

An advance draft of a paper to be delivered to the Aristotelian Society on Monday 7 June 2010 at 4.15pm, Room G22/26, South Block - Senate House, Malet Street, London WC1E 7HU.

DO NOT CITE OR CIRCULATE WITHOUT PERMISSION. COMMENTS WELCOME.

Aristotle's Two Worlds: Knowledge and Belief in Posterior Analytics 1.33

Gail Fine
Cornell University/Merton College, Oxford
gfj1@cornell.edu

Abstract: In a famous passage in Republic 5, Plato distinguishes epistêmê from doxa, knowledge from belief. What's less well known is that Aristotle devotes a chapter of the Posterior Analytics (1.33) to drawing his own distinction between epistêmê and doxa. I explore Aristotle's account, comparing it with Plato's. I conclude that, though Plato is often (though wrongly) thought to hold some version of a Two Worlds Theory, it's Aristotle who does so.

1. In a famous and much-discussed passage in Republic 5, Plato distinguishes epistêmê from doxa - knowledge from belief. What's less well known is that Aristotle devotes a chapter of the Posterior Analytics (1.33) to drawing his own distinction between epistêmê and doxa. In this paper, I explore his way of distinguishing them, and compare it with Plato's. About Plato, however, I shall have to be brief.¹

2. On a familiar interpretation of the argument in Rep. 5, Plato distinguishes knowledge from belief in terms of their disjoint objects: knowledge is of forms, belief is of sensibles. If one has knowledge, it's only about forms; if one has a belief, it's only about sensibles. One can't have any knowledge about sensibles, or any beliefs about forms. I'll call this a Strong Two Worlds Theory for Objects (STWO).

On a second view, Plato favors a Weak Two Worlds Theory for Objects (WTWO), according to which, though one can't know sensibles, one can have beliefs about forms. On this view, the set of objects one can know, and the set of objects one can have beliefs about, are different but not disjoint.

I favor a third view, according to which Plato distinguishes knowledge from belief, not in terms of their disjoint or even different objects, but in terms of the truth implications of their contents: knowledge but not belief implies truth. I'll call this the Propositional reading (P).²

To say that Plato distinguishes knowledge from belief in terms of the different truth implications of their contents is not to say that he thinks knowledge and belief are of propositions rather than of objects. Rather, he thinks one knows an object by knowing that it is thus and so: by knowing that certain propositions are true of it. Similarly, one has beliefs about an object by believing that it is thus and so: by believing that certain

¹ I discuss this in Fine (1978) and Fine (1990).

² I defend this interpretation in the articles cited in n. 1. Propositions have been understood in many ways. As I use the term, propositions are truth evaluable. Sentences express, but are different from, propositions. Propositions also differ from states of affairs: the former are made true by the latter; the proposition that fire is hot is made true by the state of affairs of fire's being hot.

propositions are true of it.

P leaves open the possibility, though it doesn't imply, that the objects that can be known and that one can have beliefs about are the same. Hence, on P, the argument in Rep. 5 doesn't commit Plato to either STWO or WTWO. Nor, on P, does it commit him to either a Strong or a Weak Two Worlds Theory for Propositions (STWP, WTWP): that is, it doesn't commit him either to the view that no proposition that can be known can be believed or even to the view that there are some propositions that can be known but not believed. P leaves open the possibility that every proposition that can be known can also be believed. (However, P of course doesn't leave open the possibility that every proposition that can be believed can be known. For there are false beliefs; they can't be known since knowledge is truth entailing.)

One key piece of evidence in deciding how Plato distinguishes knowledge from belief is his opening claim (476e10-477a4) that knowledge is set over what is (epi to(i) onti), coupled with his claim that belief is set over what is and is not.³ On one view, Plato uses 'is' existentially, to make the point that knowledge is restricted to objects that exist, whereas belief is restricted to objects that both do exist and don't exist, or that half exist. On what is probably the most popular interpretation, Plato uses 'is' predicatively, to make the point that knowledge is set over objects that are F (and not also not F), which turn out to be the forms; whereas belief is set over objects that are both F and not F, which turn out to be sensible or perceptible objects. The form of beauty, for example, is beautiful but not also ugly, whereas bright color is both beautiful (in this Klee painting) and ugly (when added to a sombre Rembrandt). According to P, Plato uses 'is' veridically, to make the point that knowledge but not belief implies truth.⁴

Though Plato says that knowledge implies truth, he does not say that it implies necessary truth.⁵ To be sure, at 477e7 he says that knowledge but not belief is infallible (anhamartêton). But all he means is that necessarily, if one knows that p, then p, whereas it is not the case that necessarily, if one believes that p, then p. If this is what he means, then he does not make the mistake allegedly 'made every five years in Mind' (but not, presumably in the Aristotelian Society), that of inferring from the necessity of the conditional to the necessity of the consequent.⁶

In arguing that knowledge but not belief implies truth, Plato is distinguishing knowledge as such (all the knowledge there is, as he conceives of knowledge) from belief conceived as a genus of which knowledge is a species; when belief is so conceived, knowledge implies belief. However, at some points in the argument he uses 'belief' (doxa) for mere belief: for belief that necessarily falls short of knowledge. He uses 'belief' in this way when he argues that the so-called sightlovers - who acknowledge sensibles but not forms - have belief, but not knowledge. When belief is so conceived, knowledge is not a species of, and does not imply, belief. On the contrary, when belief is mere belief, the same person can't, at t1, both know and believe that p. But even when belief is mere belief, it remains possible that every proposition that can be known can be believed. It's just that, if p is

³ In Fine (1990), I incorrectly say that the claim about belief is an opening premise. In fact, as I see in Fine (1978), it is elaborately argued for.

⁴ However, he uses 'is' predicatively in 478d-479e. There is no confusion, but a connecting link: see the articles cited in n. 1.

