

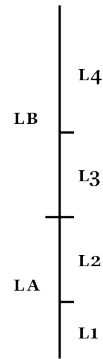
Dianoia & Plato's Divided Line

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ABSTRACT. This paper takes a detailed look at the *Republic's* Divided Line analogy and considers how we should respond to its most contentious implication: that *pistis* and *dianoia* have the same degree of 'clarity' (σαφήνεια). It argues that we must take this implication at face value and that doing so allows us to better understand both the analogy and the nature of *dianoia*.

PLATO'S IMAGES OF the Sun, Line, and Cave¹ have inspired a large quantity of scholarship, but if the aim of scholarship is to build consensus, it has had very limited success. There remains little agreement about even basic interpretive questions, and for some questions, there are almost as many answers as papers expressing them. The Divided Line is no exception, but we might think that it ought to be. While the Sun and Cave are figurative and open-ended images, the Line is a matter-of-fact mathematical analogy, and Socrates gives directions about how the Line should be constructed (509D6–8) and how it should be read (e.g. 511E2–4). A majority of modern commentators agree to this much. So why is there so much disagreement?

The problem is that if we accept Socrates' directions at face value, the Line doesn't say what most commentators expect it to say. By following his directions, we learn that the length of each 'minor' section of the Line (L1 to L4) is analogous to the 'clarity' (σαφήνεια) of the cognition it represents, and that the Line's two middle two sections, L2 and L3, represent the clarities of *pistis* and *dianoia*, respectively. We also learn that L2 and L3 are the same length, which means that they represent the same degree of clarity, and *pistis* and *dianoia* are equally clear. Unfortunately, this result contradicts a firmly and widely held conviction that *dianoia* is clearer than *pistis*, and so commentators almost universally reject the face-value reading. But there has been no agreement about what should replace it, and, thus, no agreement on the basic interpretation of the Line analogy.



¹ I will use capitals (Sun, Line, Cave) when referring to the images themselves and lower case (sun, line, cave) when referring to the eponymous entities in the images.

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I am going to argue that too much faith has been put in the conviction that *dianoia* is clearer than *pistis*. Commentators lean heavily on its *prima facie* plausibility, but rarely examine it closely. I want to show that once we do examine it, it turns out to be less plausible than it appears at first, and, crucially, less plausible than the reading of the Line that it supposedly refutes. Though it may seem ironic in the context of so much scholarly disagreement, we should remember that Plato introduces the Line analogy as a helpful way to explain, among other things, the relationship between *pistis* and *dianoia*. Rather than beginning by rewriting Plato's *explanans* to fit our expectations about how the *explanandum* ought to look, we can and should use the Line to help us make better sense of *dianoia*. This means accepting that it is no clearer than *pistis*, but this, I will argue, is not such a strange claim once it is placed within a correct and comprehensive reading of the analogy.

It is important to note that my claim is not that *dianoia*'s value as a cognition has been overestimated. There is no particular accolade that has been attached to *dianoia* that I will be denying, except, of course, that it is clearer than *pistis*, and even here my dispute with many commentators is merely verbal. Often commentators intend 'clearer' to mean something very general like 'epistemically superior', yet if they spell out the respect in which they think it is superior, it does not in fact turn out to be 'clarity' in the narrower sense in which (I argue) Socrates uses the term in the Line analogy. While *dianoia* is not a clearer cognition, it is superior to *pistis* in other significant respects, which I will also explore.

At the same time, I do want to claim that *dianoia* is a stranger addition to Plato's epistemology than is usually recognised. Books 6 and 7 of the *Republic* are the only places where we find Plato dividing knowledge into two kinds, and, on examination, *dianoia* looks very different from what he calls knowledge elsewhere, even as recently as book 5. Most surprisingly, Socrates tells us that *dianoia* is not explanatory in the way that is usually the hallmark of Platonic knowledge. This failure to be explanatory is both the principal respect in which *dianoia* differs from *noēsis* and also, I will argue, the principal respect in which it is comparable to *pistis*. So we must look elsewhere for both what qualifies *dianoia* as a species of knowledge and what distinguishes it from *pistis*.

This paper has roughly three stages: an appraisal of the current state of the literature on the Line; a new defence of the face-value reading of the analogy; and an account of what this tells us about *dianoia*. I begin by

spelling out the face-value reading of the analogy, and its putative problems (section 1). I follow this with an overview of the various objections and alternatives to this reading that have been proposed, and I argue that they do not give us a sufficient grounds to reject it (section 2). I then defend the face-value reading. My guiding assumption is that a *bona fide* reading of the analogy must meet two simple, but rarely met, criteria:

1. It must offer an account of the properties that are analogous to length and identify the bearers of these properties.
2. It must explain why the sections of the Line have the lengths that they have.²

I address these criteria in turn in sections 3 and 4, the first with an account of what ‘clarity’ and ‘truth’ mean in the analogy and the second with what I will call the ‘image–original’ reading of the significance of the ratio that relates the Line’s sections. The most controversial claim of the image–original reading is that *dianoia* and *pistis* are set over the same object, and thus have their clarity limited in the same way: both rely on sensibles as their only direct source of information, so neither can go beyond the information that sensibles provide. Of course, *dianoia* uses sensibles in a very different way, using them as images of intelligibles, but this, I will argue, is not relevant to its clarity. I compare this reading with various other attempts to pin down *dianoia*’s characteristic object (section 5). And, finally, I consider more generally what *dianoia* is, and how it in fact differs from *pistis*, with a close eye on its role in the *Republic*’s educational curriculum (section 6).

1 THE PROBLEM WITH THE DIVIDED LINE

The difficulty faced when interpreting the Line analogy can be expressed by the following inconsistent triad:

1. L₂ and L₃ are the same length.
 2. The ratio of the length of one section of the line to another represents the relative ‘clarity’ (σαφήνεια) of *eikasia* (L₁), *pistis* (L₂), *dianoia* (L₃), and *noēsis* (L₄).
- 2 The second criterion might seem to beg the question in my favour, but I am making no assumption about *how* it is met: it could be met, in part, by explaining why the equal length of the middle sections has no significance.

3. The clarity of *dianoia* is greater than the clarity of *pistis*.

I will deny claim 3, but for now I want to explain the rationale behind each claim.³

Let us begin with the construction of the line. Socrates gives the following directions:

Represent them [sc. the visible and intelligible] by a line divided into two unequal sections. Then divide each section—that of the visible kind and that of the intelligible—in the same ratio.

ὥσπερ τοῖνυν γραμμὴν δίχα τετμημένην λαβὼν ἄνισα τμήματα, πάλιν τέμνε ἑκάτερον τμήμα ἀνὰ τὸν αὐτὸν λόγον, τὸ τε τοῦ ὀρωμένου γένους καὶ τὸ τοῦ νοουμένου... (509D6–8)⁴

This is all we need to conclude that the Line's middle sections are equally long, as a matter of mathematical necessity. We can demonstrate this as follows. First: 'It is like a line divided into two unequal sections.' We describe this as a line of length L divided in an unequal ratio, $p : q$, with q greater than p (and $p + q = 1$). This gives us a line with two unequal sections of lengths pL and qL . Second: 'Then divide each section ... in the same ratio.' So now we divide, first, the section with length pL in the ratio $p : q$, yielding two sub-sections: $p(pL)$ and $q(pL)$. Then we do the same for the qL section, yielding two further sub-sections: $p(qL)$ and $q(qL)$. The result is a line divided into four sections with the following lengths: ppL , qpL , pqL , and qqL . Since multiplication is commutative, qpL and pqL are the same length, and we can conclude that the middle sections of the line are equal.

Turn now to claim (2) of the triad: given this construction of the Line, what exactly is the analogy? Socrates' instructions on how to read the analogy are, I think, quite clear, but many of the disagreements about the Line originate from small differences in how they have been understood. It is worthwhile, then, spending some time showing that the basic evidence leads us to a single, and fairly simple, reading of how the analogy is supposed to work.

The two major sections, LA and LB , represent the visible—standing for the sensible in general⁵—and the intelligible, respectively. But as with the

³ With respect to other disagreements about the Line's construction—e.g. whether it is horizontal or vertical or whether the longest section is L_1 or L_4 —I take Smith 1996 and 2019, 97–98, to offer the definitive answers.

⁴ Translations are from Grube & Reeve 1992, with frequent amendments.

⁵ See 507B8–9, and 524C13, in context, with Bedu-Addo 1979, 93, for discussion. Plato frequently uses 'visible' as a synecdoche of the sensible: e.g. *Phd.* 79A6–7 and *Ti.* 48E5–49A1.

Sun analogy that preceded it, Socrates is primarily interested in the intelligible and sensible as objects of cognition: the sensible as what can be believed and the intelligible as what can be known (τὸ δοξαστόν and τὸ γνωστόν, 510A9; cf. 534A1–5). Accordingly, for the four minor sections, we have four kinds of cognition related in different ways to sensible and intelligible objects: two kinds of belief for the sensible, *eikasia* (L1) and *pistis* (L2), and two kinds of knowledge for the intelligible, *dianoia* (L3) and *noēsis* (L4).⁶ Most of the exposition of the Line is a guide to what we should ‘put’ in each section of the Line or, in other words, to what each represents. For sections L1 and L2, Socrates describes the objects of cognition: ‘images’ (εἰκόνες) of sensible particulars (e.g. shadows and reflections) and original sensible particulars. He says very little, however, about the cognitions themselves, *eikasia* and *pistis*. For sections L3 and L4, he does nearly the opposite: he describes at some length how each cognition works, assigning Forms to *noēsis*, but leaving the object of *dianoia* obscure—a lacuna that turns out to be the source of almost all the controversies about the nature of *dianoia* and its representation in the Line analogy.

In summary, then, we have the following, remaining neutral for now about *dianoia*’s object:

	COGNITION	OBJECT
L4	<i>Noēsis</i>	Forms
L3	<i>Dianoia</i>	?
L2	<i>Pistis</i>	Sensible particulars
L1	<i>Eikasia</i>	Images of sensible particulars

But this is an ordered list, not an analogy. As a list it introduces important new kinds of cognition, but the Line itself is not needed for this—Plato could simply have named them—and it does not explain Socrates’ various remarks comparing and contrasting the four cognitions, remarks that are apparently supposed to be illustrated by the Line. To find an analogy, we need to find properties of the Line that are analogous to certain properties of the cognitions. To do this, we need to look at how the Line is construc-

6 As is explicit later: the lower two kinds of cognition ‘are jointly called belief [δόξα]’ and the higher two ‘are jointly called *noēsis*’, in a context in which it is clear that he has reversed his use of *epistēmē* and *noēsis* (534A1–2). See section 2.4.

ted.⁷ The Line's two most salient properties are the relative lengths of its sections and the several pairs of sections that are related by the *same* ratio (hereafter, 'the ratio'): $LA : LB :: L1 : L2 :: L3 : L4$.⁸ The analogical significance of the relative lengths and the ratio are closely related, but here it is helpful to consider them separately. With respect to length, we will expect, for example, the fact that $L2$ is *longer* than $L1$ to represent a way in which *pistis* surpasses *eikasia* in some analogous property. With respect to the ratio, we will expect there to be a comparable kind of relationship between each of the pairs of cognitions that match the ratio: for example, *eikasia* and *pistis* ($L1 : L2$) and *dianoia* and *noēsis* ($L3 : L4$).

When Socrates spells out the analogy, these initial expectations are borne out. First, we have the following two statements:

With respect to the clarity and obscurity of one to the other [σαφήνεια καὶ ἀσαφήνεια πρὸς ἀλλήλα], in one of the two sections of the visible are images [$L1$] ... [And] in the other put the things of which they are images [$L2$] ... (509D9–510A5)

And would you be willing to say, with respect to truth and untruth [ἀληθεία τε καὶ μῆ], the division is in this ratio: as what can be believed [LA] is to what can be known [LB], so the likeness is to the thing that it is like? (510A8–10)

These lines introduce 'clarity' (σαφήνεια) and 'truth' or 'reality' (ἀλήθεια) as the properties represented by the Line, and we can see that they are analogous to the relative *lengths* of the sections. The first passage tells us that $L1$ is to $L2$ as image to original, and the second passage tells us that belief is to knowledge, LA is to LB , as a likeness is to that which it is like: that

- 7 The end result of the construction, rather than the steps taken to get there, as recently claimed by Echterling 2018. He claims (a) that the Line would have been drawn, with compass and straightedge, in a specific manner and (b) that the analogy extends to some of the guidelines used in this way of drawing it. I have no problem with (a), in principle, but (b) seems unmotivated. Note that (a) does not entail (b): that an ordinary Greek would know that this is how to construct the Line (claim (a)) does not entail that they would know that Socrates wants to include part of that construction in his analogy (claim (b)). Socrates would need to say: 'draw it in the usual way and *in addition* take what I call *τιμήματα* to be the areas of the slices of the triangle you used to draw it' (as Echterling concludes). But since he did not say this, I do not see why we should think it is what he meant. It seems that Echterling is leaning heavily on the fact that it makes $L3 > L2$, which he assumes to be the correct result.
- 8 While I think it is significant that it is the same ratio, I do not see any need to suppose Plato had any particular ratio in mind. Some have argued that it is the golden mean: Des Jardins 1976 and Dreher 1990. Pomeroy 1971 just assumes it. Balashov 1994 argues convincingly against such views.

is, again, as image to original (in section 4 I argue that the ratio measures precisely the difference in clarity between image and original). This only works as a description of the Line if it describes the proportional relationships between the lengths of the sections, namely, $LA : LB :: L1 : L2$.

