Companions to ancient thought 1

Epistemology

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Knowledge and belief in *Republic* V–VII

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The *Meno* tells us that knowledge is true belief bound by an *aitias logismos*, an explanatory account (98a); the *Phaedo* tells us that all *aitiai* refer to Forms (96 ff.). It follows that knowledge of Forms is necessary for any knowledge at all. But although the *Meno* explains what knowledge is, it does not connect this account to Forms; and although the *Phaedo* tells us quite a lot about the metaphysics of Forms, it does not tell us much about their epistemological role. We must wait until the middle books of the *Republic* (V–VII) for the details of how Forms figure in knowledge. Here there are two crucial stretches of text: first, a difficult argument at the end of *Republic* V; and, second, the famous images of the Sun, Line and Cave in Books VI and VII. Both passages are often thought to show that Plato subscribes to the Two Worlds Theory (TW), according to which there is no knowledge of sensibles, but only of Forms,[1] and no belief about Forms but only about sensibles.[2]

If Plato is committed to TW, there are, arguably, some consequences of note. First, the objects of knowledge and belief are then disjoint; one cannot move from belief to knowledge about some single thing. I cannot first believe that the sun is shining, and then come to know that it is. Second, Plato then radically rejects the *Meno*'s account of knowledge, according to which true beliefs become knowledge when they are adequately bound to an explana-

1 A detailed account of what Forms are is not possible here. But, briefly, I take Forms to be non-sensible properties, properties not definable in observational or perceptual terms – the property, e.g., of beauty, as opposed both to particular beautiful objects (such as the Parthenon) and to observable properties of beauty (such as circular shape or bright colour). For some discussion, see my [115] and [116].

2 It is sometimes thought to follow from TW that Plato restricts knowledge to necessary truths; for, it is thought, all truths about Forms are necessary truths. See, e.g., Vlastos [86], 16. If, as I shall argue, Plato allows knowledge of sensibles, then (on the reasonable assumption that some of the knowable truths about them are contingent) he does not restrict knowledge to necessary truths.

tory account. For the *Meno*, knowledge implies true belief; on TW, knowledge excludes true belief.[3]

Third, Plato is then quite sceptical about the limits of knowledge; although at least philosophers can know Forms, no one can know items in the sensible world. No one can know, for example, what actions are just or good; no one can know even such mundane facts as that they're now seeing a tomato, or sitting at a table.

Fourth, this sceptical result would be quite surprising in the context of the *Republic*, which aims to persuade us that philosophers should rule, since only they have knowledge, and knowledge is necessary for good ruling. If their knowledge is only of Forms – if, like the rest of us, they only have belief about the sensible world – it is unclear why they are specially fitted to rule in this world. They don't know, any more than the rest of us do, which laws to enact.

Fifth, the text of the *Republic* seems to contradict TW. At 506c, Plato says that he has beliefs about, but no knowledge of, the Form of the good; and at 520c he says that the philosopher who returns to the cave will know the things there, i.e. sensibles.[4] Contrary to TW, then, one can have beliefs about Forms, and know sensibles.

I shall argue that we can avoid these unattractive consequences. For *Republic* V–VII is not committed to TW. (If I had more space, I would argue that Plato is never committed to TW: the *Republic* is no anomaly.)

Plato does, to be sure, in *some* way correlate knowledge with Forms, and belief with sensibles – but not in a way that involves TW. He argues only that all knowledge requires (not that it is restricted to) knowledge of Forms; and that, restricted to sensibles, one can at most achieve belief. This, however, leaves open the possibility that, once one knows Forms, one can apply this knowledge to sensibles so as to know them too; the philosopher's knowledge of Forms, for instance, helps him to know (although it is not, all by itself, sufficient for knowing) which laws ought to be enacted.

In addition to arguing against TW, I shall also, in looking at *Republic* VI–VII, argue that Plato is a coherentist, rather than a foundationalist, about justification. That is, he believes that all beliefs, to be known, must be justified in terms of other beliefs; no beliefs are self-evident or self-justified. I shall also suggest that knowledge, for Plato, is always essentially articulate;

3 This consequence of TW is clearly noted by Armstrong [394], 137f. Unlike me, however, he believes the *Republic* endorses TW.

4 Plato says that the philosopher 'will know each of the images, what they are and of what'; his use of *gnōsesthe* plus the *hatta* clause suggests he means 'know' and not merely 'recognise'. Plato arguably explicitly admits knowledge of sensibles elsewhere too. See, e.g., *Meno* 71b; 97a9–b7; *Theaetetus* 201a–c.

knowledge does not consist in any special sort of vision or acquaintance, but in one's ability to explain what one knows.

Republic V[5]

The difficult argument at the end of *Republic* V is Plato's lengthiest, most sustained, systematic account in the middle dialogues of how knowledge differs from belief. It is offered in defence of the 'greatest wave of paradox' of the *Republic*: that, in the ideally just *polis*, philosophers – those who know Forms – must rule (472a1–7, 473c6–e5). Plato advances this striking claim because he believes that the best rulers must know what is good; but one can know what is good only if one knows the Form of the good; and only philosophers can achieve such knowledge. He is well aware that his claim will not meet with general favour. In order to defend it, he offers a long and tangled argument, designed gently to persuade the 'sightlovers' – people who rely on their senses and do not acknowledge Forms.

This provides us with an important constraint governing an adequate interpretation of the argument. The argument occurs in a particular dialectical context, designed to persuade the sightlovers. If it is to be genuinely dialectical, then, as Plato explains in the *Meno* (75d), it should only use claims that are (believed to be) true, and that the interlocutor accepts; this is Plato's *dialectical requirement* (DR). Plato's opening premises should not, then, appeal to Forms; nor, indeed, should he begin with any claims the sightlovers would readily dispute, or that they're unfamiliar with. His conclusions may of course be controversial, but the opening premises should not be.

The opening premises, however, are difficult to interpret. The crucial ones are these[6]:

(1) Knowledge is set over what is (*epi tō(i) onti*) (477a9–10).
(2) Belief is set over what is and is not.

Esti (like 'is' in English) can be used in a variety of ways: existentially (is-e), predicatively (is-p), and veridically (is-v). (It can be used in yet further ways too – for example, for identity – but such further uses are not relevant here.) Hence (1) might mean any of (1a–c):

(1a) Knowledge is set over what exists.
(1b) Knowledge is set over what is *F* (for some predicate '*F*' to be determined by context).
(1c) Knowledge is set over what is true.

5 I discuss this argument in more detail in [145]. Here I offer a brief summary of the main points. The present account occasionally differs from, and so supersedes, my earlier account.

6 Plato also discusses *agnoia*, ignorance, correlating it with what is not (477a9–10). For some discussion, see my [145].

Premise (2), correspondingly, might mean any of (2a–c):

(2a) Belief is set over what exists and does not exist.

(2b) Belief is set over what is *F* and not-*F*.

(2c) Belief is set over what is true and not true.

On the (a) and (b) readings, (1) and (2) specify the *objects* of knowledge and belief. On the (a) reading, one can only know what exists (there is no knowledge of, for instance, Santa Claus); and one can only have beliefs about objects that exist and don't exist (that is, on the usual interpretation, about objects that somehow 'half-exist').[7]

On the (b) reading, (1) claims that one can only know objects that are *F*; and (2) claims that one can only have beliefs about objects that are *F* and not-*F*. (That is, on the usual interpretation, every object of belief is itself both *F* and not-*F* – both beautiful and ugly, e.g., or just and unjust.)[8]

On the (c) reading, by contrast, (1) and (2) specify the propositions that are the *contents* of knowledge and belief. One can only know true propositions; one can believe both true and false propositions. Knowledge, but not belief, entails truth.

The (a) and (b) readings of (1) and (2) seem to violate DR. For both of them sharply separate the objects of knowledge and belief. But why should the sightlovers agree to this at the outset of the argument? Plato may end up concluding that the objects of knowledge and belief are disjoint; but it would violate DR to assume so at the outset.

7 (1a) can be interpreted in more than one way. It might mean that (i) I can only know *x* when *x* exists; or (ii) I can only know *x* if *x* at some point exists; or (iii) I can only know *x* if *x* always exists. My own view is that of (i–iii). Plato at most believes (ii); but whatever his beliefs about (1a), I do not think he intends to assert any version of (1a) at this stage of the argument. (2a) is ambiguous between (i) Every object of belief both exists and doesn't exist, i.e., half-exists; and (ii) The set of objects about which one can have beliefs includes some that exist and others that don't (e.g. Santa Claus) (and perhaps some that both exist and don't exist, or that half-exist). Since (i) is the usual is-e reading, I restrict myself to it. For a defence of an is-e reading, see, e.g., Cross and Woozley [140]. For criticism of an is-e reading, see my [145]; Vlastos [152]; Annas [139], 196–7; Kahn [151].