⁵ Contrast Vlastos (1985), sect. II.

⁶ Barnes (1975), p. 97, says that it is 'quite conceivable' that Aristotle makes this mistake - though he also suggests an alternative explanation of why Aristotle restricts knowledge to what's necessary. The remark is omitted in Barnes (1993).

both known and believed, it will be either by different people at the same time, or by the same person or different people at different times.

3. With this background in mind, let's now turn to APo. 1.33. Aristotle begins by saying:⁷

What is epistêton and epistêmê differ from what is doxaston and doxa because epistêmê is universal and through (di') necessities; and what is necessary cannot be otherwise. But there are some things which are true and are beings (esti de tina alêthê men kai onta), but which can also be otherwise. So it is clear that epistêmê cannot be about (peri) these things; for then what can be otherwise could not be otherwise. But nor is nous <about them> (for by nous I mean a principle of epistêmê), nor non-demonstrative epistêmê. (This is supposition (hupolêpsis) of an immediate protasis.) But it is nous, epistêmê, and doxa, and what is called after them, that are true. Hence it remains that doxa is about what is true or false but can also be otherwise. This is supposition of a protasis that is immediate and not necessary. (88b30-89a4)

Like Plato in Republic 5, Aristotle contrasts epistêmê and doxa. As we've seen, Plato's contrast, at least at the beginning of the argument, is between knowledge as such and belief conceived as a genus of which knowledge is a species. That, however, is not the contrast Aristotle is drawing. First, he is not using epistêmê for all knowledge as he conceives of it, but only for what I shall call High-Level Knowledge (HLK): that is, for knowledge of the premises and conclusions of demonstrations.⁸ Aristotle thinks knowledge is more extensive than HLK. But in this chapter he leaves lower-level sorts of knowledge to one side.⁹

Secondly, in 1.33 Aristotle uses doxa just for mere belief: for belief that necessarily falls short of knowledge. He uses 'supposition' (hupolêpsis) for the genus of which doxa and epistêmê are species.¹⁰ As mentioned above, when doxa is so conceived, knowledge isn't a species of and doesn't imply doxa. It doesn't follow, however, that if a proposition can be known it can't be believed. All that follows is that if it is both known and believed, it will be either by different people at the same time or at different times, or by the same person at different times. Nor does it follow from the fact that Aristotle uses doxa for mere belief, that he doesn't think knowledge is a

⁷ I generally follow the translations in either Barnes (1975) or (1993), though I sometimes alter them without comment. I take it that in saying that epistêmê is universal and through necessities, Aristotle means that the conclusions of demonstrations are universal propositions that have been inferred from premises that are necessarily true.

⁸ Aristotle initially uses epistêmê just for the cognitive condition that apprehends the conclusions of demonstrations, reserving nous for the apprehension of immediates, which are, or at least include, real definitions. However, he also calls nous nondemonstrative epistêmê (88b36). (I agree with Ross (1949), pp. 606-7, and Barnes (1975), p. 190, that 'nor' (oude') in 88b36 is epexegetic.) So he uses epistêmê both narrowly, for the cognitive condition that apprehends the conclusions of demonstrations, and also more broadly, so as to include nous.

⁹ I discuss Aristotle on the scope of knowledge in Fine (2010). If lower-level knowledge falls under doxa, Aristotle's distinction between epistêmê and doxa is exhaustive; otherwise, it isn't.

¹⁰ Cf. De An. 427b25.

species of belief as we understand belief: as taking a proposition to be true.¹¹ On the contrary, in saying that epistêmê is a species of supposition, he implies that it is a species of belief in 'our' sense of the term.

Though Aristotle's contrast is between HLK and mere belief, rather than between knowledge as such and belief conceived as a genus, for the sake of convenience I shall nonetheless from now on generally ask how he distinguishes knowledge from belief.

4. At the beginning of the chapter, Aristotle plainly restricts knowledge to what's universal and necessary. But it's not clear whether he restricts belief to what's contingent or merely means that belief includes what's contingent. Nor is it clear whether he is distinguishing knowledge from belief in terms of their different or disjoint propositions or in terms of their different or disjoint objects. There are at least three possibilities: (a) Only propositions are at issue: knowledge is of universal (i.e. general) propositions that are necessarily true, whereas belief is either wholly or partly of propositions that are contingently true and contingently false.¹² (b) Only objects are at issue: knowledge is of universals (which are a kind of being, onta) that necessarily exist; belief is either wholly or partly of objects whose existence is contingent. (c) Both propositions and objects are at issue: knowledge is both of universal propositions that are necessarily true and also of universal objects that necessarily exist. Belief is either wholly or partly of true and false propositions, and of objects whose existence is contingent.

On (a), Aristotle distinguishes knowledge from belief in terms of the truth implications of their contents. On (b), he distinguishes knowledge from belief in terms of the sorts of objects one can know and have beliefs about. On (c), he distinguishes knowledge from belief both in terms of the truth implications of their contents and also in terms of their objects. As we've seen, there are disputes about whether Plato, in Republic 5, distinguishes knowledge from belief in terms of their different truth implications or in terms of their different or disjoint objects. The same sort of issue arises in interpreting 1.33.

One piece of evidence occurs in 88b32-3, where Aristotle uses the phrase 'there are some things that are true and are beings'.¹³ One might take 'and' to be epexegetic, and argue that 'true' is being used for beings, in the sense of objects whose existence is contingent. That would favor (b).¹⁴ However, at least two other readings of the phrase are possible. First, perhaps 'and' is epexegetic in the other direction, and 'beings' is used veridically, for truth.¹⁵ That would favor (a). Alternatively, perhaps 'and'

¹¹ For this conception of belief, see Velleman (2000), pp. 244-281.