The most general statement of the analogy is in the closing lines of book 7:

[a] Assign to the four sections these four conditions in the soul: *noēsis* to the highest [sc. the highest section]; *dianoia* to the second; to the third, assign *pistis*; and to the last, *eikasias*, and [b] order them in a ratio, understanding that as that which they are set over shares in truth, to this degree each shares in clarity.

καί μοι ἐπὶ τοῖς τέτταρσι τμήμασι τέτταρα ταῦτα παθήματα ἐν τῇ ψυχῇ γιγνόμενα λαβέ, νόησιν μὲν ἐπὶ τῷ ἀνωτάτῳ, διάνοιαν δὲ ἐπὶ τῷ δευτέρῳ, τῷ τρίτῳ δὲ πίστιν ἀπόδος καὶ τῷ τελευταίῳ εἰκασίαν, καὶ τάξον αὐτὰ ἀνά λόγον, ὥσπερ ἐφ' οἷς ἐστὶν ἀληθείας μετέχει, οὕτω ταῦτα σαφηνείας ἡγησάμενος μετέχειν. (511D6–E4)

I take [a] to explain how to arrange the analogy: it introduces the names of the four cognitions and tells us explicitly the section to which each should be assigned. Then, so arranged, [b] explains how the analogy works.

It is possible to understand [a] differently, taking it to state an analogy between the *height* of a section and the value of the cognition it represents. For example, consider Brumbaugh:

It is the relative position, not the relative length, of segments in the proportion figure on which the mathematical statements of analogy are based. 'Higher' and 'lower' are the key spatial concepts in this analogical interpretation. Actually, this is so evident in context that relatively few Plato students have been bothered by the fact that if we interpret the proportions as relating absolute lengths, the second and third segments of the line are equal. They are clearly unequal in respect to higher–lower position.⁹

I have no problem in principle with what results from this higher–lower analogy. That is, I agree that each cognition is superior to the previous one, with the worst at the bottom and the best at the top. The analogy from relative length (rather than height) entails that *dianoia* and *pistis* are equally *clear*, but this should not be confused with the obviously false claim that they are equal in all respects. *Dianoia* is a kind of knowledge, and is about intelligibles, and this distinguishes it very sharply from *pistis*. This is why they are on either side of the enormously significant categorical distinction

⁹ Brumbaugh 1954, 99.

drawn by the major sections of the Line, LA and LB, dividing the sensible and the intelligible. I will have plenty to say about these differences in sections 5 and 6. For now, I just want to emphasise that these differences are compatible with *dianoia* and *pistis* being the same in other respects, such as clarity.

It strikes me as incredible, however, to suppose that this higher–lower analogy somehow supersedes the analogy that arises from Socrates' directions for drawing the Line. Consider what would be required to give such a view an adequate defence. Since it would be implausible to claim that the construction of the Line has *no* significance, the defender of the higher–lower analogy would still need to find *an* interpretation of the sections' relative lengths, so they would not be free of the burden of explaining why L₃ is no longer than L₂. With two analogies at play, they would then need to show that the properties that are discussed explicitly in the text, clarity and truth, are those that are represented by the higher–lower analogy. This would be an uphill battle given both that the higher–lower distinction is (at best) less prominent in the text and that, as we saw, the passages that mention clarity and truth—509D9–510A5 and 510A8–10 above—appear to have the relative lengths of the sections in mind, not their height. It is hard not to be left with the suspicion that the real reason scholars have placed greater significance on the putative higher–lower analogy is simply that they prefer its results.

Consider now the second part of the passage, [b]. It is succinct, but relatively straightforward. It first invites us to order the cognitions *ἀνὰ λόγον*, 'in a ratio' or 'proportionately', and then states explicitly what is being illustrated by the analogy, namely a co-varying pair of properties, clarity and truth, that are held by the four cognitions and their objects, respectively. I take it that 'order them in a ratio' invites us to order the cognitions in relation to each other according to the ratio used to construct the Line, which gave us the sections' lengths. Again, one could propose that 'in a ratio' refers to how the sections are ordered by height, but this is improbable both for the reasons given in the previous paragraph and the fact that Socrates already used the phrase *ἀνὰ λόγον* when dividing the *lengths* of the sections 'in the same ratio' (*ἀνὰ τὸν αὐτὸν λόγον*, 509d7–8).¹⁰ So from this reading of [b], and confirming the previous statements of the analogy, we have the following basic reading of how the analogy is supposed to work:

¹⁰ See Foley 2008, 4–6, who reaches the same conclusion.

the relative lengths of L₁, L₂, L₃, and L₄ stand for the relative clarity of *eikasia*, *pistis*, *dianoia*, and *noēsis*, and the relative truth of their corresponding objects.¹¹

It follows from the first two claims of our inconsistent triad that *pistis* and *dianoia* are equally *clear* and that the objects they are set over are equally *true*. This is what I have called the face-value reading of the Line. The problem is that it very much seems that, (3), *dianoia* is clearer than *pistis*. For example, *pistis* is a kind of belief, while *dianoia* a kind of knowledge; *pistis* is a direct awareness of sensibles, while *dianoia* is an indirect awareness of Forms; *pistis* has a modest role in Plato's educational curriculum, while *dianoia* 'draws the soul from the realm of becoming to the realm of what is' (521D4–5), preparing the way to the highest kind of knowledge, *noēsis*. Moreover, in the Cave allegory, it is widely thought that the advancement from *pistis* to *dianoia* is represented by the moment the prisoner leaves the cave and sees the sun-lit world for the first time. This step, which represents the advancement from the visible to the intelligible realm, appears to be a tremendously significant step in the prisoner's journey—yet the equality of L₂ and L₃ seems to suggest that it is no progress at all. For these and related reasons, almost every commentator has tried, in one way or another, to avoid the face-value reading.

2 THE FACE-VALUE READING: ALTERNATIVES & OBJECTIONS

2.1 *Alternative readings: a concise overview*

The majority of readings, all of which try to avoid the inconsistent triad, fall into one of the following four families.¹²

1. *Amend the text.* When such strategies were still fashionable, some commentators simply excised ἄνισα τμήματα, 'unequal sections' (509D6–7) as 'a gloss that has crept into the text'.¹³ Philologically, this is not well mo-

¹¹ I offer a more precise account of how clarity and truth relate to the cognitions and their objects in section 3.

¹² For a lengthier discussion of many of these views, but with a different way of grouping them into families, see Foley 2008.

¹³ Murphy 1951, 158–59, and 1932, 99 n. 1. See also Nettleship 1897, 238–39 n. 1, and his editor's rebuke, and, most recently, Fine 2003, 99 n. 26.

tivated,¹⁴ and it is contradicted by Socrates' attribution of complex proportional relationships to the sections (510A8–10 and 534A3–5), which are meaningless if the sections are equal, yet do indeed follow if we leave the text as it is.

2. *A disjunctive analogy.* There is a long history of commentators who deny that the sections of the Line comprise a single, continuous analogy and, thus, deny that L2 and L3 can be directly compared. Typically, the claim is that LA and LB play categorically different functions: LA represents a metaphor; LB represents something literal. For example, the view might be that the entire visible realm represented by LA is still playing the purely illustrative role it played in the Sun analogy, and so is just a metaphor for the literal cognitions and objects represented in LB.¹⁵

A thorough assessment of these readings would require an examination of each specific formulation, but I will mention a few common problems. First, they have difficulty explaining why there is a *line*. Why a continuous line for a discontinuous analogy? Why not a comparison between two lines?¹⁶ Or, indeed, why not dispense with the line altogether, and just state the intended analogy directly: for example, to mention a common proposal, that *dianoia* is analogous to looking at objects through shadows and reflections? Second, these readings are at best esoteric, and at worst at odds with the text. Socrates himself invites us to read the Line as a single, continuous analogy. For example, he tells us that it represents the relationship between four kinds of cognition (511D6–E4), two species of belief and two of knowledge (534A1–2), with no suggestion that any of them is a mere metaphor.¹⁷ Finally, the disjunctive analogy must disregard some salient and apparently significant features of the analogy. For example, it is natural to conclude that L1 is the shortest of all four sections because it represents the least clear of all four cognitions. Defenders of the disjunctive analogy must instead insist that this, while coincidentally correct, has no symbolic

¹⁴ See the comments on 509D6 in Slings 2005.

¹⁵ Jackson 1881, A.S. Ferguson 1921, 1922, and 1934, Robinson 1941, 207, and Raven 1953. Cf. Shorey 1885, 229, with n. 3, Gould, 1955, 172–77, and J. Ferguson 1963. Those who take the analogy to be disjunctive for different (or unspecified) reasons include Stocks 1911, 76–77, Morrison 1977, 221–22 and 227, Reeve 1988, 80–81, Dreher 1990, 168, Benson 2015, 246 n. 26, and Broadie 2021, 24 n. 20.

¹⁶ Rose 1964 actually recommends this construction.

¹⁷ Many, I included, believe that *eikasia* is not just more than a metaphor, but a *sui generis* kind of cognition that has a crucial explanatory role in the *Republic*. See my 2020.

significance; as they read the analogy, L₁ could have been as long or longer than L₃.¹⁸

3. *So what?* The most common response has been to ignore the problem and read the analogy as if L₃ is longer than L₂. The reason, when given, is either that Plato didn't notice their equality or that he didn't intend it to be significant.¹⁹ The first possibility is scarcely credible: if Plato wished to construct a line with four unequal sections, it is hard to believe that he would not have checked even once to see if this is what he had in fact done. It is also not textually credible.²⁰ We know that the ratio holds between *eikasia* (L₁) and *pistis* (L₂), and at 534A3–5 Socrates adds that it also holds between *eikasia* (L₁) and *dianoia* (L₃). If both *pistis* and *dianoia* bear the same relation to *eikasia*, they must be equal. Missing this would be as difficult as asserting that $A = B$ and $A = C$, yet not realising that $B = C$.

So Plato knew the middle sections of the Line were equal. But the 'so what?' response has a second option: that he did not intend it to be significant. If Plato did not intend it to be significant, why did he construct the Line in this way? Raven's answer is typical:

Although it is a geometrical impossibility at once to preserve the proportions, which are all-important, and to make each segment longer than the one below it, that is what Plato, had it been possible, would have wished to do.²¹

This invites a further question: *why* are the Line's real proportions important to Plato, if his intended meaning reflects different proportions? While Raven labels the Line's real proportions 'all-important', this appears to be largely lip service, and he never explains their importance. Consequently, we are still left without an explanation for why Socrates constructed the Line as he did. Further problems concerns the wish that Raven attributes

18 For some of these and other objections, see Malcolm 1981, 62, Ross 1951, 67–68, and the detailed summary and critique of the disjunctive analogy reading (specifically the version defended by A.S. Ferguson) in Cross and Woosley 1964, 209–13.

19 See Adam 1902, 64 (unintended), Ross 1951, 45–46 (unintended, perhaps unnoticed), Brumbaugh 1952, 130–31 (unintended), Wedberg 1955, 103 (unintended), Cross and Woosley 1964, 204 (unintended, perhaps unnoticed), Raven 1965, 145 (unintended), Findlay 1974, 186 (unintended), Balashov 1994, 187 n.17 (unintended, perhaps unnoticed). Many other commentators simply ignore the equality, thereby treating it as unintended or insignificant.

20 As recognised by Foley 2008, 14, and Smith 1996, 42

21 Raven 1965, 145. See also Adam 1902, 64, Brumbaugh 1954, 91–92, 98, Wedberg 1955, 103, and Ross 1951, 45–46.

to Plato: the wish to simultaneously arrange the Line in its actual proportions ($LA : LB :: L1 : L2 :: L3 : L4$) and different proportions ($L1 < L2 < L3 < L4$). First: why would Plato wish to represent two different ideas in a single image when he knows that it will fail to represent one of them—why represent an idea erroneously, when it could have been explained separately and correctly? Second: is it coherent to wish for something mathematically impossible, like a Line simultaneously arranged in incompatible proportions? I can be undecided between a square and circle, but I cannot coherently wish for a square circle. One might respond, with Ross, that ‘the line, being but a symbol, is inadequate to the whole truth which Plato meant to symbolize.’²² The suggestion, I take it, is that what is impossible in the analogy itself is not impossible for the cognitions it represents. This is not intrinsically implausible, but it can be checked, and the answer is that it is impossible for both. As we saw in the previous paragraph, Socrates implies of the *cognitions themselves* that *eikasia* is to *pistis* as *eikasia* is to *dianoia*, which entails the equality of *pistis* and *dianoia* directly, not through the analogy—strong evidence that the equality is not an accident of the Line’s construction.

4. *An instructive error.* This final response is from two authors, Nicholas Smith and Richard Foley, who have examined the interpretive problems arising from the Line analogy in depth, and who, as I do, find the existing responses unsatisfactory.²³ They conclude that (1) to (3) of the inconsistent triad are unavoidable, so Plato must have deliberately embedded this inconsistency to impart a lesson. As Smith concludes:

Given the incredible richness and substance of this very complex image, I am tempted to think that Plato might have purposefully woven this subtle flaw into the intricate fabric of his own image, because he wished to avoid the sin of perfection. According to his own philosophy, images can never be perfect, and Plato’s divided line is, after all, only an image.²⁴

To explain my reply, I need to make a general point about speculations. We speculate—or at least ought only to speculate—when the view we wish to understand is underdetermined by the evidence, leaving a gap that can be filled in a number of more or less equally plausible ways. A good speculation articulates one of these plausible ways. Nonetheless, even if it is the

²² Ross 1951, 45–46.

²³ Smith 1996 and Foley 2008.