8 (2b) is ambiguous between (i) belief is about objects, each of which is *F* and not-*F*; and (ii) belief is about objects, some of which are *F* and others of which are not-*F* (and perhaps some of which are both). Since (i) is the usual interpretation, I shall not try to see how the argument goes if we assume (ii) instead. A predicative reading is favoured by Vlastos [152]; and by Annas [139], ch. 8. Annas correctly points out that even if Plato restricts knowledge to what is *F*, and precludes knowledge of anything that is *F* and not-*F*, TW does not follow; we could still know, e.g., that this is a table, or that Socrates is a man, even if we could not know that returning what one owes is sometimes just, sometimes unjust. (Vlastos, by contrast, conjoins is-p with a defence of TW.) On the account I shall provide we can know things that are *F* and not-*F*.

The (a) reading violates DR in further ways too. To be sure, if, for example, one takes knowledge to involve some sort of acquaintance, (1a) might seem plausible: I cannot know, in the sense of be acquainted with, Santa Claus, or even with Socrates, given that he is now dead. But it is unclear why we should assume at the outset that knowledge consists in or requires acquaintance with what is known. Moreover, (2b) introduces the difficult notion of 'half-existence'. But why should the sightlovers agree at the outset that every object of belief only half-exists?

The (b) reading also violates DR in ways peculiar to it. For it claims that one can only know what is *F*; one cannot know what is *F* and not-*F*. But it is unclear how this could be a non-controversial starting premise. Why can I not know that this pencil, say, is both equal (to other things of the same length) and unequal (to everything of any different length)? There seems no intuitive reason to suppose that Plato begins by denying the possibility of knowing that something is both *F* and not-*F*. Of course, he may end up concluding this (although I shall argue that in fact he does not); but our present task is to find suitably non-controversial *starting* premises.

Premise (1c), by contrast, satisfies DR. For it says only that knowledge entails truth, a standard condition on knowledge the sightlovers can be expected to accept, and one Plato himself has clearly articulated before (*Meno* 98a; *Gorg.* 454d6–7).

There are, however, at least two possible veridical readings of (2c):[9]

(2ci) Every proposition that can be believed is both true and false.

(2cii) The set of propositions that can be believed includes some truths and some falsehoods.

Premise (2ci) is controversial, since it introduces the difficult notion of a single proposition's being both true and false. We might be able to make sense of this notion: perhaps, for example, the claim is that all believed propositions are complex, and part of what each says is true, part false. But why should the sightlovers agree that all beliefs are partly true, partly false? If we can find a more intuitively acceptable reading of the opening premises, it should be preferred.[10]

Premise (2cii) is such a reading. In contrast to (2ci), it does not say that each token proposition that can be believed is both true and false, but only

9 (2ci) is endorsed by Gosling, in [147]. I endorse (2cii) in [145] and here.

10 Notice, though, that (2ci) does not support TW; for there is no reason in principle why I cannot believe a proposition that is both true and false (however we ultimately explain that notion) about a Form, or know a true proposition about sensibles. On (2ci), the *propositions* one can believe and the propositions one can know constitute disjoint classes; but they could be about the same *objects*, and so TW would not yet be in the offing.

that the set of propositions that can be believed contains both true and false beliefs. Belief entails neither truth nor falsity; there are both true and false beliefs. We cannot infer from the fact that *p* is believed that *p* is true, or that it is false, although we can infer from the fact that *p* is known that *p* is true.

If we read (1) as (1c), and (2) as (2cii), then all we have been told so far is that knowledge but not belief is truth-entailing. This of course leaves open the possibility (although it does not require) that there is knowledge and belief about the same objects (including sensibles), indeed of the same propositions. The readings of the opening premises that best satisfy DR are thus also the least congenial to TW. Of course, later premises might tell in favour of TW; we shall need to see. The point for now is only that at least (1–2) (if read as (1c) and as (2cii)) do not at all suggest it.

From 477b–478b, Plato argues that knowledge and belief are different capacities. First he argues that capacities are distinguished by (a) what they are set over (*epi*) and by (b) what work they do (477c6–d5). Two capacities are the same if they satisfy both (a) and (b); they differ if they are set over different things and do different work. Plato then seems to argue that since knowledge and belief satisfy (b) differently, they are different capacities; and that since they are different capacities, they satisfy (a) differently as well.

The first inference seems warranted; even if *x* and *y* satisfy only one of (a) and (b) differently, they seem to be different capacities. But the second inference does not seem warranted; why can't knowledge and belief do different work (and so be different capacities) even if they are set over the same things? Husbandry and butchery, for instance, do different work; but they are both set over the same objects – domestic animals.

If we favour the objects analysis, so that knowledge and belief are set over different objects, then Plato does seem to argue invalidly here. Just as the objects analysis seems to require Plato to violate DR, so it seems to require him to argue invalidly. If, however, we favour the contents analysis, so that knowledge and belief are not set over different objects but only over different contents, then not only are Plato's starting premises non-controversial, but also, as I shall now argue, the present argument about capacity individuation is valid.

Knowledge and belief do different work, Plato tells us, in that knowledge but not belief is infallible (*anhamartēton*, 477e6–7). This might only mean that knowledge but not belief entails truth: that's one way (the only correct way) to read the slogan 'if you know, you can't be wrong'; and it's the only reading of the slogan that the argument requires.[11]

But how can we legitimately infer from this difference of work to a

11 For quite a different interpretation of 'infallibility', see Vlastos [86], 12–13.

difference in what knowledge and belief are set over? My reading of (1) and (2) provides the answer: knowledge is set over true propositions; belief is set over true and false propositions. It follows from the fact that knowledge but not belief is truth-entailing, that they are set over different (though not necessarily disjoint) sets of propositions – the set of propositions one can know (true propositions) is a subset of (and so is different from) the set of propositions one can believe (true and false propositions).

Plato's inference from (b) to (a) is thus warranted after all – if we assume that knowledge and belief are set over different sets of propositions, rather than over different objects. Moreover, if we read the argument this way, then Plato leaves open the possibility (although, again, he does not require) that one can know and have beliefs about the same objects, and even of the same propositions. A valid, suitably non-controversial argument goes hand in hand with avoiding TW.

To be sure, Plato claims that what is known (*gnōston*) and what is believed (*doxaston*) cannot be the same (478a12–b2). This, however, might only mean that the set of propositions one can believe is not co-extensive with the set of propositions one can know – for one can believe but not know false propositions. More weakly still, Plato might only mean that the properties of being known and of being believed are different properties. Either claim is plausible, and all that the argument, at this stage, requires.

All of the argument to 478e can be read as emphasising this crucial point, that knowledge but not belief entails truth. At 479a ff., however, Plato shifts to another point:

(3) Each of the many *F*s is both *F* and not-*F*.

The many *F*s are sensible properties, of the sort recognised by the sightlover – bright colour, for instance, or circular shape.[12] (3) claims that each such property is both *F* and not-*F*. Bright colour, for example, is both beautiful and ugly in that some brightly coloured things are beautiful, others ugly; returning what one owes is both just and unjust in that some token actions of returning what one owes are just, others unjust. Any sensible property adduced to explain what it is to be *F* (at least, for a certain range of predicates) will be both *F* and not-*F*, in that it will have some *F*, and some not-*F*, tokens. Here, in contrast to (1) and (2), 'is' is used predicatively, for 'is *F*' rather than for 'is true'. One might think that therefore (1) and (2) also use 'is' predicatively; or that Plato is confused about the differences between the predicative and veridical 'is'. But neither hypothesis is necessary. Plato shifts from a veridical to a predicative use of 'is'; but he does so without confusion. There is instead a connecting link between the two uses, as we shall see.

12 For a defence of this claim, see, e.g., Gosling [146].

Plato expects the sightlovers to accept (3); he is still speaking in terms acceptable to them. Indeed, it is because they accept (3) that they deny that 'Beauty is one' (479a4). They deny, that is, that beauty is a single property, the same in all cases; there are, rather, many beautifuls – many different properties, each of which is the beautiful. In this painting, the beautiful is bright colour; in that one, it is sombre colour, and so on.

Plato, however, accepts the One over Many assumption: there is just one property, the *F*, the same in all cases, in virtue of which all and only *F* things are *F*. If we build this assumption into the argument, then we can see how Plato finally denies the sightlovers knowledge, and argues that all knowledge requires knowledge of Forms.[13]

The next steps in the argument are:

(4) The sightlovers' beliefs (*nomima*) about the many *F*s are and are not (479d3–5).

(5) Therefore, the sightlovers have belief, not knowledge, about the many *F*s (479e1–5).

Now if Plato were still concerned with the predicative reading of 'is', as in (3), one might expect him next to say:

(4′) Belief is set over the many *F*s, which are *F* and not-*F*.

But instead of (4′), Plato says (4). Premise (4) does not say that the many *F*s are and are not; it says that the sightlovers' *beliefs* (*nomima*) about the many *F*s are and are not.[14] If we are now dealing with beliefs, however, then we are back at the veridical reading of 'is'. Plato is claiming that the sightlovers' beliefs about the many *F*s are and are not true – that is, some of them are true, some of them are false. The sightlovers have some true, and some false, beliefs about beauty; and this is so precisely because they rely on the many *F*s, on the many sensible properties. Why should this be so?