¹² Contingently true and false propositions include some general propositions: e.g. 'Some men are tall', which is about a universal not spoken of universally. See De Int. 7, 17b7-12.

¹³ Cf. Rep. 508d4: alêtheia te kai to on; Tht. 178b6-7: alêthê te oietai hauto(i) kai onta.

¹⁴ For this interpretation, see Mignucci (1975), p. 647. (Some who favor this interpretation think the relevant onta are or include states of affairs: not (just) e.g. fire but (also) fire's being hot.) The main passages that have been thought to show that Aristotle uses 'true' for objects are Met. 5.29 and Met. 9.10, 1051a34-1051b9.

¹⁵ This is how it is used in, for example, Met. 1017a31-35. Cf. APo. 71b25-

is conjunctive: belief is either wholly or partly both of contingent truths and falsehoods and also of objects whose existence is contingent. That would favor (c).¹⁶

Of these three readings, I favor the second, according to which 'beings' is used veridically for truth. For Aristotle says that nous is the supposition of an immediate proposition (protasis), and that belief is the supposition of an immediate proposition that is not necessary.¹⁷ If nous and doxa are supposition of a proposition, so too, presumably, is epistêmê.¹⁸ Aristotle also says that epistêmê, nous, doxa and what is named from them (i.e. to epistêton, to noêton, and to doxaston), are true, and that belief is about what is true or false and can be otherwise (89a2-3). In speaking of epistêmê, nous, and doxa as true, Aristotle means that these cognitive conditions can be spoken of as being true; and, he goes on to imply, doxa can also be spoken of as being false. They are so called in virtue of the fact that what they are of is true or, in the case of doxa, either true or false; and he makes it clear that these are propositions. Hence Aristotle is thinking of propositional truth and falsity.

Aristotle's claim, then, is that epistêmê and nous (that is, non-demonstrative epistêmê, i.e. epistêmê that can't itself be demonstrated) imply truth, indeed necessary truth; whereas belief is either restricted to, or at least includes, contingent truths and falsehoods. So at least in this part of the chapter, Aristotle - like Plato on my interpretation of him - distinguishes knowledge from belief in terms of their different truth implications. Plato and Aristotle differ, however, in that Plato merely says that, necessarily, knowledge implies truth, whereas Aristotle says that knowledge implies necessary truth. (It doesn't follow that Aristotle makes the mistake that is allegedly 'made every five years in Mind': he might hold the view on other grounds.)

5. Aristotle next defends his way of distinguishing knowledge from belief by saying that it agrees with two appearances (phainomena) (89a4-5). Perhaps looking at them will help us decide whether he thinks belief merely includes, or is restricted to, contingent truths and falsehoods. Perhaps it will also either reinforce or challenge my suggestion that he distinguishes knowledge from belief in terms of the truth implications of their contents.

According to the first appearance, belief is unstable (abebaion).¹⁹

6.

¹⁶ According to Philoponus (1909), p. 323.15-27, Alexander favors this interpretation (in his commentary on the Posterior Analytics, which unfortunately is no longer extant); and Philoponus seems sympathetic to it.

¹⁷ It's not clear why Aristotle says this about belief. But the crucial point is that he correlates belief with a certain sort of protasis, and so with a certain sort of proposition. Aristotle sometimes uses protasis for premises rather than for propositions as such; but I don't think he does so here. But even if he does so, still, premises are a kind of proposition. So either way, belief is correlated with a certain kind of proposition rather than with objects.

¹⁸ If protasis is being used for premises, and epistêmê is restricted to the conclusions of demonstrations, then epistêmê isn't a supposition of a protasis. But if Aristotle correlates doxa and nous with certain sorts of premises, presumably he correlates epistêmê with conclusions and so with a certain sort of proposition. See previous note.

¹⁹ Aristotle adds: 'and that sort of nature' (kai hê phusis hê toiautê). B1 translates: 'and so too is the nature of the things in question', which suggests that both the cognitive condition and what it is of are unstable. But

Aristotle doesn't say what stability amounts to here; and it can be understood in at least three ways.

First, at the end of APo. 1.2, Aristotle says 'it is not possible to be more confident (pisteuomen mallon) of what one in fact neither knows (eidenai) nor is more happily disposed towards than if one in fact knew it, than one is of what one knows' (72a32-34); someone who has knowledge can't be persuaded out of it (ametapeiston, 72b3-4). Since one is more confident of what one knows than of what one merely believes, one is less likely to lose one's knowledge than one's mere beliefs; hence knowledge is more stable than belief.

The point can be put in terms of the cognitive condition: I'm more liable to cease being in the cognitive condition of believing that p than to cease being in the cognitive condition of knowing that p. It can also be put in terms of what is known and believed: if I know that p, p is stable in the sense that it isn't likely to cease being known by me; whereas, if I merely believe that p, p is unstable in the sense that it is more likely to cease being believed by me.

What's at issue here is rational confidence, not subjective certainty. A proposition p is stable for the person who knows that p, because she sees why p is true; hence she is unlikely to abandon p in the face of counterarguments. A dogmatic believer who holds on to her beliefs come what may isn't in a stable condition in the relevant sense.²⁰

If this is Aristotle's point, it allows there to be belief about every proposition that can be known. For the claim is just that if one knows that p, one's supposition that p is stable in the right way; whereas, if one merely believes that p, it isn't.

A second interpretation rests on Aristotle's view that some propositions can change their truth value.²¹ For example, the proposition that Socrates is standing is true when he is standing; but it changes to being false when he sits down. If Aristotle has this point in mind, perhaps the first appearance means that, if A knows that p, p is stable in the sense that it is always true and can't change from being true to being false. By contrast, if p can change its truth value, it can't be known; one can in this case at most believe that p.²²

Can one not only know but also believe propositions that are always true? So Aristotle seems to allow in Met. 1051b15-17: 'beliefs (doxa) and statements (logos) about things that cannot be otherwise do not come to be at one time true and at another time false, but the same ones are always true and always false'. Here, belief isn't restricted to propositions that can change their truth value; one can believe that p even if p is always true.²³

On a third interpretation, the first appearance says that the only objects one can know are stable, whereas the objects one can have beliefs about are either restricted to, or include, objects that are not stable.