²⁴ Smith 1996, 43. Contrast Smith 2019, 113–15, where he sees it not as a deliberate error, but as an error that Plato tolerated as one of images’ inevitable flaws. Cf. Denyer 2007, 296.

most plausible, it will only be the least unlikely of an unlikely bunch. After all, if we cite evidence that shows that our view is worth believing, then our view is not in fact underdetermined by the evidence. So speculations are, by definition, improbable (and more improbable the more elaborate and specific they are).²⁵ But a well-motivated speculation always follows from a prior and arguably more significant claim: that there exists an evidential gap that requires us to resort to speculation. In this case, the claim on which both Smith and Foley focus their arguments is that the evidence supports all of claims (1) to (3), and that Plato was aware of this. If this is right, then I'm wrong; if it is wrong, then so are any speculations about why it is right. For this reason, I won't discuss the merit of Smith or Foley's final responses to the problem. Instead, much of this paper is devoted to showing, against arguments that they present, that the evidence does not support claim (3).

2.2 *Objection one: Plato's silence*

In addition to the alternative interpretations discussed so far, there have been a number of direct textual objections to taking the equal length of the Line's middle sections at face value. I will consider the three most significant. The first is that Plato's conspicuous silence about this equality speaks against the face-value reading.²⁶

Plato's silence is the kind of datum that lends itself to many seemingly plausible explanations, and various authors have thought that it favours their own or goes against another interpretation.²⁷ I can offer an explanation too: perhaps it is just not part of the curriculum Plato intended for the *Republic*. After all, Socrates introduces the images of the Sun, Line,

²⁵ For this reason, Foley's account (2008, 19–24) strikes me as too elaborate. His claim is that Plato includes the $L_2 = L_3$ 'error' to encourage the readers themselves to pass through the four cognitions of the Line. This requires him to describe four highly specific stages readers are 'likely' to go through, together with specific (and heterodox) accounts of the cognitions to match them. The result is complex and detailed, and, *qua* speculation, has no textual support.

²⁶ See Cross and Woosley 1964, 204, Smith 1996, 40–42, and Foley 2008, 17.

²⁷ Foley 2008, 19–20, believes Plato's silence supports his suggestion that the equality of L_2 and L_3 imparts a lesson we are supposed to discover for ourselves. Raven 1965, 145, says: 'as Plato's failure to mention the fact strongly suggests, [the equality] is an unfortunate and irrelevant accident'. One might equally say that if it were not significant, Plato *would* have mentioned it, in order to avoid being needlessly misleading.

and Cave as a cursory introduction to a larger topic. When introducing the Line, Socrates even warns us that certain topics will be neglected: 'I think I will have to omit a fair bit' (509C9). My suggestion is that a detailed discussion of *pistis* and *dianoia* is one of the omitted topics. This would explain why Plato says almost nothing about *pistis*, though there is surely a great deal to say. We can also see why Plato would be compelled to include information in the Line that he does not wish to discuss: as a mathematical image, it is not possible to present a part without presenting the whole, so the equal length of L2 and L3 must be included whether or not Plato wishes to address it. I'm not asserting this explanation with any great confidence, since it is, like any other answer, speculative. What is important is that it shows that the face-value reading is no worse off with respect to this silence than any other answer.²⁸

2.3 *Objection two: clarity's representation in the Cave allegory*

The second objection purports to be direct evidence that Plato believed that *dianoia* is clearer than *pistis*, drawn from the symbolism of the Cave allegory. Foley offers the following statement:

The relative brightness of the sunlight outside the cave to the light of the fire in the cave is so strong that the transition to the outside world is done only under compulsion and at the cost of great pain. Since this relative brightness symbolizes the clarity of the respective mental states, again Plato asserts that *dianoia* is superior to *pistis* as regards clarity.²⁹

28 A similar response is available for 534A5–8, where Plato's reluctance to spell out the relationships between the objects the cognitions are set over—'lest they involve us in arguments many times longer'—is sometimes read as a denial that they are, as he stated earlier (e.g. 511E2–4), in the same proportions as the cognitions and the Line: a surprisingly unmotivated volte-face. A better explanation is that the 'arguments many times longer' would introduce a new topic that he wishes not to discuss. Note, first, that this line follows Socrates' surprising denial that *dianoia* is a kind of knowledge, which at least raises questions about the earlier division of the knowable into two (see sections 2.4 and 6.1). Second, note that to spell out the relationships between the objects of cognition as explicitly as he has just done for the cognitions themselves would require Socrates to explicitly name the object of *dianoia*, the main candidates for which are (a) a less fundamental intelligible and (b) sensible particulars used as images of Forms. Glaucon would surely then ask either (a) 'what are these intelligibles that aren't Forms?' or (b) 'why are *pistis* and *dianoia* set over the same thing?' (if he's being sharp, he might add 'and doesn't that imply that they are equal in clarity?'). Both questions would invite 'arguments many times longer'. Compare Shorey 1885, 235–36, and Burnyeat 1987, 148–52.

29 Foley 2008, 7.

This is a highly abridged description of the relevant passage (515D9–516B1) and it wrongly suggests that the relative clarity of *pistis* and *dianoia* is represented by the relative brightness of firelight and sunlight. In fact, once outside, the prisoner is at first blinded by the light, so he is ‘unable to see a single one of the things now said to be true’ (516A2–3). To be sure, this illustrates how bright it is outside, but it equally shows that the prisoner does *not* yet have a degree of visual clarity that corresponds to this brightness. Instead, his visual clarity, representing the cognitive clarity of *dianoia* (as Socrates later confirms: 532B6–D1), corresponds to the dimmer objects he is able to see: ‘first he’d see shadows most easily, next images of men and other things in water’ (516A6–7). In contrast, the intense brightness from which he must initially avert his gaze represents the greater clarity of the Forms, which he will experience only when he is able to look at those brighter objects directly.

The relevant comparison, then, is between the cave fire—the last object seen in the cave (515D9; 532B6–8), which presumably represents the greatest clarity in the sensible realm, as the sun does for the intelligible realm—and the shadows and reflections outside. Which is brighter? There is room for debate, but if we agree that it is not fruitful to argue about the relative brightness of bonfires and daylight shadows, the crucial point is this: in the relevant passage (515D9–516B1), Plato explicitly registers a harsh shift in brightness between the two stages in the cave (C1 to C2: ‘wouldn’t his eyes hurt ...’) and the two stages outside the cave (C3 to C4: ‘wouldn’t he be unable to see ...’), but mentions no shift in brightness or period of adaptation between the two middle stages, the brightest point inside and dimmest point outside the cave (C2 to C3). So in fact, as with the Line, someone who thinks *dianoia* is clearer than *pistis* needs to explain why this difference is not included in the symbolism of the Cave allegory.

Problems mount when we take a deeper look at how cognitive clarity is represented in the allegory. What represents clarity is not just the intensity of illumination, but the different objects illuminated: shadows, for example, are not unclear simply because they are dim, but also because they are mere images, capable of representing only an outline. Consider, then, the objects at C2 and C3. At C2 the prisoner sees models of the ordinary sensibles outside the cave (and the fire is itself an image of the sun: 517B3), and at C3 he sees shadows and reflections of those *same* ordinary sensibles. As before, I think comparing the clarity of these models and daylight images would only illustrate that no such difference is part of the ex-

implicit symbolism of the Cave. But as many have recognised,³⁰ there is a meaningful *equality* between C2 models and C3 shadows and reflections: they are, in one respect, the same kind of object, namely, *images* of the real objects outside (C4). In section 3, I will argue that 'clarity' measures precisely the difference between apprehending an image and an original. But even without these arguments, it seems plausible, first, that in the Cave being imperfect images of the real things outside symbolises lesser clarity and, second, that in this respect the objects at C2 and C3 are equivalent.

2.4 *Objection three: 533D5–6*

There is a passage that appears to offer direct textual evidence that Plato believes *dianoia* to be clearer than *pistis*. Socrates tells us that *dianoia* is 'brighter than belief, dimmer than knowledge' (ἐναργεστέρου μὲν ἢ δόξης, ἀμυδροτέρου δὲ ἢ ἐπιστήμης; 533D5–6). While the words used are ἐναργής and ἀμυδρός, it is certainly plausible that these have a similar meaning to σαφήνεια and ἀσάφεια. Furthermore, it is often thought that the word *epistēmē* in this line in fact refers to what Socrates earlier called *noēsis*, and we know that belief includes *pistis*. So Socrates appears to come within a hair's breadth of saying that *dianoia* is clearer than *pistis*, less clear than *noēsis*.

This line occurs in a complex and interesting context. It is the conclusion of a surprising passage, 533A10–E2, in which Socrates casts doubt on *dianoia*'s status as knowledge: *dianoia* relies on unexplained hypotheses, yet knowledge, as characterised in book 5, should be fully explanatory.³¹ This sheds considerable light on how Plato views *dianoia*'s limitations, and I will discuss it again in section 6. Here, I want to show that once 533D5–6 is correctly placed in this larger context, we see that it is not a comment on the clarity-relationships described by the Line analogy, but a more general claim about where *dianoia* stands in relation to what Plato has said about knowledge elsewhere.

³⁰ See Fogelin 1971, 381–82, Bedu-Addo 1979, 103–5, Smith 1996, 36–37 and 2019, 128, and Sedley 2007, 266.

³¹ This passage is not often discussed in depth, but those who do consider it have responded in very different ways. Bedu-Addo 1976, 296–97, and 1978, esp. 116, concludes that *dianoia*, if it is not knowledge, must be a kind of belief. But 533D4–7 explicitly rules this out. The best discussion of the passage is in Fine 2003, 107–12. She concludes that it is a reason to posit an implicit second stage to *dianoia* in which it *does* give accounts of its hypotheses, and so becomes knowledge. I believe the solution I offer here allows us to stay closer to the text.

Note first the infelicities that arise if we try to map what Socrates says at 533D5–6 onto the Line. Accepting that *epistēmē* has switched places with *noēsis*, it would tell us the following:

$$LA \text{ (belief)} < L_3 \text{ (dianoia)} < L_4 \text{ (noēsis)}$$

But this is all wrong: in the Line, LA is *longer* than L₃, and it can be longer, equal, or shorter than L₄ depending on the value of the ratio (whether it is greater, equal, or less than the golden mean, as it happens). Part of the problem is that 533D5–6 compares *dianoia* and *belief*—it compares a species of cognition and a genus of cognition, as it were—rather than *pistis* or *eikasia*. This kind of comparison is not possible in the Line analogy: again, if it were, belief would be clearer than *dianoia*, which is not Plato’s view.³²

Consider now the sentence’s second half: ‘dimmer than *epistēmē*’. Is there a switch in terminology here, so that *epistēmē* simply means what was earlier called *noēsis*? There are two reasons why people have supposed so. First, in its next occurrence, *epistēmē* changes places with *noēsis*: Socrates restates the four cognitions of the Line, and the cognition corresponding to L₄ is now *epistēmē*, while *noēsis* is used for the cognition corresponding to the whole of LB (533E2–534A2). Second, *dianoia* is *itself* a kind of knowledge: it is on the part of the Line representing ‘what can be known’ (τὸ γνωστόν; 510a9) and Socrates often refers to mathematics as a kind of knowledge. Both of these observations are correct, but I believe commentators draw the wrong conclusion from them. What is happening is more subtle. *Epistēmē* takes the place of *noēsis* not because Socrates is simply switching his technical vocabulary, but because he has reached a surprising conclusion about the nature of *noēsis*.

32 Leaving the context of 533D5–6 aside, there might be ways to reincorporate the first half into the Line’s schema. Perhaps ‘brighter than belief’ is shorthand for ‘clearer than either kind of belief, *pistis* or *eikasia*’. Alternatively, we might take belief to be the *addition* of the clarities of *pistis* and *eikasia*, just as $LA = L_1 + L_2$. This is encouraged by the instruction to treat belief as *eikasia* and *pistis* ‘both together’, *συναμφοτέροι*, which suggests taking them as a compound, rather than separately (533E3–534A2). Thus, Smith 1996, 40 (see also 1981, 132), concludes: ‘if *διάνοια* is clearer than the entire realm of belief, of which *πίστις* is only a part, *διάνοια* must be clearer than *πίστις*’. As we saw, this does not work for length in the Line, since it would make belief clearer than *dianoia*. But we should also not assume (as Smith 2019, 113, recognises) that a combination of *pistis* and *eikasia* adds up to something clearer than either is on its own: if we mix darker and brighter paint, the result will be intermediate, not greater. It is certainly plausible that unclear thought, like *eikasia*, obscures rather than clarifies clearer thought, so mixing *eikasia* with *pistis* might just muddy the clarity of the latter.

Dianoia & Plato's Divided Line

Follow the train of thought leading up to 533D5–6. Socrates is transitioning from his discussion of mathematics and *dianoia* to his discussion of dialectic and *noēsis*. After heaping praise on *dianoia*, he now reins in our expectations, emphasising *dianoia*'s shortcomings. He does so in a way that might seem hyperbolic. He argues that *dianoia* is not a genuine kind of knowledge—*epistēmē*—at all, since its foundations are hypotheses that are not themselves known (533B5–D6):

What mechanism could possibly turn any agreement into *epistēmē* when it begins with something not known and puts together the conclusion and the steps in between from what is not known?

ὦ γὰρ ἀρχὴ μὲν ὃ μὴ οἶδεν, τελευτὴ δὲ καὶ τὰ μεταξὺ ἐξ οὗ μὴ οἶδεν συμπλέκεται, τίς μηχανὴ τὴν τοιαύτην ὁμολογίαν ποτὲ ἐπιστήμην γενέσθαι; (533C3–6)

Our line, quoted now with its surrounding text, states the conclusion of this argument, and uses *epistēmē* twice:

We've often called these [mathematical] crafts *epistēmai* out of habit, but they need another name, brighter than belief, dimmer than *epistēmē*. We classified it as *dianoia* at some point earlier.