Knowledge, Plato has told us, is truth-entailing; it also requires an account (*Meno* 98a, *Phaedo* 76b, *Republic* 531e, 534b). The sightlovers define beauty, at least in this painting, as, for instance, 'bright colour'. But no such definition can be correct; for some brightly coloured things are ugly, not beautiful. The sightlovers cannot then know what beauty is, since their account of what beauty is – that it is bright colour – is false. Since their account is false, they lack any knowledge of beauty at all; for Plato also

13 The One over Many assumption, however, might well be thought to violate DR.

14 *Nomimon* is a general word for anything one can *nomizein*; it also conveys a suggestion of generality, and of custom or convention. It can be complemented with is-p or with is-v. In the former case it generally means something like 'customary rules or laws or conventions'; in the latter case it means something like 'customary beliefs'. That the veridical reading is intended here receives additional support from 508d8, where Plato makes a parallel point, using *doxa* (which in context clearly means 'belief') rather than *nomimon*.

believes that one can know something about *x* only if one knows what *x* is.[15]

Although the sightlovers thus lack any knowledge about beauty, they have belief, not ignorance, about it. For although beauty should not be defined in terms of bright colour, many brightly coloured things are beautiful; and so, guided by their false definition, they will be led to some true beliefs about beauty, such as that this brightly coloured painting is beautiful. These true beliefs cannot constitute knowledge, since they are not adequately explained in terms of a correct *aitias logismos*; but the fact that the sightlovers have them shows that they are not ignorant about beauty, even if they do not know anything about beauty.

The sightlovers thus have some true beliefs (about what things are beautiful) and some false beliefs (at least about what beauty is). Each of their beliefs is determinately true or false; Plato is not using 'belief' in a special technical sense for 'approximately correct'. Nor is he claiming that everyone who has belief, as opposed to knowledge, has some true and some false beliefs. As it happens, the sightlover has some true, and some false, beliefs; but other believers could have all false, or all true, beliefs.

There is, then, a well-argued connecting link between is-v and is-p. The claim is that restricted to the many *F*s (is-p), which are *F* and not-*F*, one can at best achieve belief (is-v); for accounts phrased in terms of the many *F*s (is-p), i.e. in terms of sensibles, will inevitably be false (is-v), thereby depriving one of any knowledge of the matter to hand.

If the sightlovers lack knowledge, then either there is no knowledge, or knowledgeable accounts must be phrased in terms of non-sensible properties that are not both *F* and not-*F*. Plato rejects the first option and so completes the argument as follows (479e7–480a5):

(6) Knowledge is possible.

(7) There must, then, be non-sensible objects of knowledge.

(8) Therefore, there are Forms.

(9) Those who know Forms have knowledge; those who are restricted to the many *F*s at best have belief.

(10) Therefore knowledge is set over (*epi*) Forms, and belief is set over the many *F*s (480a1).

Conclusion (6) might seem to violate DR; the sightlovers might protest that if they lack knowledge, so does everyone else. The inference to (7) seems to depend on the unstated assumption that knowledge requires the existence of certain sorts of objects.[16]

15 This is Plato's Priority of Knowledge of a Definition claim (see, e.g., *Meno* 71b): like the One over Many assumption, it seems controversial.

16 This is not to play into the hands of the existential interpretation of the argument discussed at the outset. First, no occurrence of 'is' needs to be read as 'exists'; an existential claim is only *tacit* in the argument. (Though the use of is-

Is the inference to (8) warranted? That depends on how much we read into the word 'Forms'. If (as I believe) the Form of *F* is the non-sensible property of *F*, which is *F* and not also not-*F*, in that it explains the *F*ness of all and only the *F* things there are, then (8) is validly inferred. If we take Plato, in (8), to be arguing for Forms in some other sense, or for further features of Forms than their non-sensible, unitary and explanatory nature, then the inference to (8) might be unwarranted. But there is no need to assume any other sense, or any further features of Forms, in order to understand any part of the argument. If we do not, then (8) is validly inferred.

Conclusion (9) simply summarises conclusions that have already been validly argued for; (10), however, might seem worrying. For here Plato says that knowledge is set over – not, as we might expect, true propositions, but – Forms, certain sorts of objects; and that belief is set over – not, as we might expect, true and false propositions, but – the many *F*s. Does not this suggest either that, at this last stage of the argument, Plato falls into an objects analysis and embraces TW; or that he intended an objects analysis all along (in which case, earlier stages of the argument are invalid, and he begins by violating DR)?

We need not endorse either option. Plato has explained carefully and in detail what connection he intends between knowledge, truth and Forms, on the one hand; and belief, truth and falsity, and sensibles, on the other. At the close of the argument, he offers us an elliptical way of expressing a more complex claim. To say that knowledge is set over Forms is shorthand for the claim that all knowledge requires knowledge of Forms; to say that belief is set over the many Fs is shorthand for the claim that if one is restricted to sensibles, the most one can achieve is belief.

I have provided an account of Plato's argument on which at least its opening premises satisfy DR; and on which it is valid and involves no equivocation on 'is'. Though it explicitly uses both is-v and is-p, and tacitly relies on an existential claim at one stage as well, there are systematic, explanatory connections between the different uses, and no crude slides or equivocations.

Nor does the argument commit Plato to TW. He argues only that, to know anything at all, one must know Forms; for knowledge requires an account,

e is tacit rather than explicit, Aristotle highlights it in his accounts of the theory of Forms: cf. the flux arguments recorded in *Metaphysics* A6, M4 and M9; and the second of the Arguments from the Sciences in the *Peri Ideōn* (Alexander of Aphrodisias, *Commentary* on Aristotle's *Metaphysics* (*in Met.*) 79.8–11).) Second, Plato is not now claiming that knowledge is restricted to what exists – which is what (1) would claim if it were interpreted existentially – but only that knowledge requires the existence of certain sorts of objects. This reflects a realist bias about knowledge, but not one that tells in favour of TW.

and it is only by reference to Forms that adequate accounts are forthcoming. This leaves open the possibility that once one has these accounts, one can apply them to sensibles in such a way as to know them too. Plato does not – here – explicitly say that knowledge of sensibles is possible. But his argument leaves that possibility open; so too, we shall see, does his account in books VI and VII.

Republic VI–VII

Republic V distinguishes between knowledge and belief as such; *Republic* VI–VII distinguishes between two sorts of knowledge and two sorts of belief. *Republic* V tells us that knowledge requires knowledge of Forms; *Republic* VI–VII adds that the best sort of knowledge requires knowledge of the Form of the good. *Republic* V considers knowledge and belief statically; it tells us how they differ, but says nothing about how to improve one's epistemological condition. In the Cave allegory in *Republic* VII, Plato considers knowledge and belief dynamically; he explains how to move from a lower to a higher cognitive condition.

Much of the epistemology of VI–VII is presented in the three famous images of the Sun, Line and Cave. Plato apologises for this fact; he resorts to imagery, he tells us, because he lacks any knowledge about the Form of the good (506c), whose epistemological and metaphysical role he now wishes to explain. When one has the best sort of knowledge, he later claims, one can dispense with images and speak more directly and literally (510b). Though many people are not unnaturally moved by Plato's haunting and beautiful images, it is important to bear in mind that he himself insists that he offers them only because he lacks knowledge; the best sorts of explanations and arguments, in his view, should be couched in more straightforward terms.

The Sun

Plato begins by repeating book V's distinction between the many *F*s, which are perceivable, and the Form of *F*, which is grasped by thought (507a7–b10). He then likens the Form of the good to the sun; as the sun is in the visible world, so is the Form of the good in the world of thought (*en tō(i) noētō(i) topō(i); ta nooumena*, 508b12–c2). The sun is the cause (*aitia*)[17] of vision and of the visibility of visible objects: when one looks at visible objects in the light of the sun, one sees them; when one looks at them in the dark

17 *Aitia* is variously translated as 'cause', 'reason' and 'explanation'. 'Cause' is sometimes thought to be a misleading translation, on the ground that causes are entities productive of change, whereas *aitiai* are not so restricted. For some discussion of the connection between *aitiai* and contemporary accounts of causation, see my [117]; also Vlastos [128] and Annas [259].

(unilluminated by the sun), one cannot see them, at least not well (507c–508d). Similarly, the Form of the good is the cause of knowledge and of the knowability of knowable objects (*nooumena*).[18] When one thinks about a knowable object illuminated by the Form of the good, one knows it best; when one thinks about sensibles unilluminated by the Form of the good, one at best has belief about them. The Form of the good is also the cause of the being of knowable objects,[19] just as the sun causes objects to come into being and to grow.

The Sun presents an image along with its application.[20] The image contrasts two ways of looking at visible objects:

(s1) Sight looks at visible objects in the dark, unilluminated by the sun.
(s2) Sight looks at visible objects illuminated by the sun.

(s1) illustrates (S3), and (s2) illustrates (S4):

(S3) The soul is aware only of sensibles unilluminated by the Form of the good (or by other Forms), and so has belief.
(S4) The soul considers knowable objects illuminated by the Form of the good, and so has (the best sort of) knowledge.