Aristotle need not be so understood: he might just mean that just as belief is unstable, so too is whatever is relevantly like belief.

²⁰ Cf. EN 1146b29-31. This is the point Plato has in mind when he argues in the Meno that knowledge is more stable (monimoi) than true belief. See Fine (2004).

²¹ Cat. 4a34-b13; Top. 123a15-17; SE 178b25-9; Met. 1051b13-18. Cf. Barnes (1975), 189, 126.

²² Nor can one know that p if p is always false: the sort of stability that goes with knowledge is being stably true.

²³ However, the belief at issue here might be the genus rather than mere belief. If so, the passage doesn't show that one can merely believe a proposition that is always true.

Aristotle does sometimes restrict knowledge to what's stable in the sense of being everlasting.²⁴ But when he does so, he doesn't also restrict belief to objects that aren't everlasting. Usually the issue isn't addressed one way or the other. But in EN 1111b31-3 Aristotle explicitly says there can be beliefs about what's everlasting: 'belief (doxa) seems to be about everything, no less about things that are everlasting and things that are impossible [for us] than about things that are up to us' (Irwin transl. somewhat revised).²⁵

The first appearance, then, doesn't help us decide whether Aristotle distinguishes knowledge from belief in terms of objects, propositions, or both. At least, elsewhere he makes a stability point about propositions, about objects, and about the cognitive condition. Further, when he makes one or another stability point elsewhere, he doesn't restrict belief to what's unstable; and in some passages he explicitly allows belief about what's stable in the sense at issue there. The first appearance doesn't explicitly say there can be belief about what's stable. But it leaves that possibility open.²⁶

6. Let's now turn to the second appearance:

no one thinks (oiêtai) he believes something when he thinks it can't be otherwise; rather, he thinks he knows it. But when he thinks it is so but nothing prevents it from being otherwise, he thinks he believes it, assuming that belief is of this sort of thing and that knowledge is of what is necessary. (89a7-10)

Aristotle claims that when someone takes *p* to be a necessary truth, she takes herself to know it and not merely to believe it; and when she takes *p* to be a contingent truth, she takes herself merely to believe it and not to know it. Why do people reason in this way? Because they think belief is restricted to what's contingently true or false, knowledge to what's necessarily true.

In fact, not everyone thinks knowledge is restricted to what's necessarily true, belief to what's contingently true or false. Some people think contingent truths can be known. And some people think one can merely believe a proposition that's necessarily true. One might, for example, believe that Fermat's last theorem is necessarily true, but deny that one knows that it is, since (unlike Andrew Wiles) one can't prove that it is.

Further, even if one thinks knowledge is restricted to what's necessarily true, belief to what's contingently true or false, one shouldn't infer from one's thinking that *p* is a necessary truth that one knows it, or from one's thinking that *p* is a contingent truth that one merely believes it. For one might be wrong about its modal status. (Aristotle allows such errors: see for example APo. 1.5.)

Be that as it may, the crucial point for our purposes is that the second appearance assumes that knowledge is restricted to what's necessary, belief to what's contingent. Hence, if Aristotle accepts it wholesale, he's committed to some version of a Strong Two Worlds Theory, on which what can be known and believed are disjoint. If, as I've assumed so far, propositions are at issue, then the second appearance assumes STWP, on which the propositions that can be known and believed are disjoint. However, the second appearance can also be explained in terms of objects. The idea, in this case, would be that one can know an object only if it necessarily exists; if an object's existence is contingent, one can at best have beliefs about that object. Further, one can't have beliefs about any object whose existence is

²⁴ See e.g. APo. 1.8 (where, however, the perishability at issue involves propositional truth); Met. 1040a; EN. 1139b22-4.

²⁵ Here, again, though, belief might be the genus; if so, the point made in n. 23 applies here as well.

²⁶ But see notes 23 and 25.

necessary. So, though the second appearance assumes a Strong Two Worlds Theory, it's not clear whether it assumes STWO, STWP, or both.

But before assuming that Aristotle accepts either appearance wholesale, let's see what happens next.

7. Aristotle proceeds to ask two questions:

In what way (pôs), then, is it possible to believe and to know the same thing (to auto)? And why will belief not be knowledge, if one posits that it's possible to believe everything one knows (oiden)? (89a11-13).

The first question asks whether, despite what's been argued so far, there's nonetheless a way in which it's possible to believe and to know the same thing. The question is indeterminate in at least two ways. First, it's not clear whether objects and/or propositions are at issue. Secondly, it's not clear if the question is whether there can be belief about everything, or about anything, that can be known. However we resolve these issues, perhaps Aristotle raises the first question because he realizes that he seems to have argued that nothing that can be known can be believed; he sees that that's counterintuitive and wonders whether there's a way out. The second question suggests that at least one way out leads to difficulty: for it suggests that if every proposition that can be known can be believed, belief will be knowledge.²⁷ The two questions taken together therefore raise an aporia: difficulties arise whether or not we say that what can be known can be believed. The rest of the chapter is devoted to resolving this aporia.

It may seem clear that even if every proposition that can be known can be believed, belief wouldn't be knowledge. For, as Plato and Aristotle agree, there are false propositions and they can't be known. However, the second question seems to be asking whether true belief would be knowledge, if every proposition that can be known can be believed. For if p can be known, it's true. Hence if someone believes that p, her belief is true. What, then, determines whether she knows, or just has a true belief, that p? Nonetheless, I'll continue to follow Aristotle's lead and ask, as he does, how to distinguish belief from knowledge.