ἅς ἐπιστήμιας μὲν πολλάκις προσείπομεν διὰ τὸ ἔθος, δέονται δὲ ὀνόματος ἄλλου, ἐναργεστέρου μὲν ἢ δόξης, ἀμυδροτέρου δὲ ἢ ἐπιστήμης. διάνοιαν δὲ αὐτὴν ἔν γε τῷ πρόσθεν που ὠρισάμεθα ... (533D4–7)

The reference to habit makes it unambiguous that Socrates is not talking about *noēsis*. He has shown no habit of confusing the mathematical crafts with *noēsis*, though he *has* habitually treated them as a kind of knowledge (e.g. 527A1–B8). As the first occurrence of *epistēmē* refers to a kind of knowledge, so must the second (see also *epistēmē* at 533C6). So Socrates is not telling us that *dianoia* is not *noēsis*—at this point in the dialogue, we hardly need telling—but introducing a new claim: that *dianoia* is not knowledge, at least of a kind.

More correctly, it is not *epistēmē*. We should be cautious about treating *epistēmē* as a generic word for knowledge.³³ Socrates is best understood to be denying that *dianoia* is the type of explanatory understanding that he calls *epistēmē* in book 5, and that a reader will be familiar with from almost every other discussion of knowledge in Plato's work. Yet as 533D5–6 confirms, neither is *dianoia* a kind of *doxa*. While *dianoia* may not be

³³ As forcefully argued recently by Moss 2021.

explanatory like book 5's *epistēmē*, it is still distinguished from *doxa* by book 5's criterion of being something 'infallible' or 'unerring' (ἀναμάρτητον, 477E7–8), which presumably means being reliably or always true (cf. *Gorgias* 454D5–8), as mathematics appears to be. So if it is neither *doxa* nor *epistēmē*, where does it stand? We could make *dianoia* a *sui generis* epistemic category, distinct from belief and knowledge, but I think it makes more sense to see *epistēmē* as one kind of knowledge, and *dianoia* another. It is certainly unusual for Plato to countenance a kind of knowledge other than the explanatory *epistēmē* described in book 5, but the idea that *dianoia* exists at all—that there is an inferior knowledge-like cognition—is commensurately unusual, and it must fall short of the highest kind of cognition in some respect.

So when *epistēmē* swaps places with *noēsis* as the name of the cognition at L4, this is not simply a terminological shift. It reflects the substantive conclusion of the preceding argument: *noēsis* has been discovered to be identical to the *epistēmē* of book 5, when previously it was treated only as one of its species. Similarly, when *noēsis* takes over as the generic term for both higher cognitions (LB), Plato is introducing a word for something he has not previously discussed: knowledge in a more generic sense, which for him may mean those cognitions that are reliably true, which has turned out to be a broader category than those that are fully explanatory. (I will continue to use the word *noēsis* for the cognition corresponding to L4.)

What does all this tell us about how we should read 533D5–6? Certainly it shows that the meaning of 533D5–6 is not preserved if we swap *noēsis* for *epistēmē*, but a more important conclusion is that Socrates is not at that moment engaged in the same task he was engaged in when he offered the Line analogy. His aim is to explain that *dianoia* is distinct from both of the epistemic categories with which he is usually preoccupied: it is neither *doxa* nor *epistēmē*. This is not a conclusion that the Line was designed to illustrate. We can still ask how *dianoia* is distinct from *doxa* and *epistēmē*, and someone might insist that it differs from both in degree of clarity. But this claim plays no part in the argument that 533D5–6 concludes, and it would be a mistake to assume that clarity is the only respect in which cognitions can differ.

3 'CLARITY AND OBSCURITY'
& 'TRUTH AND UNTRUTH'

The preceding survey shows that the literature on the Line has at least not provided a decisive reason to reject the face-value reading. Indeed, the principal source of resistance, which appears to motivate the various alternatives and objections we've considered, remains the one we began with: the conviction that *dianoia* is clearer than *pistis*. It is remarkable, then, that this conviction has never been fully articulated. What does it really mean to say *dianoia* is clearer than *pistis*? My guess is that commentators usually assume it means *superior* in a general epistemic sense.³⁴ I wish now to show that *σαφήνεια* in fact refers to a more specific property, and the Line remains neutral about other epistemic differences between the cognitions. Consequently, there is no contradiction between the conviction that *dianoia* is epistemically superior to *pistis* and the claim that they are nonetheless equally clear.

Evidently, the debate stands in need of an explicit account of what Plato means by *σαφήνεια*, and how it relates to *pistis* and *dianoia*, individually and comparatively. The right place to look is James Leshner's detailed investigation of *σαφήνεια*.³⁵ He concludes that *σαφήνεια* is best taken to mean 'the kind of full, accurate, and sure awareness a person could have of what had been directly presented to him or her'.³⁶ He notes that this fits especially well with the fact that the degrees of *σαφήνεια* in the *Republic* corresponds to directness or indirectness with which we grasp some object: for example, sensibles studied directly or through their shadows, or Forms studied directly or through sensibles. I think Leshner's account is essentially correct. I will eventually argue that it also lends itself naturally to the image–original reading of the analogy: the directness and indirectness relevant to clarity is the directness of being in cognitive contact with the original of something and indirectness of being in cognitive contact with only

34 Broadie 2021, 32–34, explicitly interprets *σαφήνεια* as a general quality of cognitive excellence that comprises several epistemic virtues that we tend to distinguish today, and, thus, she suggests Plato is 'naïve for treating cognitive excellence as all one thing'. She does not explore the possibility that Plato intended a more specific epistemic property.

35 Leshner 2010.

36 Leshner 2010, 180. We might doubt 'sure', if we believe that *dianoia* is as sure—as certain and stable—as *noēsis*.

its copy or image. For now, however, I will focus on the concepts of clarity and truth. Below I defend four claims that build on Lesher's account.

3.1 *The clarity of the cognition is inherited from the clarity of the object in which it is in direct or immediate contact*

Consider a few of the passages that introduce clarity and truth:

With respect to the clarity and obscurity of one to the other, in one of the two sections of the visible are images ... [And] in the other put the things of which they are images ... (509D8–510A5)

And would you be willing to say, with respect to truth and untruth, the division is in this ratio: as what can be believed is to what can be known, so the likeness is to the thing that it is like? (510A8–10)

Order them in a ratio, understanding that as that which they are set over shares in truth, to this degree each shares in clarity. (511E2–4)

Commentators generally follow the authoritative-sounding third passage (as I did in section 1) and conclude that the Line measures the 'clarity and obscurity' of the cognitions and 'truth and untruth' of the objects they are set over. Yet Socrates also regularly attributes clarity to the objects themselves, as he does of images and ordinary sensibles in the first passage.³⁷ Why is clarity sometimes attributed to the object?

It is helpful here to go back to the Sun analogy. There, what symbolised the quality of our cognition—thus playing a role analogous to length in the Line—was how clearly or unclearly one can *see* something. But the idea was not that some people are, say, clear-sighted and others near-sighted. Rather, the analogy focused on the object seen: the quality of one's vision depends on the *visibility* of the object, which depends in turn on its possession of the 'power to be seen' (ἡ τοῦ ὁρᾶσθαι δύναμις; 507E5–508A1), a power granted by an illuminating source (either the sun or 'night lights', 508C6). The analogy is epistemic: the power to be seen is analogous to the power to be understood. Thus, about knowledge and belief he says:

When the soul focuses on something illuminated by truth and what is [ἀλήθειά τε καὶ τὸ ὄν], it understands, knows, and appears to possess reason, but when it focuses on what is mixed with darkness, on what comes to be and passes away, it believes and is dimmed. (508D3–8)

³⁷ See also 511C4–6 and 515E1–3.

Spelt out: the power to be fully seen (or seen $\sigma\alpha\phi\acute{\omega}\varsigma$, 508C9), granted by the sun, is analogous to the power to be fully understood, or known, granted by the Form of the Good. The power to be partially seen, granted by 'night lights', is analogous to the power to be partially understood, or believed.

Thus, the analogy with sight and visibility assumes that the quality of our cognition is a function of the quality of its object: if a visible object is clear or obscure, our perception of it will be, for this reason and to this degree, clear or obscure. Analogously: if our object of cognition is clear or obscure, our understanding of it will be (at best) correspondingly clear or obscure. When applied to the object of cognition, 'clarity' is still an epistemic property: it measures how successful something is *qua* object of understanding, just as visibility measures how successful something is *qua* object of sight.

3.2 *What is grasped unclearly is not simply the immediate object of cognition*

So the clarity of a cognition is inherited from its object. This underlines how important it is to understand the cognition–object relationship. For Plato in the *Republic*—and, according to Leshner, as suggested by the meaning of *saphēneia*—the appropriate relationship for clarity is directness or immediacy. Accordingly, unclear cognition is indirect or mediated. This being so, it is impossible to understand unclear cognition without specifying its relationship to at least *two* objects: the direct or immediate object of cognition and the indirect or mediated object of cognition. If I see a shadow of a tree, the shadow is the direct object of cognition, and the tree is the indirect object of cognition. Attention to this distinction is crucial to understanding the Line analogy, and it will feature prominently in my discussion of *dianoia* throughout this paper.

For now, the important question is this: *of what* object are we supposed to have a clear or obscure grasp? For *eikasia* and *pistis* at least—remaining neutral about the object of *dianoia* for now—it is not the immediate object of cognition. In other words, it is not the object that they are correlated with in Socrates' exposition of the Line (that which they are 'set over', $\acute{\epsilon}\pi\acute{\iota}$, 511D6–E4): images for *eikasia* and sensibles for *pistis*. *Eikasia* lacks clarity not because it grasps images unclearly, but because images are unclear—that is, because images are an unclear representation of something *other* than themselves, namely that of which they are images. The best candidate for *what* we grasp clearly or obscurely is the nature of the kind to which an

immediate object of cognition belongs, which for Plato ultimately means a clear or obscure grasp of the Form in which it participates. Plato's claim is not that with *pistis* we obscurely grasp 'the animals around us, all the plants, and the whole class of manufactured things' (510A5–6), as if we were forced to view them through a perpetual fog. Rather, his point is that seeing, say, goats or trees, however clearly and however often, will afford one only a comparatively obscure grasp of the nature of goats or trees. (Compare Leshner: '[the point is] not that the images whose movements the prisoners spend their lives tracking are intrinsically less clear than their originals, but rather that the prisoners will never achieve a clear and sure awareness of what those higher realities are unless and until they turn their gaze directly toward them'.³⁸)

In a way the point is a simple one: one can understand something's nature only as well and as far as the information available to one allows, and certain objects of cognition necessarily supply partial and/or unreliable information. Shadows and reflections will never give us more than a sketchy and distorted view of the nature of that of which they are mere shadows and reflections. And while the latter—actual sensible originals—are better, Plato believes they still place an upper limit on our understanding: no matter how meticulously we examine sensible examples of something, we will never get a complete and accurate account of its nature.

The central point here is worth labouring. As long as our eyesight is good, of course we can grasp shadows and ordinary sensibles (*qua* shadows and sensibles) *perfectly clearly*.³⁹ That is, it is possible for a person to fully and accurately grasp the sensible characteristics—all those characteristics that strike our senses—of a shadow or ordinary sensible (cf. 519A1–B5). But that is not what Plato is interested in. What he is interested in is how clearly or obscurely we grasp something's nature or essence, and if we try to grasp *this* through shadows or ordinary sensibles we will only grasp it obscurely. Full cognitive clarity requires studying the Forms directly. So with the exception of *noēsis*, it is impossible to explain clarity by making reference to just one object, the immediate object of cognition, just as we

38 Leshner 2010, 182

39 A point also emphasised by Smith 2019, 99–100.

can't explain an image without making reference to that of which it is an image—an analogy that is not a coincidence, as we will see.⁴⁰

3.3 *The ratio relates to the maximum clarity possible for each cognition*

There are more degrees of clarity than there are types of cognition. Notice, for example, that the Cave allegory's representation of clarity (see section 2.3), suggests there are differences *within dianoia*: when the freed prisoner emerges from the cave, 'first he'd see shadows most easily, next images of men and other things in water' (516A6–7), suggesting an increase in his cognitive clarity even while still looking at images. As a representation of the philosopher's education, this makes sense: during their ten years of mathematics we would expect the philosopher to enjoy at least some gradual improvements, rather than just one leap at the end. Similarly, certain prisoners in the Cave are 'sharpest' (ὀξύτατα) at identifying the shadows (516C8–D4 and 519A1–B5), while others do so less sharply.

Cognitive clarity is, we've seen, a property inherited from the kind of object it is set over, which means that, for example, even the most exhaustive study of sensibles can only provide as much clarity as sensibles are themselves capable of providing. The object, then, determines the *maximum* clarity one can achieve—and, thus, this is what the lengths of the Line's sections represent—but there is no reason to think one could not achieve *less* clarity, with cognition set over the same object. We might attend to the object carelessly, or it might be far away or obscured by fog.

3.4 *Clarity is a function of the 'truth' of the object of cognition*

In this context, we should understand 'truth', ἀλήθεια, not in its epistemic sense, but in a way comparable to the use of 'true' in phrases like 'a true gentleman', where it is a property that applies to objects rather than propositions, comes in degrees, and signifies that something is real, genuine, or highly representative of its kind. For example, the Cave allegory's freed prisoner is plainly concerned with what is real or genuine when he first sees the objects that cast the shadows and would believe 'that the things he saw

40 Compare Gonzalez 1996, 272. Gonzalez claims that what is deficiently grasped by *doxa* is not sensibles themselves, but the Forms they instantiate. As he puts it: 'its deficiency is precisely the indirectness' with which it grasps the Form.

earlier were truer [ἀληθέστερα] than the ones he was now being shown' (515D6–7). Accordingly, when Socrates says that what casts the shadows are 'more real' (μᾶλλον ὄντα; 515D4) than the shadows, he is not introducing a new comparison. In both cases, he is referring to the degree to which it is a real or genuine example of its kind. Or, to put it another way, how completely and accurately it instantiates the nature of the kind to which it belongs.

