range over instances, but are not identical to any of their instances. This drives the common ancient comparison of Stoic concepts with Platonic Forms.[27] Generic concepts are indeterminate. The generic man is an animal, but there is no fact of the matter about whether the generic man is Greek: it is not true to say that the generic man is Greek, but nor is it

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[23] Sedley 1985: 88–89. Some hold that the 'concepts' talk ran its course in Stoicism with Zeno (Caston 1999: 184), but most scholars talk as if concepts form a key part of Stoic cognitive and semantic theory at least until Chrysippus (Brittain 2005: 166). Perhaps Galen *Plac. Hipp. et Plat.* 5.3.1 = *SVF* 2.841, part = LS 53V gives reason to think that Chrysippus appealed to conceptions, as Galen reports Chrysippus as holding that reason is an assembly of conceptions and preconceptions. For further discussion, see Mansfeld 2003b: 117.

[24] Plutarch, *On Common Conceptions* 1084F–1085A = *SVF* 2.847 (part.) = LS 39F

[25] Aëtius 4.11, 1–4 = *SVF* 2.83 = LS 39E; Plut., *Comm. not.* 1084F = *SVF* 2.847.

[26] This claim raises the question of the ontological status of concepts, on which see Caston 1999: 165–71.

[27] Aëtius 1.10.5 = *SVF* 1.65 = LS 30B; Stobaeus 1.136, 21–137, 6 = *SVF* 1.65 = LS 30A. This comparison may have been made by Cleanthes (Syrianus, *in Metaph.* 105.28–9) Sedley 2005: 119, n. 8.

false to say so.[28] Relative concepts have similarly generic correlatives. The concept parent correlates to the concept offspring. But this offspring is generic. It is not true to say that the generic offspring is a son, but nor is it false to say so. Likewise, it is not true to say that the generic offspring is a daughter, but nor is it false to say so. So the concept offspring is not the concept of a son or daughter. In this respect, Stoic relative concepts are like Plato's and Aristotle's concept of a relative that relates to a generic correlative.

As well as their relation to thoughts, Stoic concepts have another key relation: to objects. A Stoic concept has an extension and an object in the extension instantiates a concept. Objects 'fall under' (*hupopiptein*) or 'participate' (*metekhein*) in concepts.[29] Concepts are 'participate-able' (*methekta*) because objects participate in concepts.[30] 'Participation' just picks out whatever relation holds between concepts and their instances.[31] Why do certain objects fall under one concept, rather than another? Simplicius tells us that:

> **T4** The Stoics say that what is common to the quality which pertains to bodies is to be that which differentiates substance, not separable per se, but delimited by a concept and a peculiarity, and not specified by is duration or strength but by the intrinsic 'suchness' in accordance with which a qualified thing is generated. (Simpl., *in Cat.* 222 30-3 = LS 28H. Translation LS)

Each *F* thing has its own peculiarity (*idiotēs*) and falls into a concept (*eis ennoēma*) by its own suchness (*toioutēti*) from itself (*ex hautēs*).[32] Each of honey and sugar falls under the same concept, sweet, each because of its own peculiar features. Honey is sweet because of the presence of fructose. Sugar is sweet because of the presence of sucrose. But each falls under the concept sweet because of its own peculiarity. So Stoic concepts are generic and have instances. But what is the evidence for Stoic relative concepts?

The Stoics had a complex analysis of relativity, distinguishing two sorts of relative: the relatively disposed things, such as a father, and the differentiated relatives, such as sweet and bitter.[33] The Stoic distinction involved

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[28] This point is discussed in detail in Caston 1998: 187–92.
[29] Stobeus 1.136, 21-137, 6 = *SVF* 1.65 = LS 30A.
[30] Simpl., *in Cat.* 209, 10–14; cf. 214, 24–7, cited in Caston 1999: 183.
[31] 'Participation' talk does not mean that the Stoics are Platonists, see Caston 1999: 183.
[32] Discussed in Caston 1999: 184–85; Nawar 2017. Because this source refers to 'concepts', there is a *prima face* case for taking it to record a position held at least by early Stoics.
[33] Simpl., *in Cat.* 165, 32; Simpl., *in Cat.* 166, 20–30. Precisely how to understand this distinction is controversial. For a more full discussion, see (Duncombe 2020: ch. 9).