The image (s1 and s2) contrasts two ways of looking at some one sort of entity – visible objects. The application (s3 and s4) contrasts two cognitive conditions, knowledge and belief. They are described in terms familiar from *Republic* v: restricted to sensibles, one can at best achieve belief; in order to know, one must know Forms (and, for the best sort of knowledge, one must know the Form of the good). As in *Republic* v, Plato does not explicitly mention two further possibilities: (a) knowledge of sensibles; and (b) belief

18 It is striking that throughout this passage, Plato uses *nooumena*, rather than 'Forms'. Section 507b9–10 might seem to suggest that *nooumena* refers just to Forms. But it is tempting to believe that he deliberately uses *nooumena* in order to suggest, or at least to leave open the possibility, that more than Forms can be known. This suggestion is fortified by the fact that the image part of the Sun (s1 + s2: see below) contrasts two ways of looking at some one sort of entity (visible objects) – suggesting that one can have different cognitive attitudes towards a single entity. Perhaps the application part of the Sun (s3 + s4), then, also means to contrast (among other things) two ways of considering sensibles, with knowledge or with mere belief. Even if *nooumena* refers only to Forms, TW still does not follow. The point would be that one needs to know the Form of the good to have (the best sort of) knowledge about Forms. This point does not imply that one can have (the best sort of) knowledge only about Forms.

19 509b7–8 *to einai te kai tēn ousian*. I take *kai* to be epexegetic, and both *to einai* and *tēn ousian* to refer to the being, the essence, of knowable objects.

20 I follow Irwin [101], 334, n. 43, in using initial small letters (e.g. 's1', 'c1') for states which illustrate other states, and initial capital letters (e.g. 'S3', 'L1') for the states illustrated; and in using 'Sun' etc. for the name of the image, and 'sun' etc. for the entities mentioned in the images. My account of the Sun, Line and Cave is indebted to his in more substantial ways as well: see his ch. 7, sections 13–14.

about Forms. Neither, however, does he preclude (a) and (b). More strongly, he seems to believe they are possible. For as we have seen, he introduces the Sun image by claiming to have only belief about, and no knowledge of, the Form of the good (506c); and he says that the philosopher who returns to the cave knows sensibles (520c).[21]

Although the Sun distinguishes between the same two conditions as *Republic* v, it adds to *Republic* v the claim that the best sort of knowledge requires knowledge of the Form of the good (505a, 508a5).[22]

Plato seems to believe this new claim because he seems to believe that the Form of the good is both a formal and final cause of every knowable object. That is, it is part of the essence of every knowable object, and in some sense what knowable objects are for. Since knowledge of a thing requires knowing its causes, full knowledge of anything requires knowing the Form of the good.

It is easy to see why Plato should believe that the Form of the good is the formal and final cause of the virtue Forms. A full account of any virtue – of justice or temperance, for instance – will explain its point, what is valuable or choiceworthy about it; and that is to explain its contribution to, its relation to, the Form of the good.

But Plato also believes that the Form of the good is the formal and final cause of all knowable objects, not just of the virtue Forms. We can best understand why if we turn for the moment to Plato's puzzling claim that the Form of the good is in some way greater or more important than other knowable objects (504c9–e3, 509b6–10), even though, unlike other Forms, it is not an *ousia*, a being (509b9–10). Usually, to call something an *ousia* is to accord it special importance. One might then expect Plato to claim that the Form of the good is the most important *ousia* of all; instead he claims that it is not an *ousia* at all.

The best explanation of this puzzling claim is that the Form of the good is not a distinct Form, but the teleological structure of things; individual Forms are its parts, and particular sensible objects instantiate it.[23] Just as Aristotle insists that the form of a house, for example, is not another element

21 Moreover, (a) may be tacitly included in (s4), if I am right to suggest that *nooumena* may be used more broadly than for Forms; see n. 18.

22 Sometimes Plato seems to suggest instead that all knowledge – not just the best sort of knowledge – requires knowledge of the Form of the good: see, e.g., 507d11–e2; 508e3. On the interpretation assumed in the text, the Sun fits better with the Line; and Plato makes it plain that he takes the Line to be elaborating the Sun (509d–510a3). Perhaps the unclarity arises partly because Plato has not yet explicitly distinguished between the two sorts of knowledge.

23 For this view, see especially Joseph [142], in particular ch. 3; Gosling [92], 57–71; and Irwin [101], 225.

alongside the bricks and mortar, but the organisation of the matter, so Plato views the Form of the good as the teleological organisation of things. If we so view the Form of the good, we can explain why Plato claims both that the Form of the good is more important than other knowable objects, and also that it is not an *ousia*.

This view also helps to explain why Plato believes that full knowledge of a thing requires knowing its relation to the Form of the good. Consider Forms first. To know a Form's relation to the Form of the good is to know its place in the teleological system of which it is a part. Each Form is good in that it has the function of playing a certain role in that system; its goodness consists in its contribution to that structure, to the richness and harmonious ordering of the structure, and its having that place in the system is part of what it is. Plato believes, then, that each Form is essentially a good thing – not morally good, but, simply, good – in that it is part of what each Form is that it should have a certain place in the teleological structure of the world.

A similar account explains why knowledge of the Form of the good is also necessary for fully knowing sensible objects. In the later *Timaeus*, Plato explains that the sensible world was created by the demiurge (27d ff.). Since the demiurge is good, he wanted the world to be as good as possible; hence he tried to instantiate the Form of the good (and so the teleological structure of Forms generally) as widely as possible. Fully to understand his creations, then, we need to refer to the Form of the good which they instantiate.[24]

All of this embodies a crucial point to which we shall recur: Plato is a holist about knowledge. Full knowledge of anything requires knowing its place in the system of which it is a part, or which it instantiates; we do not know things in the best way if we know them only in isolation from one another.[25]

The Line and Cave

Plato introduces the image of the Divided Line in order to elaborate the application part of the Sun image (S3 and S4). He tells us to divide each of the Sun's two conditions – knowledge and belief – into two (509d6),[26] thus yielding two kinds of belief and two kinds of knowledge. The two sorts of

24 I discuss Plato on teleology in somewhat more detail, though still briefly, in [117].

25 It is often agreed that Plato endorses a holist conception of knowledge in various later dialogues; but some believe that that represents a change of view from an earlier atomism. See, e.g., Owen [122], ch. 5. On the account I propose, Plato is a holist in the *Republic* no less than in later dialogues. See my [184].

26 Plato may tell us to divide the line into two unequal parts; but the text is uncertain. If the inequality claim is made, the two likeliest explanations seem to be that (a) the belief part is bigger, because more people have belief; or (b) the knowledge part is bigger, because knowledge is more valuable.

belief – corresponding to the two lower stages of the line (L1 and L2) are *eikasia* (imagination) and *pistis* (confidence). The two sorts of knowledge – corresponding to the higher stages of the line (L3 and L4) – are *dianoia* (thought) and *nous* (knowledge or understanding).[27]

Plato initially explains each stage of the line by means of illustrative examples. L1 is explained in terms of images of physical objects, L2 in terms of physical objects. At L3, one uses hypotheses, and the sensible objects imaged in L1 are in their turn used as images of Forms; mathematical reasoning is offered as a characteristic example. At L4, one uses dialectic (511b, 533c) in order to 'remove' or 'destroy' (533c8) the hypotheses of L3 – not by proving them false, but by explaining them in terms of an unhypothetical first principle so that they cease to be mere hypotheses. Although Plato does not say so explicitly, this first principle is plainly the Form of the good (or a definition of, and perhaps further propositions about, it).[28] At L4 one also reasons directly about Forms without, as in L3, relying on sensible images of them.

Whereas the Line corresponds to the application part of the Sun, the Cave corresponds to its image part (s1 and s2), dividing each of its two parts into two (c1–4). It is an allegory, designed primarily to explain ways of moral reasoning (514a). Plato begins with a haunting description of prisoners who have been bound since birth so that all they have ever seen are shadows on a cave wall – shadows of artificial objects illuminated by a fire internal to the cave (c1). Strange though the image is, Plato insists that the prisoners are 'like us' (515a5). Plato then imagines one of these prisoners being released,[29] so that he can see not only the shadows but also the artificial objects that cast the shadows. When asked to say what each of the artificial objects is, he is at first confused, and thinks the shadows are 'more real' than

27 Plato's terminology is not fixed. At 510a9, L3 + L4 are collectively called *to gnōston*; at 511a3, b3 they are collectively called *to noēton* (cf. 533e8–534a). When *to noēton* is used for L3 + L4 collectively, *epistēmē* is sometimes used for L4 (cf. 533e8). Nothing should be made of these terminological variations; Plato tells us (533d7–e2) not to dispute about the use of words.

28 Like Aristotle, Plato speaks of both propositional and non-propositional entities as being principles; I shall follow their lead. This double usage involves no confusion. One explains, or justifies one's belief in, a proposition by appealing to other propositions; but these propositions refer to, are about, various sorts of entities, which are explanatory factors one can know.

29 I assume Plato uses the singular in order to suggest that very few people will ever undergo the transformation he describes (although he seems to believe that everyone could in principle undergo it). I hope it is not too obvious to be worth saying that Plato's picture of the release of the prisoner is an early illustration of the biblical saying 'the truth will set you free' – except that Plato believes that even the prisoners (us) can have by and large true beliefs; what the Cave really illustrates is rather the thesis that 'knowledge will set you free'.

the objects. Eventually, though, he is able to discriminate systematically between the shadows and the objects, and to see that the latter are 'more real' (c2). He learns to distinguish between the appearance or image of an object and the object, between appearance and reality.