An object's 'clarity and obscurity' and its 'truth and untruth' are two sides of the same coin, epistemological and ontological. Clarity concerns the degree to which it is representative of or informative about the nature of the kind to which it belongs. Truth concerns the degree to which it participates in or instantiates the nature of the kind to which it belongs. These are directly correlated: something is representative of the nature to which it belongs because, and to the extent that, it instantiates the nature to which it belongs.⁴¹ (I take this to be closely related to the Platonic doctrine commonly referred to as the deficiency of sensible particulars, and thus that it goes hand in hand with familiar phenomena like the compresence of opposite properties. For example, it might be argued that deficiencies like compresence explain why sensibles fail to completely and accurately represent the nature of the kinds to which they belong. See section 6.1.)

We can summarise some of the conclusions of this section with a more precise statement of the central analogy of the Line: the ratio of the relative length of its minor sections represents the relative maximum clarity achievable by the cognitions to which each section corresponds and, proportionately, the relative clarity and truth of the objects that each cognition is set over, where this measures the degrees to which the object represents (for clarity) and instantiates (for truth) the nature of the kind to which it belongs.

4 THE RATIO & IMAGE-ORIGINAL RELATIONSHIPS

While we now have a better understanding of what 'clarity' means, this, by itself, does not explain why the cognitions possess their differing degrees of clarity, or why they differ not randomly, but in the specific pattern we find in the Line. In other words, recalling the two criteria of a *bona fide*

41 Since they are directly correlated, sometimes I will only explicitly discuss clarity, with the assumption that the discussion implicitly applies *mutatis mutandis* to truth.

interpretation of the Line analogy introduced at the start of this paper, we have still to address the second criterion: to explain why the sections of the Line have the lengths that they have.

To this end, I introduce what I will call the 'image–original' reading of the ratio in the Line analogy.⁴² In the previous section, we saw that the clarity or obscurity of a cognition relates to the directness or indirectness with which it grasps an object it attempts to understand. The 'image–original' reading claims that what it means for a cognition to be indirect, and thus unclear, is for it to have cognitive contact only with an image (or image of an image) of what it attempts to understand. For example: *eikasia* is less 'clear' than *pistis* precisely because it is set over mere images of sensible originals, which *pistis* cognises directly. So understood, the primary bearers of the properties of clarity and truth are images and the objects of which they are images (henceforth, images and originals), and this relationship is what the ratio represents in each of its occurrences: $LA : LB :: L1 : L2 :: L3 : L4$. According to this reading, these image–original relationships are all that we need to understand the relationships between the lengths of the sections in the analogy. As I hope to show, this reading is remarkably successful: it can give an explicit explanation for every aspect of the Line analogy—in this sense being comprehensive—and it has the Line assert claims that both make sound Platonic sense and find unambiguous corroboration from elsewhere in the *Republic*.

Before I begin: what exactly is an image for Plato? I will beg off a detailed discussion, since it would raise questions about Platonic metaphysics that I do not wish to address here, but the following comments should suffice. Even if Plato's talk of 'images' and 'likenesses' is partially or wholly

42 If only because it casts the widest net on an intuitively related family of views, I count something as an image–original reading if, minimally, it deals with the middle sections of the Line by asserting: (a) that *pistis* and *dianoia* are both set over sensibles, but treat them, respectively, as originals and as images and (b) that this fact explains the equal length of $L2$ and $L3$. There are many variations within this, and only a minority agree with me (or don't deny) that it entails that *pistis* and *dianoia* are equally clear: Ringbom 1965, 91–97, Fogelin 1971, 381, probably Pomeroy 1971, and perhaps Cooper 1966, 67, though how it fits his overall position is unclear. Of these, only Ringbom's position resembles mine significantly. Both Bedu-Addo, most clearly in his 1979, and Smith 1996 agree with (a) and (b), and say much with which I'm sympathetic, but also deny that *pistis* and *dianoia* are equally clear. Strictly speaking, Morrison 1977 accepts (a) and (b), though he also thinks that the Line is a disjunctive analogy (see section 2.1). Gallop 1965 and Boyle 1973 accept neither (a) nor (b), but take image–original relationships to explain the Line's representation of clarity (both are silent on $L2 = L3$).

metaphorical, it is a metaphor that runs deep in the *Republic* and one that Plato himself never feels the need to spell out in more literal terms. We can say this much: when Plato says something is an ‘image’ of some F thing—either by being, say, a painting of a sensible F thing or being a sensible participating in the Form of F—this entails that it has some of the same properties as the original F thing (though it might ‘have’ them in a different way, like a painting and its subject) and is in this respect *like* it, but it also necessarily shares its properties incompletely and/or inaccurately and, thus, is in other respects *unlike* it, and so is not perfectly or completely F. It might be the case that the language of ‘images’ does not mean a lot more than this, but this is not a point I will explore further here.

4.1 Image–original relationships

According to the image–original reading, the ratio in the Line corresponds to image–original pairs:

- L1 : L2 Images of sensible particulars to sensible particulars
- L3 : L4 Images of Forms to the Forms themselves
- LA : LB The visible realm to the intelligible realm

That the whole sensible realm (LA) is an image of the whole intelligible realm (LB), is a familiar Platonic claim.⁴³ It is largely another way of saying that sensibles and Forms—the originals in their respective realms—are related as image to original, so we can add:

- L2 : L4 Images of Forms to the Forms themselves

This pattern of image–original relationships invites the following simple explanation: the ratio corresponds to image–original pairs because the ra-

43 I assume that this is uncontroversial. To be an image of a Form is to share, imperfectly, in the properties instantiated by that Form. As such, it is closely related to the widely accepted relationship of participation between sensible and Form. Textually, in addition to the Line analogy, passages that can be cited as evidence include: the Cave allegory with its subterranean (sensible) world that imitates the outside (intelligible) world with models lit by a fire that ‘is itself a shadow in relation to the sun’ (532C3–4); the description of the sight-lovers’ error concerning sensible and intelligible beauty as thinking ‘that a likeness is not a likeness, but rather the thing itself that it is like’ (476C4–5); the many places where Plato likens the philosopher to, for example, a painter who paints images in the sensible realm using intelligible Forms as his model (e.g. 484C4–D6; 500D11–501C9; and 540A8–B1); and most explicitly the image–original hierarchy in book 10 (see section 4.3).

tio *measures* a difference between an image and its original. I take this to be Socrates' point when he introduces the ratio:

With respect to the clarity and obscurity of one to the other, in one of the two sections of the visible are images ... [And] in the other put the things of which they are images ... (509D8–510A5)

It does not sound like he is saying 'relate these two things, which in this case just happen to be image and original, in respect of clarity and obscurity'. Rather, he seems to be explaining what he *means* by 'clarity and obscurity'. A more accurate gloss would be: 'the respect in which these differ in clarity and obscurity is the following: one is the image and the other the original'. A similar point can be made about his second statement of the ratio:

And would you also be willing to say that, with respect to truth and untruth, the division is in this ratio: as what can be believed [LA] is to what can be known [LB], so the likeness is to the thing that it is like? (510A8–10)

While part of what Socrates is doing is comparing the believable and knowable to images and originals he has just described (i.e. LA : LB :: L1 : L2), the use of the generic phrase 'so the likeness is to the thing that it is like' (οὕτω τὸ ὁμοιωθὲν πρὸς τὸ ὡμοιωθή) suggests that the believable and knowable are themselves related as image and original: that is, that this is the respect in which the ratio of the division compares them, and, thus, that this is the reason why it is justifiable to compare them to sensible images and originals.

4.2 *Applying the image–original reading*

The insight that the ratio measures a difference between image and original makes the Line's proportions intelligible. The following is a summary of how this is so, but it is a summary that is also a kind of argument. It shows that we can *independently* derive the proportional relationships the Line represents from a few plausible claims that are commonly attributed to Plato. In other words, the Line analogy and its proportions are not among the premises of the following summary, but they fit its conclusion.

The first claim fills the gap in the earlier table (section 1) of what the four kinds of cognition are set over, adding that *dianoia* only has direct cognitive contact with, and thus is 'set over' in the relevant sense, the sensibles

that it uses as images to study intelligible Forms. For now I just assume this claim; section 5 below will be devoted to defending it. This gives us the following:

- L4 Forms
- L3 Sensible particulars used as images of Forms
- L2 Sensible particulars
- L1 Images of sensible particulars

Note that for now this is just a table or list; we have not yet said anything about relative clarity. Next add the claim that Plato believes sensible particulars are (in some sense) images of Forms (though they are not always *used* as images of Forms). With this addition, our table is now as follows:

- L4 Forms
- L3 Images of Forms [used as images of Forms]
- L2 Images of Forms [not used as images of Forms]
- L1 Images of images of Forms

Consequently, we have the same images at L2 and L3 (since we are concerned only with the ontological status of their objects, we can ignore the difference mentioned in square brackets, but it will be discussed in section 5.2). Finally, we stipulate that there is a fixed ratio, $p : q$ (where $p < q$), that represents the relative clarity of an image to an original. Applying this last assumption gives us the following:

L4	Forms	q^2/p	E.g. for a 1 : 3 ratio:	9
L3	Images of Forms	q		3
L2	Images of Forms	q		3
L1	Images of images of Forms	p		1

While the p 's and q 's might not make this obvious, the numbers give an intuitive example: this entails that there is the same ratio not only between L1 and L2 (1 : 3) and L3 and L4 (3 : 9), but also between L1 + L2 and L3 + L4 (1 + 3 : 3 + 9).⁴⁴ In other words, we have derived the proportions of the

⁴⁴ That is, $p : q :: q^2/p :: p + q : q + q^2/p$. To see how q^2/p is derived, look at the lengths of the sections on page 4, and divide them all by p .

Dianoia & Plato's Divided Line

Line from a small selection of claims about the four cognitions and their objects, without relying in any way on the Line analogy itself.

What should we conclude from the fact that this set of claims leads us to the proportions we find in the Line? The obvious answer is that they result in the same proportions because they accurately capture the philosophical position Plato had in mind when he wrote the Line analogy. That they entail the correct proportions by chance is extremely improbable, and I can hardly be accused of gerrymandering them, since all three are reasonable and straightforward interpretive claims, neither too surprising nor too controversial. The claims are that:

- The ratio represents the relative clarity of image and original
- Sensible particulars are images of Forms
- *Dianoia* is 'set over' sensible particulars used as images of Forms

The last of these is the most widely contested, and I will examine it at length in section 5.

For now, let us take stock of what the image–original reading tells us about the Line analogy. It tells us that the ontology represented by the Line analogy is a three-place image–original hierarchy: Forms; sensibles (which are images of Forms); and images of sensibles, like shadows or reflections. Consequently, there are three corresponding levels of clarity and truth, which are represented by the three minor lengths on the Line. The reason there are *four* kinds of cognition and only *three* degrees of clarity is that *pistis* and *dianoia* are 'set over'—that is, make direct cognitive contact with—objects at the same ontological level, namely sensibles, and so must share the same degree of clarity: 'as that which they are set over shares in truth, to this degree each [cognition] shares in clarity' (511E2–4).

4.3 *Book 10: as through two glasses, very darkly*

The purpose of the Line analogy is to express a philosophical view. That being so, we have a further standard by which to assess readings of the analogy, and arguably the most important one: a sound reading should make the analogy express a coherent philosophical position that we can confidently attribute to Plato. Here the image–original reading fares exceptionally well. In book 10 Socrates summarises his central metaphysical views, again using relationships between images and originals as his core explan-

atory idea, and the result is precisely what the image–original reading proposes.

Socrates begins by rehearsing the central idea of his metaphysics: ‘we customarily posit a single form for each of the [sets of] many things to which we apply the same name’ (596A6–8). He chooses the example of a couch, describing three ‘couches’: a Form of couch, sensible couches, and the kind of ‘couch’ made by catching a sensible couch’s reflection in a mirror or by painting it.⁴⁵ The last is not a couch ‘as it is in truth’ (τῆ ἀληθείᾳ; 596E4) but it is a couch ‘in a way’ (596D3): it is an *image* of a couch. The original sensible couch is, in turn and for a parallel reason, only a couch ‘in a way’. He compares a painter and a carpenter. Just as a painter uses sensible couches as his model, a carpenter ‘looks towards the appropriate form’ (596B5), and like the painter, what he makes is a deficient copy: he does ‘not make the form of the couch, which is our term for what a couch is, but rather *a* couch’ (597A1–2). Thus, he makes ‘something like what is, though not it’ (τι τοιοῦτον οἶον τὸ ὄν, ὄν δὲ οὐ), something that is not ‘completely ... real’ (τελέως ... ὄν) (597A4–5) and something that, like a painting or reflection, ‘also turns out to be something obscure [ἀμυδρόν] in comparison to the truth’ (597A10–11).