Before replying to either question, Aristotle explains why it might seem problematical to allow that everything that can be known can be believed:

For the knower (eidôs) and the believer will follow <the same steps> through the middle terms until they come to the immediates; so that (hôte) since the former knows, the believer also knows. For just as one can believe the fact (to hoti), so too <one can believe> the reason why (to dihoti); and that is the middle term. (89a13-16)

Aristotle plainly has propositions in mind here: he's considering a case in which two people - a knower and an alleged mere believer - consider a demonstrated conclusion and trace it back to its grounds, eventually to its ultimate grounds. The suggestion is that, in this case, the alleged mere believer has knowledge. For he accepts exactly the same propositions as the knower does. Hence, if every proposition that can be known can be believed, belief will be knowledge.

On the assumption that belief is not knowledge, there are two ways of responding to this argument. First, one might accept the conditional and argue that not every proposition that can be known can be believed. There are at least some propositions that can be known but not believed. If one accepts such a proposition, one thereby knows it; mere belief isn't an option.²⁸

²⁷ I explain shortly why I think propositions are at issue.

²⁸ For recent discussion and criticism of the closely-related view that there are some propositions such that to understand them is to know them, see Williamson (2007).

Secondly, one might reject the conditional and argue that belief would not be knowledge even if every proposition that can be known can be believed.

8. Which of these replies does Aristotle favor? He begins by saying:²⁹

Or (ê) if he supposes something about what cannot be otherwise in the way in which he grasps (echei) the definitions through which demonstrations <proceed>, will he not believe (doxasei) but know it? While if he supposes that they are true but not that they belong to them in virtue of their essence and form (kat'ousian kai kata to eidos), will he not believe and not truly know - both the fact and the reason why, if he believes through the immediates, but if not through the immediates, he will believe only the fact? (89a16-23)

The basic idea is that if one supposes that, say, man is necessarily and essentially an animal, one thereby has knowledge; whereas, if one supposes that man is an animal but not that man is necessarily and essentially an animal, one has mere belief.³⁰ But there are two ways of spelling this out.³¹

First, Aristotle might mean that even if every proposition that can be known can be believed, knowledge still differs from belief. 'Man is an animal', for example, can be both known and believed. One knows it when one knows that it expresses a necessary, essential truth; one believes it when one supposes that it is true, but does not grasp that it expresses a necessary, essential truth. Both the knower and the believer accept what is in fact a necessary, essential truth (e.g. 'Man is an animal'). But they accept it in different ways.³²

One might wonder whether this line of argument could show that every proposition that can be known can be believed. For even if it shows how 'Man is an animal' can be both known and believed, it's not clear how it could show that the different proposition that 'Man is necessarily an animal' can be both known and believed. For here the modality is part of the content of the proposition. One might stipulate that modality is never part of the

²⁹ I retain echei. Though the OCT deletes it, it is found in most MSs. Aristotle seems to use epistêmê, here, just for knowing the conclusions of demonstrations. For he contrasts having epistêmê with grasping (echei) the definitions through which demonstrations proceed, using the latter to elucidate the former. It's not clear whether he is assuming that one can know, but not believe, correct definitions to be true, and the question is whether the same is true of propositions that can be demonstrated; or whether he means to leave open the possibility that there's a way in which one can not only know but also believe correct definitions to be true.

³⁰ This is an example involving an immediate. But, as mentioned in the previous note, Aristotle here seems to exempt them from the scope of epistêmê. Later, however, he uses this example in speaking of epistêmê; so he goes on to use the term more broadly. It will be simplest to use the example he gives later. Aristotle says that the knower grasps that (say) man is essentially an animal, whereas the believer doesn't grasp this; he infers that the knower but not the believer grasps that man is necessarily an animal. I shall leave to one side discussion of exactly how Aristotle links essence and necessity, and shall generally speak just of necessity.

³¹ Cf. Ackrill (1981), pp. 367-8.

³² This interpretation may be favored by Philoponus (1909), pp. 328.14-329.2, and by Zabarella (1597), esp. 1025, though I am not sure about that. They may instead favor what, in section 10, I call the TFP view.

content of a proposition. But that seems ad hoc. Nor does it seem to be Aristotle's usual view. For example, his modal syllogistic seems to assume that some propositions have modality as parts.

On a second interpretation, Aristotle's point is that, since belief isn't knowledge, there must be at least some propositions that can be known but not believed. The knower accepts the proposition that (e.g.) 'Man is necessarily an animal', whereas the believer accepts the different proposition that 'Man is an animal' (or: 'Man is not necessarily an animal').³³

The second interpretation can itself be developed in two ways. First, one might say that no propositions can be both known and believed. Whenever one knows a proposition, it's of the form 'x is necessarily F'; and whenever one merely believes a proposition, it's not of that form. It's of the form 'x is F' or 'x is not necessarily F'. Alternatively, one might argue that there are some propositions that can be known but not believed, and other propositions that can be both known and believed. One can know, but not believe, the proposition that 'Man is necessarily an animal'. But one can both know and believe the different proposition that 'Man is an animal'. One knows the latter proposition when one thinks it's necessarily true. One merely believes it when one accepts it but doesn't think it's necessarily true: one either has no view about its modality or else thinks it's not a necessary truth.

There are therefore three possibilities: every proposition that can be known can be believed; some but not all of the propositions that can be known can be believed; no propositions can be both known and believed. Unfortunately, it's not clear which of these options 89a16-23 favors. That's not surprising, since the passage is very compressed. To see what Aristotle's considered view is, we need to look at what he says next.