Next the prisoner is led out of the cave. At first he sees only shadows of natural objects, then the natural objects themselves (c3), and finally the sun (c4). He learns to distinguish between appearance and reality outside the cave, just as he previously learned to distinguish between them inside the cave.

Each of Plato's three images is distinctively different from the others. The Sun describes both image and application; the Line explains the application further, while the Cave explains the image further. The Line is illustrated with literal examples of its cognitive conditions; the Cave is an allegory primarily about ways of moral reasoning. The Sun and Line (like *Republic* v) describe conditions statically; the Cave explains them dynamically. Each image offers details not to be found in the others; if we interpret them in the light of one another, we can achieve a better grasp of their underlying thought than if we consider each on its own.[30]

Plato, then, distinguishes between two sorts of belief – imagination (L1) and confidence (L2) – and between two sorts of knowledge – thought (L3) and understanding (L4). One familiar way of explaining the differences between these conditions relies on an *objects analysis*: each condition is individuated by reference to its unique sort of object. Just as some argue that in *Republic* v there is belief only about sensibles and knowledge only of Forms, so some argue that in *Republic* VI–VII each cognitive condition has its own unique objects. On this view, one is in a belief state (L1 or L2), for instance, if and only if one is confronted with a certain sort of sensible object (images are the usual candidates for L1, and ordinary physical objects for L2). As in *Republic* v, an objects analysis goes naturally with TW.[31]

Just as I rejected an objects analysis of *Republic* v, so I shall reject one of *Republic* VI–VII, defending again a *contents analysis*. On the contents analysis, L1–L4 are individuated, not by their unique objects (no state has unique

30 Plato plainly means there to be some correspondence between the three images; at 517b, having completed his initial account of the Cave, he tells us to apply that account 'as a whole to all that has been said', i.e. to the Sun and Line. He supplies a brief account of how to do this; but different commentators carry out his directions in different ways, and not everyone would agree with the connections I have claimed obtain. Nor would everyone agree with the account I have provided of the intrinsic nature of each image.

31 At least, most objects analyses preclude knowledge of sensibles. However, some allow knowledge of more than Forms. For it is sometimes thought that L3 is correlated with special mathematical entities that are not Forms but which one can know. See n. 35.

objects), but by their distinctive sorts of reasoning (by their cognitive content). What state one is in is determined by the sort of reasoning one engages in, whatever sort of object it is about. To be sure, as in *Republic* v, one needs to know Forms to know anything at all. Hence in a way, objects are relevant to determining cognitive level; but as we shall see, they are not relevant in a way congenial to TW.

L1. Imagination

Plato's initial characterisation of L1 is quite brief. He says only that 'one section of the visible world [is] images. By images I mean, first, shadows, and then reflections in water and on surfaces of dense, smooth and bright texture, and everything of that kind' (509e1–510a3). Similarly, at c1 the prisoners are bound, and have always been so, so that all that they have ever seen are shadows of artificial objects.

Plato might seem to be suggesting that one is at L1 if and only if one is confronted with an image of a sensible object – just as the objects analysis would have it. But if so, various difficulties arise. First, most of us don't spend much time looking at images and reflections of physical objects;[32] nor will most people in the ideal city do so. Yet Plato says that most of us are at L1 (515a5); and that most people in the ideal city would be too (517d4–e2, 520c1–d1).

Second, contrary to the objects interpretation, looking at images doesn't seem to be either necessary or sufficient for being at L1. It's not necessary because the prisoner who is released in the cave and then looks at the artificial objects (not just at their images) is at first confused; he is still at L1, even though he is confronted with an object, not just with its image. It's not sufficient because, as we noted before, Plato says that the philosopher who returns to the cave will know the images there (520c); he does not lapse back into L1 when he looks at images.

We can avoid these difficulties if we turn to the contents analysis – and also understand the nature of and interconnections between Plato's three images in the way I have suggested.

The prisoners are at L1 about physical objects not because they see, are confronted only with, images of physical objects, but because they cannot systematically discriminate between images and the objects they are of.

32 Contrast White [141], 185f., who argues, on the basis of bk x, that most of us do, in Plato's view, spend a great deal of time looking at images of sensible objects, in that we focus only on aspects or appearances of objects, without, e.g., correcting for the effects of perspective. It is also sometimes suggested that we are restricted to appearances of objects in that we are restricted to their surface features (e.g. their colour and macroscopic size) and do not know their inner structure (e.g. their atomic constitution).

Even if they were confronted with a physical object, they would remain at L1, so long as they could not systematically discriminate between images and their objects, and could not tell that the objects are 'more real' than the images, in that they cause the images. They are at L1, not because of the objects they are confronted with, but because of the ways in which they reason about them. Similarly, the philosopher who returns to the cave does not lapse back into L1 about images. For he, unlike the prisoners, can systematically discriminate between objects and their images; he knows that the images are mere images, caused and explained by the physical objects. One is at L1 about physical objects, then, not just in case one is confronted only with images of physical objects, but just in case one cannot systematically discriminate between physical objects and images of them.

Moreover, one can be at L1 in other areas. When Plato says that most of us are like the prisoners (are at L1), he does not mean that most of us literally see only images of physical objects. He means that our moral beliefs are relevantly like the prisoners' beliefs about physical objects; we are at L1 in our moral beliefs (not in our physical object beliefs), just as they are in L1 about their physical object beliefs. Thus, for instance, he talks about people who 'fight one another for shadows and wrangle for office as if it were a great good' (520c7–d1) – about people, that is, who take seeming goods to be real goods, and lesser goods to be greater goods than they are. Or, again, at 517de, Plato speaks about contending 'about the shadows of justice' – about, that is, ordinary, unreflective beliefs about justice (cf. 493a6–c8; 515b4–c2). We uncritically accept what seems just or good as being really just or good.[33]

To be sure, the Line (unlike the Cave) is not an allegory. It describes literal examples of cognitive conditions – but they are only illustrative, not exhaustive, examples. The Line illustrates L1 reasoning about physical objects; but one can be at L1 in other areas, for example, about morality. Plato does not believe we are at L1 about physical objects (so he illustrates L1 with an example that is not characteristic of us); but we are at L1 in our moral reasoning.

Objects are relevant to the line in a way, then: if one cannot make certain sorts of distinctions between kinds of objects, the most one can achieve is a certain level of understanding about those sorts of objects. This, however, plainly allows one to have different cognitive attitudes to the same sorts of objects. L1, then, when properly understood, does not suggest an objects analysis or TW.

33 Many of our moral beliefs are not only unreflective, but also false. What is crucial about L1, however, is not that one's beliefs are false, but that they are accepted uncritically. Even in Plato's ideally just city, most people will be at L1, even though their beliefs are by and large true (517d4–e2, 520c1–d1).

L2. Confidence

The prisoners advance to L2 when they are released from their bonds and gradually learn to distinguish between the images and the objects they are of. This represents the first application of elenchus or dialectic. At first the prisoners believe they know that the images exhaust the whole of reality. Then, when they are exposed to the objects the shadows are of, and are asked to say what those objects are, they become confused and frustrated; they are at a loss. In just the same way, interlocutors in the Socratic dialogues at first believe they know the answers to Socrates' 'What is *F*1?' questions; when cross-examined, they too are quickly at a loss. Most of the Socratic dialogues end at this aporetic stage – and so it is sometimes concluded that the elenchus is purely negative and destructive (or at best plays the modest positive role of getting people to recognise their own ignorance). Here, however, the elenchus is carried further – and so Plato shows how the Socratic elenchus can enable one to move beyond *aporia* to better-based beliefs (and, in L3 and L4, to knowledge). For the released prisoner gradually learns to discriminate between images and their objects; his beliefs become more reliable. Similarly, in the *Meno*, the elenchus with Meno's slave advances beyond *aporia*, until the slave improves his beliefs. Like the prisoner, he moves from L1 to L2, from *eikasia* to *pistis* – though in his case, of course, about a mathematical, not about a moral, belief: he (like most of us, in Plato's view) remains at L1 about morality. Because he cannot give a satisfactory account, an *aitias logismos* of the sort necessary for knowledge (98a), however, he remains at a belief state, though at a better one than he was in before.[34] Perhaps the Socrates of the Socratic dialogues would place himself at L2 about morality. He disclaims knowledge about morality, but clearly believes he is in some way better off in his moral reasoning than his interlocutors are; the difference between L1 and L2 allows us to see how this could be so. His ability to make certain sorts of systematically correct discriminations puts him in a better epistemic position than his interlocutors, even though he (believes he) lacks knowledge.