relative concepts.[34] Sextus reports a distinction between relatively disposed items and differentiated items. Although attributed to 'the Sceptics', Sextus relies on Stoic material because conceptions are used to distinguish the relatively disposed and the differentiated. Relative concepts cognitively depend on some correlative concept:

> (**T5**) Relatives are the things conceived according to their disposition relative to something else (*hōs pros heteron skesin nooumena*) and not grasped absolutely, that is on their own, for example paler and darker and sweeter and bitterer and anything if it is of this form. For pale or dark or bitter are thought of individually, not in the same way as paler or darker. (*M.* 8 162.3–162.5)

Relatives are conceived of as relating to something else. But what is it to conceive of something as relating to something else? Here is one answer. If S thinks of some item, *x*, as paler, S thinks of some item, *y*, than which *x* is paler. If S thinks of a snowball as paler, S must think of something than which the snowball is paler. There are two difficulties with this answer. First, it over-generates relatives. Almost anything can be thought of as somehow relative to something else. Second, it seems false. To think of something, *x*, as paler, S need not think of some specific thing than which *x* is paler. Granted, S might have to think *that x* is paler than something, but S need not think of any given thing *as* darker than *x*.

Another way would be to read **T4** as discussing relative concepts. A relative concept cannot be grasped 'absolutely', that is, cannot be grasped without grasping another concept. Sweet and bitter can each be conceived of without the other, but sweeter and bitterer cannot, because to think of something as sweeter, we must think of it as sweeter than something bitterer. This gives a modal analysis of relative concepts: relative concepts are those that cannot be grasped without grasping some other concept.

This condition is necessary but not sufficient. I cannot adequately grasp the concept of a human without grasping the concept of an animal. But the concept human is not a relative concept, because a human is not a relative item. Sextus goes on to refine the account to deal with such counterexamples:

> **T6** But in order that we conceive of one of them, it is necessary to apprehend also that thing than which it is paler or that thing than which it is darker. (*M.* 8 162.7–9)

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[34] '[The Stoics say that] just as there is one concept of what is *per se* and another of what is differentiated, so some things are relative and others relatively disposed' (Simpl., *in Cat.* 166, 1–2).

To conceive of something as paler, I also need to conceive of a thing *than which* the paler is paler. So, I need the concept of the correlative of the paler. The concept of a relative is such that to grasp it, one must grasp, not *some* other concept, but *the* concept of the correlative. This approach gives us the granularity to block the counterexample. To grasp the concept human, I must grasp some other concepts, but I need not grasp the concept of the correlative, because human *has* no correlative.[35]

This move relies on a distinction that the Stoics drew: the distinction between an act of conceiving and the concepts that result from, or are needed for, that act.[36] To conceive of something as pale, I need the concept pale, but not any other concepts. To conceive of something as paler, I need the concept paler, but also the concept darker because to conceive of something as paler is just to conceive of that thing as paler than some darker thing. It would be false to claim that, if S conceives of some *x* as paler than some *y*, S does not also conceive that *y* is darker than *x*. So if S conceives of something as paler, S conceives of something as darker.

Moreover, if S conceives of something as paler, then S must have the concept paler. Certain acts of conceiving correspond to certain concepts: acts of conceiving as relative correspond to relative concepts. Sextus relies on the Stoic distinction between conceptions and concepts, which indicates that the Stoics also could have connected relatives to concepts in that manner. The Stoics accept relational situations such as Phaedo being taller than Simmias who is taller than Socrates. But the Stoics would say that Phaedo and Simmias both fall under the concept of a taller thing.[37]

There is direct evidence that the Stoics delineated relative concepts in the way described by Sextus in **T4**. Simplicius reports that the Stoics distinguished relatively disposed items from differentiated items. Like Sextus' report of the Sceptics' view, this is not the standard contrast between relative and absolute items.[38] The Stoics used the technical terms 'relatively disposed' (πρός τί πως ἔχοντα) and 'differentiated' (κατὰ διαφοράν) to draw exactly the same contrast as Sextus.[39] The sources even share 'sweet' and 'bitter' as examples of the differentiated items.[40]

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[35] Barnes 1988: 22–23 explicates this move in linguistic terms, where relative concepts correspond to two-place and potentially incomplete predicates. This linguistic analysis seems unwarranted because Sextus' discussion remains in the cognitive domain.