First, though, it's worth noting that on all three views, Aristotle seems to think that, if one supposes that man is necessarily and essentially an animal, one thereby has knowledge. Yet it seems that any proposition can be accepted on inadequate grounds. If Aristotle believes that taking a proposition to be necessarily true, when it is, is sufficient for knowing that it is true, we should be disappointed.³⁴

9. Aristotle proceeds to argue - characteristically - that 'there is not belief and knowledge of the same thing (tou auto) in every way' (89a23-4). But neither, he argues, do they exclude one another in every way. For just as there's a way in which there can be true and false belief about the same thing, so there's a way in which there can be knowledge and belief about the same thing. So his resolution to the aporia raised by his two questions is: there's a way in which one can believe and know the same thing, and a way in which one can't. What are these ways?

Let's look first at Aristotle's explanation of how there can be true and false belief about the same thing. For it is meant to illuminate the way in which there can be knowledge and belief about the same thing. Aristotle explains that:³⁵

to believe truly that the diagonal is commensurate is absurd. But because the diagonal that the beliefs are about (peri) is the same, in this way they are of the same thing, though what it is to be each of them in respect of its account is not the same. (89a29-32)

³³ I return to the differences between these latter two propositions below.

³⁴ Cf. Barnes (1975), p. 190.

³⁵ Aristotle offers two accounts of false belief, rejecting the first but accepting the second. I focus on the second account.

One can't believe truly that the diagonal is commensurate (sc. because it isn't). But one can have the false belief that the diagonal is commensurate. One can also have the true belief that it is incommensurate. That is, one person can have the true belief that it is incommensurate, and someone else can have the false belief that it is commensurate; or the same person can have first one of these beliefs, then the other. Here the 'same thing' is an object, the diagonal. The propositions expressing true and false belief are different; but they are about the same object.

Aristotle's language is reminiscent of the Sophist, which explains false belief as believing, of x, what isn't true of x.³⁶ At t1, I might falsely believe, of Theaetetus, that he is flying; and you might believe truly, of him, that he is sitting. The thing, x, is the same, but the propositions about x are different.

Aristotle proceeds to use this account of how there can be true and false belief about the same thing, to show how there can be belief about what can be known:

<knowledge> is of the animal³⁷ in such a way that it is not possible for it not to be an animal, and <belief is of the animal> in such a way that it is possible - e.g. if the former is of just what is man (hoper anthrôpou esti), and the latter is of man but not of just what is man. For they are the same,³⁸ because man <is the same>; but they are not the same in the way (hôs) they take man <to be>. (89a33-37)

Aristotle immediately infers:

It is clear from this that it is not possible to believe and to know the same thing at the same time. For then one would at the same time have the supposition that the same thing can be otherwise and that it cannot be otherwise - which is not possible. In different people it is possible for there to be each <of these attitudes> with regard to the same thing, as has been said. But in the same person it is not possible even in this way. For he would at the same time have the supposition that e.g. a man is just what is an animal (for this is what it is for it not to be possible for a man not to be an animal), and also the supposition <that man is> not just what is an animal (for let that be what it is for it to be possible). (89a38-b6)

Aristotle has now explained the way in which there can, and the way in which there can't, be knowledge and belief of the same thing.

10. But what are these ways? Aristotle summarizes them in 89a36-7: knowledge and belief can both be of e.g. man; but they conceive of man in different ways.

Here is one natural interpretation of this claim. If to auto is an object, there can be belief about everything that can be known: one can both know, and have beliefs about, e.g. man. If, however, to auto is a proposition, nothing that can be known can be believed. Consider, for example, suppositions about what man is. If one's supposition amounts to knowledge, one knows the proposition 'Man is necessarily an animal'. If, however, one's supposition is a mere belief, one believes that 'the same

³⁶ Sophist 262e-264b. There's considerable dispute about precisely how the Sophist explains false statement and belief. Fortunately, this need not concern us here.

³⁷ In speaking of 'the animal', Aristotle means e.g. man, which he goes on to discuss.

³⁸ To auto. Here we might have expected tou autou, for Aristotle's point is not that knowledge and belief are the same, but that what can be known and believed is the same.

thing [man] can be otherwise': that is, one believes the proposition 'Man is not necessarily an animal'. Strictly speaking, knowledge is of the form 'x is necessarily F'; and belief is of the form 'x is not necessarily F' (or: 'x is contingently F'). Let's call this the Same Object, Different Proposition view (SODP). On it, Aristotle's claim is that no propositions can be both known and believed.

Notice that in the example Aristotle gives, the belief about what man is, is false. Why does Aristotle suggest this? SODP provides a reason. Recall that Aristotle's second question asks whether belief would be knowledge, if every proposition that can be known can be believed. Perhaps Aristotle thinks the answer to this question is 'yes'. He therefore rejects the antecedent of the conditional, and argues that not every proposition that can be known can be believed; in fact, no such proposition can be believed. For any proposition that can be known, one either in fact knows it or is out of touch with it altogether; mere belief isn't an option. Hence, either one can't have beliefs about (for example) what man is at all; or else one can have a false belief. Aristotle plumps for the latter option.³⁹

Even if there can't be any mere true beliefs about what man is (for here one has either knowledge or a false belief), there can be mere true beliefs about man. One might e.g. have the true belief that man is tall (i.e. that some men are tall).

If Aristotle accepts SODP, we can say that he accepts the second appearance wholesale, if it is read in terms of propositions. We can also see how Aristotle answers his two questions. The first question asks how it's possible to know and believe the same thing. According to SODP, one can do so if 'the same thing' is an object, but not if it is a proposition. The second question asks whether belief would be knowledge, if every proposition that can be known can be believed. SODP accepts this conditional; to avoid the consequent, it says that no propositions can be both known and believed.

SODP has much to recommend it. First, when Aristotle discusses the second appearance, he doesn't express any misgivings about it. Perhaps that's because he accepts it, if it is read in terms of propositions - and it can easily be so read. He avoids the counterintuitive result that nothing can be both known and believed by turning from propositions to objects.