Just as L1 does not support an objects analysis, neither does L2. Plato does not mean that one is at L2 if and only if one is confronted with a physical object. He rather means that one is at L2 *about physical objects* if one can systematically discriminate between physical objects and images of them,

34 Though Plato adds (*Meno* 85c) that if the slave continues practising the elenchus, he will eventually reach knowledge. This claim is not further explained or defended in the *Meno*; but it is illustrated in the Cave, in showing how elenchus, dialectic, enables us to move not only from L1 to L2, but also from L2 to L3 and L4.

but cannot explain their difference. This, however, allows one to be at L2 about physical objects even if one is not confronted with a physical object. Further, one can be at L2 in other areas – so long as one's reasoning is relevantly like the prisoner's reasoning about physical objects when he has reached L2.

L3. Thought

One moves from L2 to L3 – from a kind of belief to a kind of knowledge – when one emerges from the cave, from a preoccupation with sensibles, and turns one's attention to non-sensibles, that is, to Forms. As in *Republic* v, here too one needs to be suitably aware of Forms in order to have any knowledge at all (although – again as in *Republic* v – it does not follow that knowledge is restricted to knowledge of Forms).

Plato initially distinguishes L3 from L4 as follows:

> in one section [L3], the soul is compelled to enquire (a) by using as images the things imitated before [at L2], and (b) from hypotheses, proceeding not to a first principle but to a conclusion; in the other [L4], it (b) advances from a hypothesis to an unhypothetical first principle, (a) without the images used by the other section, by means of Forms themselves, progressing methodically through them. (510b 4–9; cf. 511a3–c2)

When Glaucon professes not to understand this very abstract account, Socrates provides a mathematical illustration of L3:

> students of geometry, calculation, and such studies hypothesise the odd and the even and shapes and three kinds of angles and other things akin to these in each branch of study, regarding them as known; they make their hypotheses, and do not think it worth while to give any further (*eti*) account of them to themselves or to others, thinking they are obvious to everyone. Beginning from these, and going through the remaining steps, they reach a conclusion agreeing (*homologoumenos*) [with the premises] on the topic they set out to examine. (510c2–d3)

He adds:

> They also use the visible forms, and make their arguments (*logoi*) about them, although they are not thinking (*dianoumenoi*) of them, but of those things they are like, making their arguments for the sake of the square itself and the diagonal itself. (510d5–8)

Plato cites two key differences between L3 and L4: (a) at L3, one uses sensibles as images of Forms, although one is thinking of Forms, not of sensibles; at L4, one thinks of Forms directly, not through images of them; (b) at L3, one proceeds from a hypothesis to various conclusions; at L4, one proceeds from a hypothesis to an unhypothetical first principle (510b) – that is, to (a definition of, and perhaps also further propositions about) the Form of the good.

L3 poses a threat for the objects analysis. For Plato makes it plain that the square itself, etc. can be known in both an L3 and an L4 type way (511d); contrary to the objects analysis, then, the same objects appear at two distinct stages of the line.[35] Moreover, L3 uses sensibles as images of Forms; but sensibles are also in some way correlated with L2. So just as mathematical entities appear at both L3 and L4, so sensibles appear at both L2 and L3.[36]

Although Plato provides a geometrical illustration of L3, L3 is not restricted to geometry or even to mathematical disciplines more generally; any reasoning that satisfies the more general features (a) and (b) belongs at L3. Indeed, it seems reasonable to suggest that although Socrates (in the Socratic dialogues and *Meno*) places himself at L2 in his moral reasoning, Plato in the *Republic* places himself at L3.[37]

The *Republic* is peppered with images used self-consciously to illustrate something about Forms: the Sun, Line and Cave are cases in point. Similarly, Plato partially explains the nature of justice in the soul through the analogies of health and of justice in the city; he uses the analogy of the ship to illustrate the nature of democracy, and so on. So the *Republic*'s moral reasoning satisfies (a).

It also satisfies (b). Plato claims that the account of the virtues in book IV is a mere outline that requires a longer way (435d, 504c9–e2). That longer way involves relating the virtues to the Form of the good (a task not undertaken in book IV); and (a definition of) the Form of the good is the unhypothetical principle one advances to when one moves from L3 to L4. Similarly, Plato offered accounts of the virtues, and justified them in terms of

35 There is dispute about whether 'the square itself', etc. (510d) are Forms; I assume they are, but others take them to be mathematical entities that are distinct from Forms. For some discussion of this matter, see Annas [127]; Wedberg (124], esp. appendix D. The difficulty I pose for the objects analysis arises whether or not they are Forms; for the crucial point is that, whatever they are, they can be known in both an L3 and an L4 type way.

36 Moreover, if Plato, in saying that L3 uses sensibles, means to suggest that sensibles can be objects of L3 as well as of L2 epistemic attitudes, then, contrary to TW, Plato explicitly allows one to have at least L3 type knowledge of sensibles. Even if, in saying that L3 uses sensibles, Plato does not mean to say thereby that sensibles can be known in at least an L3 type way, we shall see that he nonetheless leaves open the possibility that one can have L3 (and L4) type knowledge of sensibles.

37 For this suggestion, see also Gallop [159], [160] and Irwin [101], 222–3.

their explanatory power; but the accounts were partial, and not justified in terms of anything more fundamental.[38]

Plato is often said to favour a mathematical model of knowledge. He does, to be sure, count mathematics as a type of knowledge; and mathematical studies play an extremely important role in the philosophers' education. But he places mathematics at L3 – it is the lower form of knowledge. Moreover, it is just one example of L3 type reasoning – Plato's moral reasoning in the *Republic* is another example of it. Further, the higher type of knowledge – L4 – is not mathematical but dialectical.

Nor does Plato praise mathematics for the reasons one might expect. To be sure, he emphasises its value in getting us to turn from 'becoming to truth and being' (525c), that is, in getting us to acknowledge Forms. But he adds in the same breath, as though it is of equal importance, that mathematics is also of value in the practical matter of waging war (525bc; cf. 522e, 526d). Nor does he praise mathematics for using necessary truths or for conferring some special sort of certainty. On the contrary, he believes that even if mathematical truths are necessary, they cannot be fully known until they, like all other truths, are suitably related to the Form of the good. Mathematics is not invoked as a paradigm of a discipline consisting of self-evident truths standing in need of no further justification or explanation.[39] Moreover, although mathematical reasoning may be deductive, L3 is not restricted to deductive reasoning; it includes other ways of explaining the less general in terms of the more general. Platonic moral argument, for instance, also belongs at L3, although it is not deductive in character.

It can appear puzzling that Plato counts L3 even as an inferior type of knowledge. To see why, I first need to say a bit more about what he thinks knowledge in general involves.

We have seen that Plato believes that in addition to true belief, knowledge requires an account or *logos* (*Meno* 98a; *Phaedo* 76d; *Republic* 531e, 534b). Call this KL.

It is tempting to infer that Plato is offering a version of the justified true belief account of knowledge; and many have succumbed to the temptation.[40] Recently, however, some have argued that the temptation ought to be resisted.[41] For, it is argued, KL requires, not a *justification* for believing that something is so, but an *explanation* of why it is so.[42]

38 Cf. the account of the hypothetical method in *Phaedo* 100 ff. (which is plainly not restricted to mathematical reasoning), which the account of L3 clearly recalls. Plato's account of L3 also recalls the *Meno*. There too Plato uses a geometrical example to illustrate a point about our capacity for reaching moral knowledge; he again uses diagrams, but in order to make a point about non-sensibles (diagonals); he insists that in a dialectical, as opposed to eristic, context, one should use claims the interlocutor agrees he knows (75d), just as here he says that the mathematicians assume that their hypotheses are obvious to everyone; and, of course, he again uses the hypothetical method.

39 For an interesting and provocative discussion of this matter, see Taylor [164], 202–3.

I agree that the sort of account Plato at least typically has in mind is an explanation. Often, for instance, he speaks, not of knowing propositions, but of knowing things. To know a thing, he believes, usually involves being able to say what it is, in the sense of articulating its nature or essence; doing this explains what the entity in question is. Even when Plato speaks instead of knowing a proposition, the sort of account he generally has in mind is an explanation of why it is so; sometimes this involves proving it, or explaining the natures of any entities it mentions.

But although Platonic accounts are typically explanations, we should not infer that he therefore rejects or bypasses a justified true belief account of knowledge. His view is rather that justification typically consists in, or at least requires, explanation. For Plato, I am typically justified in believing *p* only if I can explain why *p* is so; I am typically justified in claiming to know some object only if I can explain its nature or essence.

In addition to KL, Plato also believes that knowledge must be based on knowledge (KBK): I know a thing or proposition only if I can provide an account of it which I also know. Stating an account of something is not sufficient for knowing it; in addition, I must know the account.[43]

The conjunction of KL and KBK raises the threat of the famous regress of justification: to know something, I must, given KL, provide an account of it. Given KBK, I must know this account. Given KL, I must then provide an account of it which, given KBK, I must also know – and so on, it seems, *ad infinitum*. Plato discusses this regress in some detail in the *Theaetetus*; but it is lurking not far below the surface here as well.[44]

Plato also believes, as we know from *Republic* V, that if one knows anything at all, one knows Forms.

40 See, e.g., Chisholm [398], 5–7; Armstrong [394], 137; and my [184].

41 See especially Burnyeat [228], esp. 134f.; and [180]. We have seen before that if Plato accepts TW, that too precludes a justified true belief account of knowledge since, on TW, knowledge precludes belief; at the moment, however, I am concerned with a different challenge attributing a justified true belief account of knowledge to Plato.