[36] Sextus does not seem to commit himself on whether acts of conceiving are temporally prior to concepts or vice versa.

[37] I'm grateful to Tamer Nawar for pressing me to clarify my arguments here.

[38] In fact, the Stoics contrasted the relatively disposed/differentiated contrast with the relative/absolute contrast (Simpl., *in Cat.* 165, 31–166, 15).

[39] Simpl., *in Cat.* 165, 33–5. Cf. *M.* 8 162.3– 162.5.   [40] Simpl., *in Cat.* 165, 35; 166, 10.

Furthermore, both Sextus and the Stoics distinguish relatively disposed from differentiated *items* on the basis of our *conceptions* of those items.[41] In both cases, our thinking taxonomizes items in the world. Sextus' distinction either is, or closely resembles, the Stoic distinction.[42]

Plato and Aristotle conceive of relatives in such a way that each relative relates exclusively to a generic correlative. The Stoic view of relative concepts has an equivalent commitment. First, the Stoic theory recognized relative entities. A relative, R, has a correlative, R^*. In some cases, the correlative will be a contrary: the larger thing correlates to the smaller thing and the larger thing is contrary to the smaller thing. In other cases, the correlative need not be a contrary concept: the parent is relative to the offspring, but a parent is not contrary to offspring. A parent is a relative entity because it is conceived in relation to something else. Like any concept, to grasp a relative concept, that relative concept must feature in a conception. Unlike non-relative concepts, a relative concept must feature along with the concept of its correlative. Just as the concept human features in the conception that human is a rational animal, so too the concept larger features in the conception that the larger relates to the smaller. Indeed, if the conception involves the larger it must involve the smaller. Similarly, to grasp the concept smaller, I need the conception the smaller relates to the larger.

Notice that the latter conception must involve the relative concepts and involve them in the right way. If I conceive that the larger is the same size as the smaller, then I have not really grasped the concept larger, not least because I do not have a proper conception involving the larger. To get a proper conception, the conception must relate the concepts correctly. The conception must be this: the larger is larger than the smaller. Thus, the concept larger is the concept of a thing that is larger than a smaller. Likewise, the concept smaller is the concept of something smaller than a larger. So relative concepts feature correctly in certain conceptions, conceptions of the form 'an R is R in relation to an R^*'. The concept larger, then, is the concept of a larger that is larger than a smaller.

To fully spell out the concept larger, we should say something about the corresponding smaller. One thing we could say is that the concept larger the concept of a thing that is larger than some *specific* smaller thing. For example, the concept larger is the concept of a thing larger than a one-cubit stick. Thus, a house will fall under the concept larger, since it is larger

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[41] Simp., *in Cat.* 166,1–3. Cf. *M.* 8 161.4–162.2.
[42] The above paragraphs appear, modified, in my (Duncombe 2020).

than a one-cubit stick, but a mouse will not fall under the concept larger. Call this the specific understanding of relative concepts.

Stoic relative concepts are not specific relative concepts. One of the key roles that concepts play for the Stoics is a unifying role. The concept *F* tells us what all *F* things have in common. So the concept larger ought to tell us what all the larger things have in common. But not all the larger things are larger than some specific thing: not all the larger things are larger than a one-cubit stick.

A relative concept, such as the concept larger, is the concept of a thing larger than a smaller thing. The concept larger is the concept of a thing larger than a smaller thing, not the concept of a thing larger than a one-cubit stick, or some other arbitrary small thing. We saw above that there is no fact of the matter about whether the concept man is Greek or not. In the same way, there is no fact of the matter about whether the concept larger is larger than a one-cubit stick or not. Rather the concept larger is the concept of a thing larger than a smaller thing *in general*. These generic 'smaller things' are strange items. For example, there is no fact of the matter about whether the smaller is one-cubit or not. But this is what the generic concept larger gives us.