Secondly, this is what we should expect him to do, given that he uses his account of true and false belief to explain how there can be belief about everything that can be known. For the key move in that account is to distinguish between propositions and objects. Aristotle can then say that, just as there can be true and false beliefs about the same objects, though the propositions by which one does so are disjoint, so there can be knowledge and belief about the same objects, though the propositions by which one does so are disjoint.

Thirdly, as we've seen, in 89a36-7, Aristotle says that knowledge and belief are of the same thing, because man is the same; they differ in how they take man to be. This is naturally taken to mean that the object - e.g. man - is the same, though the propositions about man that are known and believed are different.

Fourthly, Aristotle says that 'it is clear from this that it is not possible to believe and to know the same thing at the same time' (89a38-9). We might have expected him to say that the reason is that no one can simultaneously know, and merely believe, that p. For, as we've seen, 'belief', here is mere belief. But that is not the reason he gives. Rather, he says that if one knew and believed the same thing at the same time, one

³⁹ Cf. Met. 9.10, where Aristotle seems to say that in the case of essences, one either grasps the truth or is out of touch; error is impossible, except accidentally.

would be supposing that the same thing, *x*, both can and can't be otherwise: one would simultaneously accept the propositions that (e.g.) 'Man is necessarily an animal' and 'Man is not necessarily an animal'; one would be committed to accepting contradictory claims. That suggests that knowledge is always of the form '*x* is necessarily *F*', whereas belief is always of the form '*x* is not necessarily *F*'. On SOPD, it's clear why Aristotle says this: he thinks that belief would be knowledge, if every proposition that can be known can be believed. To avoid that result, he suggests that the propositions that can be known and believed are disjoint.

Though SOPD fits the chapter well, it has at least one disadvantage: it doesn't seem to sit well with what Aristotle says elsewhere. At least, he is often thought to believe that, where *p* is a proposition that can be demonstrated, one first believes that *p* is true, and then acquires high-level knowledge that *p* is true by demonstrating it.⁴⁰ On SOPD, Aristotle would be speaking loosely when he speaks that way. Strictly speaking, one first believes one proposition, and then comes to know a different proposition.⁴¹

Accordingly, let's consider a second interpretation, which I mentioned briefly above: perhaps Aristotle thinks that every proposition that can be known can be believed; but the knower and believer accept the same propositions in different ways. One can, for example, both know and believe the proposition 'Man is an animal'. When one knows it, one sees that it expresses a necessary truth. When one believes it, one does not see this: one either has no views about its modality or else takes it to express a contingent truth. (In fact, as we've seen, Aristotle seems to plump for the latter option, since he says that the believer supposes that man is not just what is an animal, and that it is possible for man not to be an animal.) Let's call this the Same Proposition, Different Mode of Apprehension view (SPDM). Like SOPD, it too has advantages and disadvantages.

In its favor is the fact that it allows Aristotle to say that one can first believe that *p*, and then come to know that *p* by demonstrating it. And, as noted, Aristotle is often thought to say this elsewhere. Further, insofar as SPDM allows one to grasp the same proposition in different ways, it seems philosophically more satisfying than SOPD does.

However, SPDM also has disadvantages. First, it aims to show how every proposition that can be known can be believed. But, as noticed above, it seems to show at most how some propositions can be known and believed. Though it shows how 'Man is an animal' can be both known and believed, it doesn't show how 'Man is necessarily an animal' can be both known and believed. We could stipulate that no proposition has modality as part of its content. But that seems *ad hoc*; nor does it seem to be Aristotle's usual view. To this extent, SPDM doesn't fit well with everything Aristotle says elsewhere, any more than SOPD does.

We might then consider a third interpretation, according to which some but not all of the propositions that can be known can be believed. 'Man is an animal' can be both known and believed, but 'Man is necessarily an animal' can be known but not believed. Let's call propositions like 'Man is an animal' truncated propositions, and propositions like 'Man is necessarily an animal' full propositions; and let's call this third interpretation the Truncated vs. Full Proposition view (TFP). According to it, every truncated proposition that can be known can be believed, but no full proposition can be

⁴⁰ However, it's worth noting that, though this is a natural interpretation of what Aristotle thinks, he doesn't actually tend to speak that way explicitly. But see 76b28-34. Thanks to David Bronstein for calling this passage to my attention.

⁴¹ Cf. Ackrill, *ibid.*

both known and believed.

SPDM and TFP answer the first and second questions differently from one another, and from SODP. SPDM answers the first question, about whether the same thing can be known and believed, by saying that every proposition that can be known can be believed. Accordingly, it answers the second question by rejecting its conditional, and saying that, though every proposition that can be known can be believed, still, belief isn't knowledge because the modes of apprehension are different. TFP answers the first question by saying that every truncated proposition that can be known can be believed, but no full proposition that can be known can be believed. It answers the second question by rejecting its conditional if it is read in terms of truncated propositions, but by accepting it if it is read in terms of full propositions.

Both SPDM and TFP face some difficulties internal to the chapter. For one thing, they don't seem to fit as well as SODP does with Aristotle's account of true and false belief. That account, we've seen, relies crucially on distinguishing objects from propositions. Neither SPDM nor TFP relies on that distinction. Rather, Aristotle would be transferring the role played by objects to propositions (or to truncated propositions); and he would be transferring the role played by propositions to modes of apprehension or to full propositions. The parallel is not nearly as neat.

Further, we saw that Aristotle doesn't mention any misgivings when he discusses the second appearance. Yet on SPDM, he rejects it without explicitly saying so. For his considered view, on SPDM, is that every proposition that can be known can be believed; it's just the mode of apprehension that differs. TFP fares better here. For on it, we can say that Aristotle modifies or qualifies, but doesn't reject, the second appearance. For on TFP, he accepts the second appearance if it means that no full proposition can be both known and believed; he just goes on to say that truncated proposition that can be known can be believed.