42 This is also sometimes used as part of an argument for the claim that Plato is not so much concerned with knowledge as with understanding. I consider this argument briefly below, in discussing L4.

43 KBK is most explicitly discussed and defended in the later *Theaetetus*; but *Republic* 533c (quoted and discussed below) may endorse it as well.

44 I discuss the regress as it emerges in the *Theaetetus* in [184]. I argue there that Plato avoids the infinite regress by allowing justifications to be circular, if the circle is sufficiently large and explanatory. As we shall see, this is also the resolution I believe Plato favours in the *Republic*. In this respect as in others, Plato's epistemology remains relatively constant, whatever the fate of the theory of Forms.

Can one satisfy these three conditions for knowledge – KL, KBK and knowing Forms – within the confines of L3? And if so, how does Plato respond to the regress KL and KBK seem to give rise to? I begin by looking at KL and KBK in the abstract; I leave until later the question of whether everyone at L3 provides accounts of Forms.

Plato says that at L3, one offers hypotheses, which are then used in order to derive various conclusions. Are the hypotheses or the conclusions known at L3? At 510c7, Plato says that mathematicians offer hypotheses without giving any further (*eti*) account of them. Later he says that mathematicians can't:

> see [Forms] clearly so long as they leave their hypotheses undisturbed and cannot give an account of them. For if one does not know (*oide*) the starting point (*archē*), and the conclusion and intervening steps are woven together from what one does not know (*oide*), how ever could this sort of agreement (*homologia*) be knowledge (*epistēmē*)? (533c1–5)

Both passages may seem to suggest that KL cannot be satisfied for the hypotheses at L3. But if KL is not satisfied for the hypotheses at L3, then the hypotheses are not known at L3, since KL is a necessary condition for knowledge. Moreover, if KL is not satisfied, then neither is KBK; for one certifies that one knows something by producing an account of it.

KL might be satisfied in the case of the conclusions. For the hypotheses and proofs used to derive the conclusions might reasonably be thought to constitute an account of – an explanation of, and so an adequate justification for believing – them. But if the hypotheses are not themselves known, then KBK seems to be violated in the case of the conclusions; and so, since KBK is also a necessary condition for knowledge, the conclusions seem not to be known either.

It is thus initially unclear why Plato counts L3 as a type of knowledge. For KL, and so KBK, seem to be violated for the hypotheses; and at least KBK seems to be violated for the conclusions.

I suggest the following resolution of this difficulty. In saying that no (further) account of the hypotheses is given at L3, Plato does not mean that KL cannot be satisfied for them at L3. He only means, first, that no account can be given of them at L3 in terms of something more fundamental, such as the Form of the good; and, second, that at L3 they are used in an enquiry, in order to derive various results, before their assumption has been justified. The mathematician says, for instance, 'Let a triangle be a plane figure enclosed by three straight lines', and then goes on to derive various conclusions about triangles, without first giving us any reason to accept his account of a triangle.

None of this, however, precludes the possibility of justifying the hypotheses *in the course of* the enquiry. And it is clear how this can be done. For in using them in order to reach various results, one displays their explanatory power, shows what results one is able to achieve by using them; and showing this is one way of providing an account. In just the same way, scientists often offer speculative hypotheses, which become confirmed when they are shown to explain some variety of phenomena. One can, then, even within the confines of L3, satisfy KL for the hypotheses.

Does one then know the hypotheses? Only if KBK is also satisfied. For KBK to be satisfied, however, the conclusions must be known, for the hypotheses are justified in terms of the conclusions. But we said before that the conclusions might not be known because, although KL seemed satisfied in their case, KBK was not, because the hypotheses were not known. We seem locked in a vicious circle: we can provide accounts of the hypotheses in terms of the conclusions, and of the conclusions in terms of the hypotheses; but we do not yet seem to have reached anything that is known.

But although there is a circle here, it is not a vicious one. The hypotheses are justified in terms of the conclusions, and the conclusions in terms of the hypotheses. In providing these mutually supporting accounts, one comes to know both hypotheses and conclusions. One does not *first* know the hypotheses, and *then* the conclusions; one comes to know both simultaneously, in seeing how well the hypotheses explain the conclusions. Instead of a vicious circle, there are mutually supporting, interlocking claims.

I suggest, then, that both KL and KBK can be satisfied for conclusions and hypotheses alike, within the confines of L3. One satisfies KL for the hypotheses by appealing to their explanatory power; and one satisfies KL for the conclusions by deriving them from the hypotheses. In thus deriving the conclusions, and seeing how well the whole resultant system fits together, one acquires knowledge of both conclusions and hypotheses, and so satisfies KBK for both as well.

Now I said before that the conjunction of KL and KBK threatens a regress: to know *p*, I must know *q*; to know *q*, I must know *r*, and so on, it seems, *ad infinitum*. There are many different responses to the regress, but two of the most popular are *foundationalism* and *coherentism*. Foundationalism claims that the regress halts with basic beliefs that are not themselves justified in terms of any further beliefs; they are self-justified, or self-evident. Coherentism claims that the regress is finite but has no end; accounts can circle back on themselves. I explain *p* in terms of *q*, and *q* in terms of *r*, and so on until, eventually, I appeal again to *p*; but if the circle is sufficiently large and explanatory, then it is virtuous, not vicious.[45]

45 There are, of course, many different versions of foundationalism and coherentism. Not all foundationalists, e.g., require self-evident beliefs, as opposed to, e.g., initial warrant or credibility. Those who view Plato as a

Plato has typically been counted a foundationalist. At least for L3, however, he seems to be a coherentist. For he counts L3 as a type of knowledge, and so believes that KL and KBK are satisfied at L3. But the best explanation of how this could be so appeals to circular accounts, in the way I have suggested.

One might argue that the passage cited above from 533c (cf. *Cratylus* 436cd) shows that Plato rejects coherentism,[46] but it does not. The passage does seem to commit Plato to KBK; if one does not know the starting point neither does one know the conclusions derived from it, because knowledge must be based on knowledge. That, however, does not show that one cannot come to know the starting-point through deriving conclusions from it, and then come to know the conclusions by deriving them from the starting-point. The passage may also suggest that consistency or agreement is insufficient for knowledge; but any self-respecting coherentist would agree. For, first, the relevant sort of coherence involves more than consistency or agreement; in addition, the consistent beliefs must be mutually supporting and explanatory, and form a sufficiently large group. And, second, not even such coherence is sufficient for knowledge, but only for justification; knowledge also requires truth.

I have suggested that if Plato is a coherentist about justification, at least for L3, then both KL and KBK can be satisfied at L3, for hypotheses and conclusions alike. One further problem remains, however. If L3 is a type of knowledge, then at L3 one must know Forms. Now Plato (who seems to place himself at L3 in his moral reasoning) seems to believe that he has at least partial knowledge of some Forms; so at least one person he places at L3 knows some Forms. But he also places the mathematicians at L3 about mathematics; yet it may seem unclear that they know mathematical – or any – Forms. At least, it seems unlikely that mathematicians explicitly recognise Forms at all; there are no entities in their ontology that they call 'Forms'. If they do not explicitly admit Forms into their ontology, is it appropriate to say that they know Forms?

This problem too can be resolved. The mathematicians offer hypotheses. These hypotheses include accounts, or partial accounts, of, for example, the square itself;[47] and the square itself etc. are Forms. So the mathematicians offer accounts of Forms. To be sure, they do not know that the entities they

foundationalist, however, typically believe that his version invokes self-evident beliefs. For one good recent defence of coherentism about justification, see Bonjour [395], part 2, especially ch. 5 and 7.

46 See, e.g., White [106], 113, n. 50.

47 This is sometimes disputed; but for a good defence of the claim, see Taylor [164], 193–203.

are defining are Forms. It does not follow, however, that they do not know the entities they are defining; it follows only that there are some facts about these entities that they do not know. But one can know an object even if one does not know everything about it. And Plato makes it plain that mathematicians know some crucial facts about the entities they define. Not only do they offer hypotheses, partial definitions of them. But they also know, for instance, 'that the unit should never appear to be many parts and not to be one' (525e) – the one the mathematician is concerned with is one, and not also not one; it does not suffer compresence of opposites. They may also know that mathematical entities are non-sensible (for example, 511d, 525de, 526a1–7). Perhaps this shows that mathematicians treat mathematical entities *as* Forms, even though they do not recognise that that is what they are doing.

Nonetheless, if one can know a Form without knowing that what one knows is a Form, then the conditions for knowing Forms might seem weaker here than they did in *Republic* V. At least, the philosopher described there seems explicitly to countenance Forms in a way mathematicians do not. Still, perhaps that is only sufficient, and not also necessary, for knowledge. Mathematicians still differ significantly from anyone at L1 or L2. For such people do not have any *de dicto* beliefs about Forms (although they may of course have some *de re* beliefs about them); but mathematicians do have some *de dicto* beliefs about Forms, as expressed in their hypotheses, even if they lack the *de dicto* belief that what they are defining is a Form.