Many commentators have noted, with various degrees of caution, that this hierarchy of kinds related by likeness and contrasted by degree of truth or reality—Forms, sensibles, and image of sensibles—recalls the hierarchy found in the Line analogy.⁴⁶ But this caution is surely misplaced. If we agree that books 6 and 7 and book 10 are parts of the same dialogue, our default assumption should be that his earlier and later descriptions are not just similar, but identical. This is especially true given that Socrates himself presents what he is doing as a re-description of his central views (‘we customarily posit ...’; 596A6–7). And book 10 is hardly the place to introduce innovations in *these* views, given its agenda is an investigation of imitative poetry. So on reflection, it is only differences or inconsistencies between these books that would call for explanation. This being so,

45 It is unusual to find Forms of man-made objects like couches, and some have argued that Plato is not serious here: e.g. Fine 1993, 110–119. Others argue that he is: e.g. Burnyeat 1999, 245–49. But even if ‘the couch itself’ is a made-up Form, used only as an easy example, it is hard to deny that his description of it *qua* Form could be extended to more familiar Forms. After all, Plato is happy to base most of the arguments in book 10 on the claims he makes here.

46 More rarely, the comparison is denied outright: see Halliwell 2002, 57–58, and Belfiore 1984, 129 n. 26

Dianoia & Plato's Divided Line

attention to book 10's articulation of the *Republic's* epistemology and metaphysics should not be an afterthought. Rather, it should be treated as an important, and useful, constraint on acceptable interpretations of the related ideas found in books 6 and 7, including those in the Line analogy. Any interpretation that has difficulty aligning with what Socrates says in book 10 is for this reason highly suspect.

Importantly, the similarity with books 6 and 7 is not simply the *presence* in book 10 of Forms, sensibles, and images of sensibles. Practically everyone will admit that these correspond to the Line in the following way:

L4	Forms	The Form of Couch
L3	——	——
L2	Images of Forms	Sensible couches
L1	Images of images of Forms	Apparent couches

What is more significant is that they bear the same relation to each other as they did in the Line analogy: three objects placed in an ordered series of images and originals that measures their descending truth and reality. In book 10, however, it is even clearer that there are exactly three objects in this series, and no space for a supposed fourth object for *dianoia*.⁴⁷ The place held by images like reflections and paintings makes this plain: they are 'by nature third from the king and the truth' (597E7) or from 'what is' (599A2). In saying they are third from the truth, Plato cannot mean that they are the least true of a collection of kinds of objects that *just so happens* to amount to three, so that if we were to mention a fourth—such as a unique object that *dianoia* is set over—it would then be fourth from the truth. Rather, it holds the third place in an ordered and discrete series, the steps of which are not arbitrary, but essential to explaining its nature and deficiency.

The idea is that a painting of a couch falls short of the Form twice or in two respects: it inherits the particular couch's shortcoming of being an imperfect likeness of the Form, and it compounds it by being an imperfect likeness of this particular. As such, it presents a doubly obscured view of the nature of the kind to which it belongs, being an imperfect likeness of an imperfect likeness of the Form (compare the prisoners of the Cave who unwittingly discuss items that exist in the outside world, to which

47 Contra Gallop 1965, 120–21.

they have doubly indirect access: through shadows cast by statues that are themselves copies of real objects). There is, then, no meaningful way to insert a further step into the series, between sensible couch and Form. Book 10 tells us quite plainly, then, that images like shadows and reflections are at the third remove of *three* degrees of truth, just as shadows and reflections in the Line were represented by the third longest of the *three* minor lengths.

5 DIANOIA & ITS OBJECTS

Given my emphasis on an interpretation that fits together as a whole, it might be thought that my proposal for *dianoia*'s object—sensibles, used as images of intelligible objects—relies on an inference to the best explanation, drawing on the image–original pattern that otherwise pervades the Line. But in fact, it comes from the text. Socrates tells us repeatedly that *dianoia* uses images to study intelligibles. He also tells us, first, that these images are *sensible* (see 510D5 and 511C1) and, second, that they are the same thing—at least in kind—as what *pistis* is concerned with, namely, again, *sensible* originals (e.g. ‘using as images those very things of which images were made in the section below’; 511A7–8, see also 510B4, 510B7–8, and 510E1–511A2). So it is beyond doubt that sensible images are *an* object of *dianoia*.

Are they *the* object of *dianoia*? As we saw in section 3.2, this question is ambiguous.⁴⁸ Unclear cognition is indirect or mediated cognition, so it can only be understood by its relationship to *two* objects: the direct or immediate object of cognition and the indirect or mediated object of cognition. Either of these could be ‘the’ object of *dianoia*, depending on what we are trying to refer to. In this context, what we really want to know is if sensible images are the object that stand to *dianoia* in the same way that shadows stand to *eikasia* or Forms to *noēsis*. In other words, we want to know if sensible images are the object that *dianoia* is said to be ‘set over’ at 511D6–E4: the object that determines *dianoia*'s clarity and, thus, its representation in the Line analogy.

48 As recognised by Smith 1981, 129, in a paper that offers a thorough defence of the claim that *dianoia*'s object is images and considers a wide range of the alternatives. See also Smith 1996, 34–36. How my view of these images differs from Smith's is explained in section 5.2.

There are strong reasons to think that it is. The clarity of the other three cognitions is determined by their immediate object of cognition. As we saw (section 3.1), this makes sense: our immediate object can be seen as a kind of lens through which we imperfectly grasp a mediated object. For *dianoia*, the immediate object does appear to be sensibles, used as images. Socrates tells us quite plainly that *dianoia* is less clear than *noēsis* because it can only study intelligibles indirectly, using sensibles as images of them. Consonantly, in the Cave allegory, Socrates represents *dianoia* with the freed prisoner looking at images, like shadows and reflections, to indirectly view the objects outside the cave (516A6–7 and 532B6–D1). The same conclusion follows from the commonly recognised parallel between *eikasia* and *dianoia*: just as *eikasia* grasps sensibles through images, *dianoia* grasps intelligibles through images.

The image–original reading opens, then, with a strong hand. Nonetheless, that *dianoia* is set over sensible images is undeniably surprising: it entails that the ontological kind represented by the lower part of the *intelligible* section is something *sensible*. This is the worry that motivates most objections to the image–original reading, as well as alternative accounts of *dianoia*'s object. I consider these objections and alternatives in this section, and I then offer another account of what qualifies *dianoia* for inclusion in the intelligible section: even if it must use sensibles to do so, *dianoia* nonetheless studies intelligibles.

5.1 *Intermediates*

A common view, or family of views, is that just as *dianoia* is itself 'between belief and understanding' (511D4–5), *dianoia*'s object is something between sensibles and Forms: a *sui generis* kind of intelligible object, other and lower than Forms (or, alternatively, a lower kind of Form). If it is further assumed that *dianoia* is distinctly mathematical (correctly, I believe: see section 6), this would corroborate Aristotle's claim that Plato believed in distinct mathematical intelligibles, 'different from sensible things in that they are eternal and unchanging, and different from Forms in that there are many of the same kind' (*Met.* 987B14–18; see also 1028B19–21).

I do not think that this is the view Plato expresses in the *Republic*, but I'm not going to argue directly against it here.⁴⁹ Instead, I want to show that even if *dianoia* has a defining relationship to intermediates, this relationship does not explain *dianoia*'s degree of clarity, and it therefore does not explain how *dianoia* is represented in the Line.

The following passage will help sharpen the discussion. Socrates describes *dianoia*'s relationship with two kinds of object:

Then you also know that, although they use [A] visible forms and make claims about them, they are not thinking about them, but rather about those things they are like. They make their claims for the sake of [B] the square itself and the diagonal itself, not the diagonal they draw, and similarly with the others. These forms that they construct⁵⁰ and draw, of which shadows and reflections in water are images, they now in turn use as images, seeking to see those others themselves that one cannot see except by means of thought.

Οὐκοῦν καὶ ὅτι τοῖς ὀρωμένοις εἶδεσι προσχρῶνται καὶ τοὺς λόγους περὶ αὐτῶν ποιοῦνται, οὐ περὶ τούτων διανοοῦμενοι, ἀλλ' ἐκείνων πέρι οἷς τὰτα ἔοικε, τοῦ τετραγώνου αὐτοῦ ἕνεκα τοὺς λόγους ποιοῦμενοι καὶ διαμέτρου αὐτῆς, ἀλλ' οὐ ταύτης ἦν γράφουσιν, καὶ τὰλλ' οὕτως, αὐτὰ μὲν τὰτα ἃ πλάττουσί τε καὶ γράφουσιν, ὧν καὶ σκιαὶ καὶ ἐν ὕδασι εἰκόνες εἰσὶν, τούτοις μὲν ὡς εἰκόσιν αὐτὸ χρώμενοι, ζητοῦντές τε αὐτὰ ἐκεῖνα ἰδεῖν ἃ οὐκ ἂν ἄλλως ἴδοι τις ἢ διανοίᾳ. (510D5–11A1; cf. 510B4–8 and 511A4–9)

There are two related but importantly separate questions that we need to answer: What are A and B? And is *dianoia* 'set over' A or B?

The relevant relationship between cognition and object is stated in the following now familiar passage:

Order them [sc. the four kinds of cognition] in a ratio, understanding that as that which they are set over [ἐφ' οἷς] shares in truth, to this degree each shares in clarity. (511E2–4; cf. 534A5–6)

The clarity determining relationship is introduced with a cognition–ἐπί–object phrase. This invites comparison with book 5, where Socrates tells us

- 49 While I do not accept it as a reading of the *Republic*, I agree Aristotle's testimony makes it very likely that intermediates are something Plato believed in, at some point. But we can hardly infer from this that intermediates must be implicit in any discussion of mathematics we find in Plato's dialogues. I find Aristotle's testimony all the more fascinating given that he is clearly *not* reporting something he has learned from Plato's dialogues. For the sharp difference between what Aristotle says and what we find in the dialogues, see Annas 1975.
- 50 The verb used, *πλάσσειν*, might suggest making physical models—which would explain how they have shadows—although it could mean a mental construction, which is a common use for the verb in the *Republic*: e.g. 420C2, 466A6, and 588B10.

that powers are individuated by what each is 'set over [$\acute{\epsilon}\phi' \acute{\omega}$] and what it accomplishes' (477D1–2), and knowledge and belief, being different powers, are 'by nature $\acute{\epsilon}\pi\acute{\iota}$ something different' (478A4–5), namely, Forms and sensibles, respectively. The two uses of $\acute{\epsilon}\pi\acute{\iota}$ may not be identical (for example, the cognitions of the Line might not be powers themselves, but ways of exercising the powers of knowledge and belief) but certainly both are examples of a cognition– $\acute{\epsilon}\pi\acute{\iota}$ –object phrase being used to define a cognition in terms of an object to which it is related.

But what exactly is the relationship of being 'set over'? It is easy to suppose that what a cognition is 'set over' is the same as what it is *about*—its subject matter. But even though this will often turn out to be true, we need a more subtle analysis. Compare, for example, the earlier $\chi\text{-}\acute{\epsilon}\pi\acute{\iota}\text{-}\gamma$ phrases that described the relationship between crafts and what they are 'by nature' set over (341D8–9). While it makes sense to think that shepherding is a craft 'set over' sheep (345D2), we would not say that shepherding is *about* sheep; rather, it *tends* sheep. In other words, just by itself the $\acute{\epsilon}\pi\acute{\iota}$ locution is neutral about the relevant type of relationship: it refers us to a defining relationship to some relatum, but leaves the nature of this relationship open. In book 7, the specific relationship that the cognition– $\acute{\epsilon}\pi\acute{\iota}$ –object phrase picks out is left entirely open. All that is said is that it is the relationship that determines a cognition's clarity.

On examination, we see that a cognition's subject matter and what determines its clarity do sometimes come apart. For example, *eikasia* is set over 'images' or 'likenesses' ($\epsilon\acute{\iota}\kappa\acute{\omicron}\nu\epsilon\varsigma$), but it is not *about* images, at least in any straightforward sense, as if it were a kind of sciography, studying the nature of shadows as such. Plato calls its object 'images' precisely because images by definition represent something other than themselves and, thus, mediate (imperfectly) a person's grasp of this second thing. Thus, when Socrates describes the prisoners' attitude to shadows in the Cave allegory—which, with most commentators, I take to illustrate *eikasia*—he asks: 'don't you think they'd suppose [mistakenly] that the names they used applied to the things [sc. the shadows] they see passing before them?' (515B4–5). The implication being that the names they use really refer (unbeknownst to them) not to the shadows, but to the names' real subjects.⁵¹ *Eikasia* is *set over* images, but what it grasps, in this mediated way, is the

⁵¹ See Harte 2007. I discuss this passage in more detail in my 2020, 41–42.

objects that its images imperfectly represent.⁵² The point of course is that the same seems to be true of *dianoia*. Its subject matter is unambiguously objects B: these are what mathematicians ‘make their claims for the sake of’ and although they use and talk about sensible images, ‘they are not thinking about [περὶ] them, but rather about those things they are like’. Yet it is equally unambiguous that what limits the clarity of mathematicians’ grasp is the fact that they must *use* imperfect sensible images, objects A, in order to *study* intelligibles, objects B. So *dianoia* appears to be about objects B, yet to only have direct contact with—and thus have its clarity determined by—objects A: it appears to be about B, but ‘set over’ A.⁵³

So what are A and B? Objects A are explicitly described as sensible images of B and while there are many questions about what kind of images they are, we can leave these aside for now. What are B? There are two main candidates: Forms and intermediates. If they are Forms, then *dianoia* must be set over objects A, since if it were set over Forms, *dianoia* and *noēsis* would be set over the same thing and be indistinguishable with respect to clarity. But suppose they are intermediates: would this contradict the image–original reading? In fact, it would not: with respect to clarity, it makes no difference what objects B are. If we accept the image–original reading, what matters is that *dianoia* is set over objects A, images, which mediate and obscure its access to the objects it studies—whatever these objects turn out to be. So understood, if *dianoia* studies intermediates, it is still its use of images that makes it obscure. What would contradict this reading would be a proposal that *dianoia* not only studies intermediates, but is also set over them—that is, that its clarity is directly proportional

52 Similar claims are made about what belief and knowledge are set over in book 5. See especially, Smith 2000 and 2012, and Gonzalez 1996. Note that what I have said here shows what a cognition is set over and what it is about *can* come apart, but not that they must do (consider *noēsis*). I am not, therefore, taking any stance on belief and knowledge in book 5.