Moreover, we've seen that, on SODP, it's clear why Aristotle says that mere beliefs about what man is are false. On SPDM it's not clear why he says this. He should say instead just that the mere believer believes that man is an animal; he need not say that the mere believer falsely believes that man is not necessarily an animal. TFP again fares better here than SPDM does. For TFP allows Aristotle to say that, though the believer believes that man is an animal (and so to that extent he has a true belief), he is committed to accepting the corresponding full proposition that 'Man is not necessarily an animal', which is false.

I've suggested three interpretations of Aristotle's final view. According to SODP, one can have beliefs about every object that can be known, but no proposition can be both known and believed. According to SPDM, every proposition that can be known can be believed; knowledge and belief differ instead in the way in which they accept propositions. According to TFP, no full proposition that can be known can be believed; but every truncated proposition that can be known can be believed. Each of these interpretations has advantages and disadvantages. But, on the whole, SODP seems to me to fit best into the chapter as a whole.

11. Though I'm not sure which of these three interpretations is right, they all compare interestingly with Plato's argument in Rep. 5. As we've seen, the argument in Rep. 5 doesn't commit Plato to either STWO or WTWO: it leaves open the possibility that there can be knowledge and belief of exactly the same objects. Nor does the argument commit Plato to either STWP or WTWP: it leaves open the possibility that every proposition that can be known can also be believed.

On all of SODP, SPDM, and TFP, Aristotle rejects STWO, but accepts

WTWO: for he restricts the objects that can be known to those that necessarily exist. Hence on all three interpretations, 1.33 differs from the argument in Rep. 5 in being committed to a Weak Two Worlds Theory for Objects. (Of course, if, unlike me, one thinks the Rep. 5 argument defends STWO, then it is committed to a more robust Two Worlds Theory for Objects than 1.33 is. And if, unlike me, one thinks the argument in Rep. 5 defends WTWO, then it agrees with 1.33 on this point. In either of these two cases, though, Plato and Aristotle would still differ insofar as different objects would be at issue: forms vs. sensibles for Plato; what's necessary vs. what's contingent for Aristotle.)

As to propositions, whereas Plato says just that knowledge but not belief implies truth, Aristotle, on all three interpretations, says that knowledge implies necessary truth. Hence, just 1.33 has a more restrictive view than Rep. 5 does about the range of objects that can be known, so it has a more restrictive view about the range of propositions that can be known.

SPDM avoids a Strong Two Worlds Theory for Propositions: but only by stipulating that no propositions have modality as parts. TFP commits Aristotle to a Strong Two Worlds Theory for Propositions for full, though not for truncated, propositions. On SODP, Aristotle straightforwardly accepts a Strong Two Worlds Theory for Propositions.

It's often thought that, in Rep. 5, Plato defends some version of a Two Worlds Theory, though in my view he does not do so. However that may be, if the argument of this paper is correct, Aristotle is committed to a Weak Two Worlds Theory for Objects and (on two of the three interpretations we've considered) to a Strong Two Worlds Theory for Propositions. It's therefore Aristotle, not Plato, who defends a Two Worlds Theory.⁴²

References Cited

- Ackrill, J.L. 1981: 'Aristotle's Theory of Definition', in E. Berti (ed.), Aristotle on Science. Padua: Editrice Antenore, 1981, pp. 359-384.
- Barnes, J. 1975, 1st edition/1993, 2nd edition: Aristotle: Posterior Analytics. Oxford: Clarendon Press, 1975/1993.
- Fine, G. 1978: 'Knowledge and Belief in Republic 5'. Reprinted in Fine 2003, pp. 66-84.
- Fine, G. 1990: 'Knowledge and Belief in Republic 5-7'. Reprinted in Fine 2003, pp. 85-116.
- Fine, G. 2003: Plato on Knowledge and Forms: Selected Essays. Oxford: Clarendon Press, 2003.
- Fine, G. 2004: 'Knowledge and True Belief in the Meno', Oxford Studies in Ancient Philosophy, 27, pp. 41-81.

⁴² Earlier versions were read at Oxford, Yale, the Moral Sciences Club in Cambridge, and the University of Bologna. Thanks to the audiences for helpful discussion. Thanks too to Paolo Crivelli, Dominic Scott, David Sedley, and Linda Zagzebski for helpful discussion; to Walter Cavini, Andrew Chignell and Mikhail Peramatzis for helpful written comments; and to David Bronstein for helpful written and oral comments, and for sharing his own paper on 1.33 with me.

Fine, G. 2010: 'Aristotle on Knowledge', Elenchos, 14, pp. 121-56.

Mignucci, M. 1975: L'argomentazione dimostrativa in Aristotele. Commento agli Analitici Secondi. Padua: Editrice Antenore, 1975.

Philoponus, J. 1909: In Aristotelis Analytica posteriora commentaria cum anonymo in librum secundum, ed. M. Wallies, Commentaria in Aristotelem Graeca, XIII.3. Berlin: Reimer.

Ross, W.D. 1949: Aristotle's Prior and Posterior Analytics. Oxford: Clarendon Press.

Velleman, D. 2000: The Possibility of Practical Reason. Oxford: Clarendon Press, 2000, pp. 242-281.

Vlastos, G. 1985: 'Socrates' Disavowal of Knowledge' Philosophical Quarterly, 35, pp. 1-31.

Williamson, T. 2007: The Philosophy of Philosophy. Oxford: Blackwell, 2007.

Zabarella (1597/1966): In duos Aristotelis libros Posteriorum Analyticorum Commentarii, in Opera Logica. Hildesheim: Olms.