L4. Understanding

At L4, one reaches an unhypothetical first principle (a definition of, and perhaps further propositions about) the Form of the good. When one can suitably relate the hypotheses of L3 to the Form of the good, the hypotheses are removed or destroyed (533c8) – that is, they cease to be mere hypotheses, they lose their hypothetical status and become known in an L4 type way (511d) and not merely, as before, in an L3 type way. Moreover, at L4 one no longer uses sensibles but only Forms.

In saying that at L4 one no longer uses sensibles, Plato does not mean that there is no L4 type knowledge of sensibles. He means only that at L4 one no longer needs to explain the nature of Forms through images of them; one can speak of them directly, as they are in and of themselves. But once one has done this, one can apply these accounts to sensibles, in such a way as to have L4 type knowledge of them. In just the same way, Aristotle believes that one can define various species and genera without reference to particular instances of them; but, once one has done this, one can apply the definitions to particulars in such a way as to have knowledge of them.

L4 raises the following problem. At L4, one explains the hypotheses by relating them to something more fundamental (the Form of the good), which is itself known. But how is the Form of the good known? It cannot be explained in terms of something yet more fundamental – for there is nothing more fundamental (and if there were, we could raise the same question about how it is known, and then we would be launched on an infinite regress). Are not KBK and KL then violated at this later stage? The same difficulty that arose for L3 seems to arise for the Form of the good at L4.

One answer – popular historically – is to say that both the route to L4, and what L4 type knowledge consists in, is some sort of vision or acquaintance. One knows the Form of the good, not by explaining it in terms of something more fundamental, but by a self-certifying vision, which is also what the knowledge consists in.[48] The threatened regress thus halts with a self-certifying vision that confers knowledge. This answer essentially abandons KL; for it claims that knowledge does not require an account after all, but only a vision.

However, Plato repeatedly stresses that the route to L4 (as to L2 and L3) is dialectic (511b,c, 533a–d) – the Socratic method of cross-examination, of critically testing beliefs against general principles and examples.[49] Moreover, Plato asks rhetorically, 'do you not call the person who is able to get an account of the essence of each thing "dialectician"? And will you not say that someone who cannot do this, insofar as he cannot give an account to himself and others, to that extent lacks knowledge (*nous*) about the matter?' (534b3–6).

Dialectic, not acquaintance, is thus the route to L4; and since L4 crucially involves the ability to provide an account, neither does it consist in acquaintance alone. KL is thus not abandoned at L4. Even if acquaintance is necessary for L4, it is not sufficient; an account is also needed. And so our problem remains: what is there in terms of which we can justify our beliefs about the Form of the good?[50]

48 An acquaintance view is favoured by, e.g., Cornford [161]. See also the discussion in Robinson [102], 172–9 for a critical assessment of the acquaintance view (or, as he calls it, the 'intuition' theory).

49 There is one difference in the practice of dialectic at L4 and at earlier stages, however: at L4 dialectic is practised *kat'ousian*; at earlier stages it is practised *kata doxan* (534c2). By this Plato means that at L4 dialectic is practised on accounts of Forms – i.e. on the hypotheses of L3 (although, of course, when one begins, these are not fully satisfactory accounts – otherwise one would already be at L4); at L2 and L3, on common beliefs that fall short of knowledge and are not (except perhaps *de re*) about Forms. The method is the same, although what it is applied to differs.

50 Although I have argued only that acquaintance is not sufficient for knowledge, I do not believe it is necessary either. The chief reasons for introducing acquaintance seem to be (a) that it is needed to halt the regress; and (b) that Plato's visual metaphors suggest it. Reason (a), however, is false; coherence is another way of halting the regress and, as I go on to explain, I believe it is Plato's way of halting the regress at L4 as at L3. As to (b), even if Plato's visual metaphors suggest some sort of acquaintance, they do not require it. The metaphors can as easily be interpreted in terms of understanding; when I say that I finally see the point of what you have said, I do not mean that I have had some special vision that confers knowledge, but that I now understand what you have said. For this point, see Gosling [92], esp. ch. 8; and Burnyeat [397]; see also my [184].

An alternative – and I think preferable – solution appeals again to coherence: one justifies one's claims about the Form of the good, not in terms of anything more fundamental (there is nothing more fundamental), but in terms of its explanatory power, in terms of the results it allows one to achieve; and one justifies one's acceptance of the hypotheses of L3 by explaining them both in terms of their results and in terms of the Form of the good. The Form of the good, we have seen, is the teleological structure of the world; other Forms are its parts, and sensibles instantiate it. We justify claims about other Forms and about sensibles by relating them to this general structure; and we justify claims about the Form of the good by showing how well it allows us to explain the natures of, and interconnections between, other Forms and sensibles. There is again a circle; but, again, it is a virtuous, not a vicious, circle.

But how, it might be asked, could this be so? For didn't we propose a moment ago that L3 was an inferior type of knowledge precisely because it relied on coherence? If so, how could L4's justifications also be rooted in coherence?

The answer is that it is not coherence as such that makes L3 inferior to L4, but the degree and kind of coherence. Both L3 and L4 rely on coherence for justification; but their coherentist accounts differ. The justifications at L3 are piecemeal, restricted to individual branches of knowledge – one justifies mathematical beliefs, for example, solely in terms of mathematical claims, and so on (*mutatis mutandis*) for morality and the like. At L4, by contrast, one offers more synoptic accounts, integrating every branch of reality into a synoptic whole, in terms of the Form of the good (531c6–e5; 537b8–c7) – that is, in terms of the teleological structure of reality. The mathematician, for instance, provides some sort of account of the square itself; the dialectician provides an account of *each* thing (534b), and relates each thing to the Form of the good. The mathematician restricts himself to mathematical connections; the dialectician provides 'a comprehensive survey of their affinities with one another and with the nature of things' (537c) – his accounts are not restricted to individual branches of knowledge, but interre-

late them, by means of the Form of the good. He shows the point and interconnection of all things.

L4 thus relies on coherence no less than does L3; but its coherentist explanations are fuller and richer, and that is why L4 counts as a better sort of knowledge. Not every sort of coherentist account is equally good; L4 is an improvement on L3, not because it appeals to something different from coherence, but because its coherentist accounts are more explanatory.

This account also helps to explain how L4 type knowledge of sensibles is possible. The teleological structure of the world is stated in general terms, in terms of properties and natural laws, without reference to sensibles. However, once this general structure is articulated, one can have L4 type knowledge of sensibles by seeing what properties and laws they instantiate, and by seeing how they contribute to the goodness of things.

Indeed, Plato's coherentism may require that L4 type knowledge of sensibles be possible. At least, it seems reasonable to suppose that Plato believes that one eventually needs to refer back to sensibles in order to justify one's belief that one has correctly articulated the world of Forms – for part of one's justification for believing one has correctly articulated the world of Forms is that it allows one to explain sensibles so well. If Plato accepts KBK, and believes one needs to refer to sensibles to justify one's beliefs about Forms, then he must allow knowledge of sensibles.

On the account I have proposed, one knows more to the extent that one can explain more; knowledge requires, not a vision, and not some special sort of certainty or infallibility, but sufficiently rich, mutually supporting, explanatory accounts. Knowledge, for Plato, does not proceed piecemeal; to know, one must master a whole field, by interrelating and explaining its diverse elements.

It is sometimes argued that if this is so, we ought not to say that Plato is discussing knowledge at all; rather, he is discussing the distinct phenomenon of understanding. For, it is said, understanding, but not knowledge, requires explanation and interrelated accounts; and knowledge, but not understanding, requires certainty, and allows one to know propositions individually, not only collectively. A more moderate version of this general sort of view claims that Plato is discussing knowledge – but an older concept of knowledge, according to which knowledge consists in or requires understanding, in contrast to 'knowledge as knowledge is nowadays discussed in philosophy.'[51]

Now I agreed before that for Plato, knowledge typically requires explanation; but I argued too that this is only to say that for him, justification

51 Burnyeat [180], 188. A similar view is defended by Annas.

typically requires explanation. Similarly, I agree that, for Plato, knowledge does not require any sort of vision or certainty, but does require interrelating the elements of a field or discipline or, for L4, interrelating the elements of different disciplines in the light of the Form of the good. But, once again, I do not think this shows that he is uninterested in knowledge. We can say, if we like, that he believes knowledge consists in or requires understanding. But I would then want to add that this is not so different from 'knowledge as knowledge is nowadays discussed in philosophy'. To be sure, some contemporary epistemologists focus on conditions for knowing that a particular proposition is true, or believe that knowledge requires certainty, or that justification does not consist in or require explanation. But that is hardly characteristic of all contemporary epistemology. Indeed, concern with certainty is rather in disfavour these days; and many contemporary epistemologists defend holist conceptions of knowledge, and appeal to explanatory connections to explicate the sort of coherence a justified set of beliefs must exhibit. Plato does indeed explicate *epistēmē* in terms of explanation and interconnectedness, and not in terms of certainty or vision; but we should resist the inference that he is therefore not talking about knowledge, or that, if he is, he has an old-fashioned or unusual notion of knowledge. On the contrary, in this as in other matters, Plato is surprisingly up to date.

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