53 Two passages are sometimes cited as evidence that *dianoia* is ἐπί something intelligible (e.g. Moss 2021, 184). One passage is 511D6–E4, but the only philosophically relevant use of ἐπί (E2) appears to me neutral (‘that which they are set over’). The other is 534A5–8, where Socrates begs off a discussion of ‘the ratio between the things these are set over [ἐφ’ οἷς] and the division into two of both the believable and the knowable [δοξαστοῦ τε καὶ νοητοῦ]’. Two points. First, by begging off ‘discussions many times longer’, Socrates himself problematises this description, and the reason, I believe, is precisely the difficulties raised by *dianoia*’s object: see n. 28. Second, when considering the τὸ δοξαστόν versus τὸ νοητόν contrast here, we must remember (section 2.4) that in this line *noēsis* is the genus covering both kinds of knowledge, and, thus, τὸ νοητόν does not mean intelligible, in the metaphysically loaded sensible-versus-intelligible sense, but is rather playing the same role as τὸ γνωστόν at 510A9.

to intermediates, not to the images it uses to study them. But then *dianoia's* dependence on images, and hypotheses, would not impair its clarity, and mathematicians would get just as clear a grasp of 'the square itself and the diagonal itself' through images as they would studying them directly.⁵⁴ This is a difficult view to make sense of, but in any case, it is not what Socrates says. Socrates plainly believes that *dianoia's* clarity *falls short* of the objects it studies, and does so precisely because it is forced to view them through images. As we saw, mathematicians use images when 'seeking to see' (ζητοῦντες ... ἰδεῖν) objects like the square itself, suggesting that their sight is less than perfect. This is reaffirmed later:

We described them as to some extent grasping what is, for we saw that, while they do dream about what is, they are unable to command a waking view of it as long as they make use of hypotheses ... (533B5–C3)⁵⁵

Presumably to have a 'waking view' of one's object is to see it clearly and although images are not mentioned explicitly, to 'dream' about one's object is presumably to have only an image of it (dreaming was earlier described as 'whether asleep or awake, to think that a likeness is not a likeness but rather the thing itself that it is like?' (476C3–5)). Further evidence that what makes *dianoia* obscure is its reliance on images (alongside the companion limitation of its reliance on hypotheses) can be found in the way in which Socrates differentiates *dianoia* and *noēsis*. Socrates consistently describes the progression between the two as a progression from using *images* to using only Forms, not intermediates to Forms: *noēsis* proceeds 'without using the images used in the previous section, using Forms themselves' (510B7–8) or 'without making use of anything visible at all, but only of Forms' (511C1–2). Finally, what represents *dianoia* in the Cave allegory is almost universally thought to be the freed prisoner's 'ability to look at

54 An alternative reading suggested by Sayre (1983, 196–97, with n. 13) is that intermediates themselves are made less true by our inability to grasp them without using images. But does this mean the intelligible object is itself compromised by our use of images, or only our grasp of it? As I have understood 'intelligible object' and 'less true', the former is not tenable. But if it is the latter, then the 'less true' object would seem to be not the intermediates that we imperfectly grasp, but whatever makes our grasp of them imperfect, which is the image we rely on.

55 With most commentators, I assume that *dianoia's* reliance on hypotheses and on images go hand in hand: I discuss this in section 6.1. Glaucon, in his summary of what Socrates has said, also thinks hypotheses limit *dianoia*: 'because these crafts do not examine them [the objects they study] by going back to a starting point but by going from hypotheses, they do not have understanding [νοῦν] of them' (511C8–D2, my emphasis).

divine images in water and shadows of the things that are' (Socrates more or less asserts this at 532B6–D1). The fact that Plato finds it sufficient to represent *dianoia* by its use of images, without any representation of intermediates at all, is a significant embarrassment for anyone who thinks that being set over intermediates is its defining feature.⁵⁶

In light of all this, one might think it worth reconsidering whether intermediates could be identified with the images mathematicians use. But let me once again underline the fact that the two surest facts about these images that we know, stated by Socrates repeatedly, are that they are, first, *sensible* images and, second, the same in kind as the objects of *pistis*. Neither of these can be reconciled with intermediates, whose *raison d'être* is to be intelligible entities, ontologically distinct from the objects of *pistis*. So if intermediates exist at all, they will need to be identified with those objects that *dianoia* studies *through* images, and as such they will not be what determines *dianoia*'s clarity.

5.2 *Sensibles qua originals versus sensibles qua images*

A second objection was introduced by Nicholas Smith.⁵⁷ Smith gives one of the clearest statements of the image–original reading, but he deviates from it for two reasons: first, to give *dianoia* an appropriately *intelligible* object and, second, to reflect the following difference between the objects of *pistis* and *dianoia*. Socrates tells us that *pistis* is set over 'the originals of these [i.e. L1] images, namely, the animals around us, all the plants, and the whole class of manufactured things' (510A5–6) whereas he tells us that *dianoia* uses '*as images* those very things of which images were made in the section below [L2]' (511A7–8; my emphasis). There is undoubtedly a difference here. Sensible originals, as such, are different from images of intelligibles, even if one and the same thing can fit both of these descriptions. But whether Plato is describing one or two 'objects' here depends on what we are counting: the characteristic intensional object of each kind of cogni-

⁵⁶ Burnyeat suggests that 'perhaps mathematical entities are the 'divine reflections' outside the cave (532C1), dependent on the 'real things' they image', even though he also argues that intermediates should be identified with objects B in 510D5–11A2 (2000, 34). Given that in 510D5–11A2 objects B are unequivocally what are studied *through* images, I can make little sense of this suggestion.

⁵⁷ Smith 1981. See also Pappas 1995, 106.

tion or the extensional object, independent of the description under which it is apprehended.

Which *should* we be counting? That depends on which of these two 'objects' is the bearer of the properties that the Line represents, clarity and truth. Smith's claim is that the bearer is the intensional object:

While the class of objects at the level of *pistis* has the same extension as that of *dianoia*, the two classes have different intensions, distinguishable according to the descriptions under which the appropriate objects are viewed. ... Images of Forms, as such, are not equal to visible originals, as such, in truth or reality, and the states of mind achieved by treating these objects in such different ways are not equal in clarity.⁵⁸

There is an implicit response to this already in my account of clarity. According to that account, a cognition's clarity is directly determined by its *actual* object, and specifically how much clarity or truth this object has, where this is fixed by its relationship to a Form. So understood, our cognitive clarity is a function of the truth of the object of cognition, not *vice versa*, and we cannot vary something's truth by apprehending it in different ways.

But a problem with Smith's account can be raised without presupposing any specific account of clarity and truth. Consider: in what way are sensible originals, as such, deficient, such that thought directed at them is also deficient? A simple answer is that only the relevant Form is fully F, while sensible F things are only imperfectly like the Form—they are images of the Forms. That is, they are deficient *because* they are mere images of Forms. But if that is right, then Smith's claim that 'images of Forms, as such, are not equal to visible originals, as such, in truth or reality' would miss Plato's central point: visible originals *are* images of Forms and this is *why* they are deficient in truth.⁵⁹ In other words, if *being* images of Forms is Plato's way of explaining sensibles' deficiency, there is clearly some error

58 Smith 1981, 132–33; see also Smith 1996, 41–42. A similar distinction, though with a less clear grasp of the problem it addresses, is proposed by Bedu-Addo 1978, 114, and 1979. This is also, presumably, what Dominick 2010, 3, has in mind when he says 'the objects that correspond to *dianoia* are in fact the same kind of objects that correspond to *pistis*, though seen more clearly'. Smith 2019 takes a different approach that focuses on how *dianoia*'s use of images necessarily involves a recognition of the difference between sensibles and Forms. On this, see section 5.4 below.

59 Compare Smith's claim that the 'objects are employed under different, and *incompatible* descriptions' (1996, 41, my emphasis): I agree that 'sensible' and 'intelligible' are incompatible descriptions, but not 'sensible' and 'image of Forms'.

in the idea that sensibles *qua* images of Forms are less deficient than sensibles, as such. Smith has taken sensibles' defining deficiency and misinterpreted it as an occasional strength. For a similar reason, I think it is wrong to think of 'images of Forms' as somehow closer to intelligibles than sensibles *qua* sensibles: thinking about sensibles under the description 'images of Forms' does not elevate their status above the sensible any more than a captain who refers to himself as 'just one below major' increases his rank. 'Images of Forms' is what sensibles are, not incidentally but *qua* sensibles. (See also the discussion of what it means to be intelligible in the next section.)

There is also a lesson to be drawn about the importance of a *comprehensive* account of clarity. Smith introduces his distinction between intensional objects specifically to explain *dianoia*'s superior clarity, but it does not help, and may even hinder, our search for a general account of clarity. Since the relationship between *pistis* and *dianoia* is unique, they could never differ in clarity for the same reason as *eikasia* and *pistis* or *dianoia* and *noēsis*. Consequently, if L2 and L3 are unequal in clarity, we seem forced to abandon a uniform account of clarity for a disjunctive one in which the relevant differences have two independent explanations: in most cases they (e.g.) differ as images and originals but in the unique case of *pistis* and *dianoia*, it is another difference, such as the difference between the descriptions under which they grasp their object.⁶⁰

This lacks parsimony, but it also assumes that the exposition of the Line leaves a gap that can be safely filled without changing how we understand the rest of the analogy. That is a mistake: since the analogy describes the *relative* clarity of the four cognitions, the relationships it describes are necessarily linked. You can't move *pistis* and *dianoia* apart, so to speak, without also moving one (or both) of them relative to either *eikasia* or *noēsis* (or both). For example, if it is claimed that *pistis* and *dianoia* differ in clarity, one cannot also claim that they each differ from *noēsis* to the same degree (as the Line suggests), so such a reading will owe us *two* new accounts of re-

60 Unless L2 objects *are* images of L3 objects, so each step in the Line is a relationship between image and original. This reading is untenable since ordinary sensibles, at the level of *pistis*, would need to be images of something other than Forms, which is too large a modification of Plato's metaphysics (see n. 43). This reading is not unheard of, though it occurs either in passing or in ways that I find hard to piece together into a consistent reading: see Moss 2021, 189–90, Payne 2017, 151, 155, Boyle 1973, 2, Raven, 1965, 152, and Ross 1951, 47; cf. Denyer 2007, 294.

lative clarity, both absent in the Line: one for *pistis* and *noēsis*, and another for *dianoia* and *noēsis*.

5.3 *Hypotheses and mental images*

A number of commentators have thought that *dianoia's* object is the hypotheses it uses and concluded that this elevates *dianoia's* status in one way or another. Recall the two central objects of *dianoia*: a direct object, (A), that it uses to study an indirect object, (B). Though they are not always explicit, most of these commentators intend hypotheses to be in the (A) position. This makes sense: at *dianoia*, a person is 'forced to use hypotheses in the investigation of [intelligibles]' (510B4–5), which sounds like the right kind of instrumental role. But, as we've seen, there is already an abundance of evidence that *images* are in the (A) position. This is usually what leads these commentators to suggest a hybrid object: hypotheses that are themselves images, such as mental or verbal images of Forms.⁶¹

This view has a number of problems. The text discusses images *and* hypotheses, separately, and there is no evidence that Plato thought hypotheses are themselves images. Nor is there any mention of mental or verbal images. So it begins with a deficit of textual evidence. It is also the wrong kind of object. The *Republic's* cognition-to-object relationships typically relate cognitions to ontological kinds, like sensibles or Forms, which exist apart from our mental activity and provide our cognition with a source of information or object of study. But mental images are not, for Plato, a *sui generis* ontological kind (though we might debate where to place them) and they evidently are part of our cognitive activity: mental images exist in our mind, and only people hypothesise.

The most serious problem, however, concerns what these commentators expect to achieve with this reading. They assume that hypotheses, *qua* mental images, are *intelligible* objects, and then use this to explain *dianoia's* greater clarity.⁶² Now, the images that *dianoia* uses are explicitly said to be sensible, but let us assume *arguendo* that the proposed mental images are

61 Views in this broad family are defended by Gallop 1965, Tanner 1970, Boyle 1973 and 1974, Byrd 2018, and Moss 2021, 185–90. Mohr 1984 and Payne 2017 give a comparable role to mental or verbal images, though they do not identify them with hypotheses.

62 Byrd 2018 thinks mental images of Forms are on the same ontological level as sensibles, but nonetheless clearer. While she recognises that Socrates says clarity and truth co-vary, she thinks the combination of two facts forces us to separate them: (a) that L₂ and L₃ are equal,

a second set of images.⁶³ Why think that this picks out a set of *intelligible* objects in the sense relevant to the *Republic*: objects that belong ontologically to τὰ νοούμενα, alongside Forms? Of course almost everything is intelligible in a non-technical sense of being capable of being grasped by the mind: mathematical hypotheses, fingers (523A–525A), even the multi-headed beast of book 9. But for obvious reasons, that is far too permissive. One might suggest restricting ‘intelligible’ images to images *of* intelligibles. But this confuses the nature of a thought with the nature of its object: a mental image of a Form is not thereby intelligible for much the same reason that a mental image of a statue is not made of stone.⁶⁴ Similarly, if we hypothesize the square itself, we create a hypothesis *about* an intelligible, but we do not thereby create a further intelligible.