As with Plato and Aristotle, the idea that the correlative is generic goes hand in hand with the idea that the relative relates exclusively to the correlative. If the concept of a larger thing is the concept of a thing larger than a generic smaller thing, there can be no other possible correlative for the larger thing. After all, what would the alternative correlative be? It cannot be any of the items that fall under the concept of a smaller thing – a one-cubit stick, a mouse – because the generic smaller is not any of these things. Nor could the alternative correlative be the concept of a generic middle-sized thing, since the concept of a larger thing is not the concept of a thing larger than a middle-sized thing: the concept larger is the concept of a thing larger than a smaller thing. So a relative concept is the concept of a thing relative only to its generic correlative.

Plato, Aristotle, and the Stoics share some key commitments about relative concepts, especially that a relative concept is the concept of a thing that relates only to its generic correlative. In the next section we will see that Sextus gets to the heart of what is wrong with this conception of relatives.

5   Sextus against Relative Concepts

Like Russell, Sextus finds the exclusive conception of relatives implausible. Unlike Russell, Sextus argues against it in detail. Sextus' argument against

exclusive relative concepts is based on a metaphysical premise that no object, whether a being or a something, can have incompatible attributes.[43] Such an argument would work against the Stoics, but also a wider range of targets – in fact, against anyone who holds that nothing can have incompatible attributes, including against Plato and Aristotle. True to form, Sextus iterates several similar arguments for his conclusion. Here is the first:

> **T7** If the relative subsists (*huparkhei*), and obtains not simply in the mind, one thing will be opposites. But it is absurd to say that one thing is opposites: therefore the relative does not subsist, but is in conception only. For again, the one-cubit body is said to be larger juxtaposed with the half-cubit, but smaller juxtaposed with the two-cubit. For perhaps it would be possible to conceive the feature according to a relation to something else, but it is not possible for it to be and to obtain. So the relatives don't subsist. (*M.* 8 459)

There are relative concepts, such as larger and smaller, and that items in the world can be conceived in accordance with them – some stick can be *conceived* as larger and smaller.[44] But, Sextus argues, such relative concepts cannot be instantiated. Sextus core argument is a *modus tollens*:

1. If any relative concept is instantiated, then that instance is opposites;
2. But nothing is opposites;
3. So, no relative concept is instantiated.

The argument is valid and premise 2 seems uncontroversial. So Sextus must show that premise 1 is true. Unfortunately, his argument for premise 1 seems terrible. Sextus offers a particular instance of a relative concept, which he hopes to generalize to the universal claim. But even Sextus' argument for the basic case seems to fail:

1. A one-cubit body is larger than a half-cubit body   [Premise]
2. A one-cubit body is smaller than a two-cubit body   [Premise]
3. So a one-cubit body is larger and smaller   [From 1,2]
4. But larger and smaller are incompatible attributes   [Premise]
5. So a one-cubit body has incompatible attributes.   [From 3,4]

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[43] The Stoics would accept that somethings cannot have incompatible attributes. None of the examples of Stoic 'somethings' (τινα) have incompatible attributes. Seneca (*Ep.* 58.13-15 = *SVF* 2.332, part = LS 27A) gives centaurs and giants as examples; Sextus (*M.* 10 218=*SVF* 2.331, part = LS 27D) gives the sayables, void, place and time. Simplicius (*in Cat.* 105, 8–16 = *SVF* 2.278.part = LS 30E) records the famous 'not-someone' argument. The argument aims to show that the generic man is not something precisely because if the generic man were something he would have incompatible attributes.

[44] The Stoics would agree: for the Stoics, items in the world can be conceived of in a certain way, and that concepts are used in such conceptions.

This argument is invalid. The one-cubit body is larger and smaller, but these are only incompatible attributes if the one-cubit body is larger and smaller than *the same thing*. And in this case, the one-cubit body is larger and smaller than different things. So the one-cubit body does not have incompatible attributes.

There is confusion here, but it is unlikely to be Sextus'. Sextus often points out that one thing can have different relations to different things, but nowhere infers that that thing has incompatible attributes.[45] So it is puzzling why Sextus invalidly infers (3) from (1) and (2).

This puzzle disappears if Sextus targets the view of relative concepts we detected in Plato, Aristotle, and the Stoics. We saw above that the Stoic theory of relative concepts entails that a relative concept is the concept of a relative that relates *exclusively* to its generic correlative. The concept larger is the concept of a thing that is larger *only* than the smaller. Without this generic and exclusive correlative, a relative concept cannot do the work it needs to: it cannot be sufficiently general to feature in true conceptions. Thus, an instance of the relative concept, larger, will relate exclusively to the generic object, the smaller.

What is more, the concepts larger and smaller correlate with each other. Since an instance of the concept smaller relates exclusively to the generic larger, an instance of the concept larger will also be the generic larger. The concept larger is the concept of a thing larger than some smaller thing, while the concept smaller is the concept of a thing smaller than some larger thing. Both are taken as generic. The concept larger is the concept of a larger thing, not any specific larger thing; the concept smaller is the concept of a smaller thing, not any specific smaller thing. And, of course, nothing can be both a generic larger and a generic smaller. So there cannot be an instance of the concept larger or the concept smaller.

We are now in a position to reconstruct Sextus' argument in detail:

1. If something instantiates the concept *larger*, it is larger than only the generic smaller.
2. If something instantiates the concept *smaller*, it is smaller than only the generic larger.
3. Suppose *m* instantiates the concept larger and the concept smaller.
4. *m* is larger than only the generic smaller   [From 1–3]
5. *m* is smaller than only the generic larger   [From 1–3]
6. So *m* = the generic larger and *m* = the generic smaller   [From 4, 5]
7. But nothing is both the generic larger and the generic smaller.

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[45] For example: *PH.* 1.38; *PH.* 1.39; *PH.* 1.103; *PH.* 1.132; *PH.* 1.135–9.

Sextus' point is not that instances of relative concepts have incompatible attributes at all; rather his point is that an instance of the concept larger turns out to also be identical to an instance of the concept smaller. This is why Sextus says that 'one thing will be opposites'.

We are now better placed to understand Sextus' reasons for premise 1. Suppose that a one-cubit body instantiates the concept *larger*. The one-cubit body, conceived of as larger, is larger than something smaller – not some specific smaller thing, but the generic smaller. In a precisely analogous way, the concept smaller is the concept of something smaller than some larger thing. Taken as an instance of the concept *smaller*, the smaller is smaller than something larger – not some specific larger, but the larger understood as such. Instantiated, the one-cubit body, conceived of as smaller, is conceived of as smaller than the larger.

Now, we can make sense of conceiving of the one-cubit stick as larger. We conceive of the one-cubit stick as larger than the generic smaller. We can also make sense of conceiving of the one-cubit stick as smaller. We conceive of the one-cubit stick as smaller than the generic larger. Sextus allows for this when he says 'for perhaps it would be possible to conceive the feature according to a relation to something else'. But, while we can *conceive* of the one-cubit body as a larger and a smaller, the one-cubit body cannot instantiate both concepts. To instantiate the concept *larger*, the one-cubit body would have to be larger than the generic smaller, hence the one-cubit body would be a generic larger. To instantiate *smaller*, the one-cubit body would have to be smaller than the generic larger, hence the one-cubit body would be the generic smaller. But then the one-cubit body is the generic larger and the generic smaller. But nothing can be both of those. Hence, if it instantiates *larger* and *smaller*, the one-cubit body is opposites, which, although relational, genuinely conflict. This does not show that no relative concept *at all* can be instantiated. The argument shows that no relative concept *with a contrary correlative* can be instantiated. But that is still a large and important class of relative concepts that cannot be instantiated.

6   Conclusion

This chapter has surveyed ancient thinking about relative concepts. I have not attempted to be comprehensive: there is a great variety of approaches to relatives in antiquity and almost as many ways as deploying relatives as there are thinkers. Instead, I have followed one tread of ancient thinking about relativity, which binds ancient thinkers together and separates them from us: relatives are conceived of as relating to generic, exclusive correlatives.

Despite the pessimism of some scholars, ancient thinkers did have an understanding of relative concepts. Despite the optimism of other scholars, ancient thinking about relative concepts did not anticipate Frege's view that relative concepts are incomplete concepts. Instead, I argued that Plato, Aristotle, and the Stoics share some common ideas about relative concepts, in particular that the correlative concept is the concept of something generic and related exclusively to the relative. I concluded by looking at Sextus' sceptical argument against any such view of relative concepts. Sextus is clear about what is wrong with such a view of relative concepts, namely, that if a relative concept has a generic, exclusive correlative, then that relative concept cannot be instantiated. So some pessimism is justified. That one strand of ancient thinking about relative concepts seems unsustainable.