Hypotheses are, in the end, the wrong place to look if we want to identify something that gives *dianoia* increased clarity. They are a methodological tool, not a cognitive achievement, and they are introduced to explain *dianoia*’s limitations, not its strengths. Moreover, insofar as they are part of what holds *dianoia* back, they go hand in hand with its use of *sensible* images. Hypotheses and sensible images are used together as part of the same imperfect means by which it tries to apprehend intelligibles, and, as such, they are both part of an account of the effect of having one foot stuck in the sensible realm (in section 6.1, I will argue that both are part of an account of *dianoia*’s inability to provide explanations). If we fully acknowledge the limiting role that hypotheses play, and the manner in which they play it, it is not easy to construe them, at the same time, as what explains *dianoia*’s superior clarity or intelligibility.

5.4 *Turning the soul to what is*

When mathematicians argue for the sake of intelligibles like the ‘square itself’, they thereby *acknowledge* (albeit in some attenuated sense: see, e.g.

which she takes to indicate only ontological equality, and (b) that *dianoia* is clearer than *pistis* (125–126). Naturally, I think her mistake is to assume (b).

63 This creates a new requirement: to explain the relationship between these two classes of image. For Moss 2021, 185–90, the sensible images that *dianoia* uses are images not of Forms, but of its own intelligible images. Payne 2017 suggests the sensible images are of (151, 155) or part of (187) the intelligible images, though he at times treats them as optional aids to understanding (190).

64 Compare the distinction in the *Parmenides*, 132B3–C11, between Forms and thoughts about Forms.

533B5–C3) the existence of intelligibles like the ‘square itself’. This is not a new or surprising claim: it is implicit in our understanding of *dianoia* as a discipline that studies intelligible entities. But some people might think that if we focus on just this very fact—that, unlike *pistis*, *dianoia* essentially involves some recognition of intelligibles—the manner in which *dianoia* is clearer will emerge. This thought might be bolstered by the evident importance that Socrates places on this fact. His rationale for training the guardians in mathematics is that it leads to this kind of ontological enlightenment, and so prepares them to eschew sensibles in favour of directly studying intelligibles. It ‘turns the soul towards the study of what is’ (525A1–2), as Socrates puts it. Does this make *dianoia* clearer than *pistis*?

If it did, clarity would be a function of what a person believes or knows. But it is hard to see why this would be so, and it is not an account of clarity that has been defended. As we saw in section 3, a cognition’s clarity relates to the kind of object it relies on for information: its direct or immediate object. What matters is where a person’s judgements *come from*, the ontological status of their starting points, rather than what they are about. So understood, what is relevant to clarity is not that *dianoia* studies intelligibles, but that it must do so *indirectly*, through sensibles that obscure its view. The prisoners in the Cave allegory, who have a parallel relationship to images, provide a useful analogy. Imagine a prisoner who rather than being freed, becomes aware that the shadows are cast by statues that exist behind her: this might instil in her a great desire to turn around, but it will not make the shadows a less sketchy and unreliable representation of the statues. What information shadows can convey accurately, or at all, is simply not affected by her mental state, however enlightened it is.

So why does Socrates value the ontological enlightenment associated with mathematics? Note that the claim that mathematics ‘turns the soul towards the study of what is’ (525A1–2) is not a reference to *its* study of what is. The soul-turning metaphor is used to describe how education, rather than simply imparting information or skills, ought to shepherd a student’s intellectual abilities towards the right end.⁶⁵ When Socrates praises mathematics’ ability to turn students towards ‘the study of what is’, he is praising its ability to lead students beyond mathematics, to the next and ulti-

⁶⁵ See Reeve 2010, Smith 2019, and my forthcoming.

mate subject, dialectic, where they study intelligibles directly.⁶⁶ To return to the above analogy, while our enlightened prisoner cannot change the nature of shadows, she is, unlike her peers, ready and eager to turn around and see the statues. Similarly, the enlightened mathematician cannot make sensibles a better reflection of the intelligible world, but by being familiar with sensibles as mere copies of intelligibles, she is poised to ‘turn around’, practice dialectic, and gain an unmediated grasp of intelligibles. (I return to *dianoia*’s role in education in section 6.2.)

5.5 *Visibles in the intelligible*

Let us now look directly at the problem posed by *dianoia*: how do we reconcile *dianoia*’s use of sensibles with its placement in the intelligible section of the Line? We should begin by noting that it is undeniable that Plato presents *dianoia*, the cognition ‘between belief and understanding’ (511D4–5), as having a foot in both realms: on the one hand, it achieves knowledge about intelligibles; on the other, it relies on sensibles to do so. This is on the very surface of the text and is a fundamental part of Plato’s explanation of *dianoia*’s status as a lesser kind of knowledge. A good answer, then, must explain this fact.

Since *dianoia* has a foot in the sensible realm, qualifying for the intelligible section cannot be a matter of avoiding sensibles altogether. So we need a more specific criterion. Since *dianoia* is essentially related to two objects, one sensible and one intelligible, it makes sense to think that it is included in the intelligible section because of its relationship to the latter, intelligible object. As we saw, it *studies* intelligibles and reliably reaches truths about them, and does this despite its reliance on sensibles. The following passage is instructive:

No one will dispute it when we say that there is no other inquiry that systematically attempts to grasp with respect to each thing itself what the being of it is, for all the other crafts are concerned with human opinions and desires, with growing or construction, or with the care of growing or constructed things. As for the remaining crafts [αἱ δὲ λοιπαί], I mean geometry and the subjects that follow it, we described them as to some extent grasping what is, for we saw that, while they do dream about what is, they are unable to command a waking view

66 This is especially clear from those occasions when ‘what is’ is replaced by the more specific goal of the Form of the Good, which is undoubtedly studied by dialectic, not mathematics. See 526D7–E2 and 532C4–7.

Dianoia & Plato's Divided Line

of it as long as they make use of hypotheses that they leave untouched and that they cannot give any account of. (533A10–C3)⁶⁷

As we would expect, mathematics is not an investigation of the nature of each thing; that is the preserve of dialectic. But what is interesting about this passage is that Socrates also distinguishes mathematics from all the other non-dialectical crafts: those that are ‘concerned with’ (περί) the various phenomena of the sensible world, which presumably means that the sensible world is where they find their subject matter. Mathematics finds its subject matter elsewhere: it uses sensibles to reach its conclusions, but its conclusions are not about the sensible world. At least in its purest form, mathematics is a science of the intelligible, with the theoretical goal of discovering intelligible truths for their own sake, and even if it is only ‘dreaming’ of intelligibles, it does so with considerable success. Plato’s description of *dianoia* at 510D5–11A2 is a good statement of this: the mathematician uses visible figures, but his thought is *for the sake of* (ἕνεκα; D8) intelligible entities like the square itself and the diagonal itself. I propose, then, that the relevant criterion for inclusion in the intelligible section of the Line is being a kind of cognition that makes intelligibles its subject-matter and can systematically reach truths about them. *Dianoia*’s ability to meet this criterion is not threatened by its use of sensibles.

6 THE EQUALITY & INEQUALITY OF *PISTIS* & *DIANOIA*

One major task of this paper is now complete. My aim up to this point has been to show that we can and should take the Line analogy just as Socrates describes it. With a proper understanding of what ‘clarity’ means and how the analogy works—the image–original reading—we see that the Line expresses a consistent and plausibly Platonic position, and one that we have very little reason to try to avoid. We should, then, accept what it tells us: *dianoia* and *pistis* are equally clear. My aim in the remainder of this paper is to show that this is not a result we need to fear. Taking the Line analogy at face value does not make *dianoia* intractably mysterious, but, on the contrary, it helps us make better sense of what it is, and in particular it helps explain its more unusual features.

⁶⁷ This passage is discussed further in section 6.1.

I draw on three related observations, which I consider in turn. The first is that *dianoia* has the surprising status of being a kind of knowledge that fails to be explanatory, a limitation shared by any cognition that relies on sensibles. The second is that *dianoia* corresponds, in the education of the guardians, to ten years of pure mathematics, which is an interlude in their primarily ethical education. And the third is that for Plato there can be significant differences between properties on the *same* ontological level, including between ethical properties and mathematical properties.⁶⁸

6.1 *Non-explanatory knowledge*

The idea that *pistis* is deficient in clarity is a version of a more familiar Platonic view about the deficiency of sensibles. In this more familiar view, the definitive epistemic limitation caused by relying on sensibles is a failure to be explanatory: as Plato argues in book 5, the sensible F's that belief is set over are just not the sort of things to provide an explanatory account of what it is to be F. It seems likely, then, that the *manner* in which *pistis* is unclear—the manner in which it fails to accurately and completely grasp the nature of what it cognises—is a failure to provide explanatory accounts of what it cognises. If *dianoia* is equally unclear, again because of its reliance on sensibles, we should expect its limitation to be the same: a failure to provide explanatory accounts, due to a reliance on sensibles. As we've already seen briefly in section 2.4, that is exactly what we find. On reflection, this is quite a remarkable observation: *dianoia*'s defining limitation is one that is elsewhere—in *Republic* book 5 and almost every other

⁶⁸ I assume that *dianoia* is a form of mathematical reasoning. In this, I am simply following the text and I do not believe it requires any special defence. Some commentators propose a further ethical form of *dianoia*, not mentioned in the text: e.g. Cooper 1966, Fine 2003, and Smith 2019. I do not think the challenges this proposal faces have been fully recognised. The idea is that mathematics is just an example of *dianoia*. While this might work for book 6—though even there it seems not to be Glaucon's understanding (511A10–B1)—it is ruled out by book 7, where mathematics is clearly the precise object of Socrates' concern: it alone has the power to 'turn the soul towards being' and is the only subject in the guardians' education in *dianoia*. If another, ethical form of *dianoia* existed, it would be extremely surprising for it to be absent from the guardians' education. Other challenges include the fact that the mathematical subjects are later described as what was labelled (even defined, ὀρίζεσθαι) as *dianoia* (533C8–E2); as what are represented by the relevant moment in the Cave allegory (532B6–D1); and as the *only* subjects, besides dialectic, that have some grasp of intelligibles (533A10–B5).

discussion of knowledge and belief in Plato—presented as the defining limitation of *belief*.

Consider Socrates' description of how *dianoia* uses hypotheses:

I think you know that students of geometry, calculation, and the like hypothesize the odd and the even, the various figures, the three kinds of angles, and other things akin to these in each of their investigations, as if they knew them [ὡς εἰδότες]. They make these their hypotheses and don't think it necessary to give any account [λόγον] of them, either to themselves or to others, as if they were obvious to everyone. (510C2–D1)

We usually take it as a truism that for Plato knowledge requires an explanatory account. This is why it requires Forms: Forms provide an explanatory account of something's nature. Yet this is what mathematicians lack: they lack accounts, λόγοι, of their hypotheses. It is true that after assuming their hypotheses, mathematicians provide proofs that, from this starting point, explain why their conclusions are true, but it seems reasonable to think that such proofs are not *bona fide* explanatory accounts if they rely on substantial assumptions that themselves lack accounts. In short, from one reasonable point of view, knowledge requires an explanatory account that is itself fully known or understood. This is exactly Socrates' view, as we see from a passage discussed at length in section 2.4:

We described them [sc. the mathematical crafts] as to some extent grasping what is, for we saw that, while they do dream about what is, they are unable to command a waking view of it as long as they make use of hypotheses that they leave untouched and that they cannot give any account of [μὴ δυνάμεναι λόγον δίδοναι αὐτῶν]. What mechanism could possibly turn any agreement into knowledge when it begins with something not known and puts together the conclusion and the steps in between from what is not known? (533B5–C6; see also 531E3–4 and 534B3–6)

As we saw earlier, Socrates acknowledges that up to this point he has not distinguished *dianoia* from *epistēmē* (533D4). But now that he fully faces the fact that *dianoia* does not provide *logoi* of its hypotheses, he concludes that it must be distinguished from the concept of *epistēmē* that dominates his other discussions of knowledge, where being fully explanatory is paramount. While *dianoia* may be knowledge, it is a new, and limited kind, special to the mathematicians.

Dianoia's failure to be fully *explanatory* and its failure to be fully *clear* are limitations that we will naturally expect to be related, even if the rela-

tionship is not explicitly spelled out in the text. *Dianoia*'s reliance on unexplained hypotheses, which make it less explanatory, and its reliance on sensibles as images, which make it less clear, are typically mentioned in the same breath:

Using as images the things that were imitated before [L2 sensibles], the soul is forced to investigate from hypotheses, proceeding not to a starting point but to a conclusion. (510B4–6)

The soul is forced to use hypotheses in the investigation of it, not travelling up to a starting point, as it is unable to reach beyond its hypotheses, but using as images those very things of which images were made in the section below ... (511A4–8)

Hypotheses and images are 'used' in the same activity of investigating intelligibles, so they figure as two parts of a single method, both occurring in its early stages. How are they related? Any precise answer will be controversial, but it at least seems likely that *dianoia* must use hypotheses *because* it relies on sensible images, rather than *vice versa*. Hypotheses have to come from somewhere, and since *dianoia* has no direct contact with Forms, the only possibility is that it derives its hypotheses from the sensible world. This being so, an obvious proposal is that the derivation of hypotheses is part of the process of using sensibles as images of the intelligible world and, in turn, that the reason it cannot give an account of these hypotheses is that sensibles do not provide these accounts. Sensible observations provide us with certain fundamental 'that's without the accompanying 'why's.⁶⁹ (With a proviso that many other accounts are consistent with what has just been said, I understand the idea to be that mathematics begins from certain invariable characteristics of the sensible world—basic observations 'obvious to everyone' (510D1) about, say, space and number—and uses these as the starting points from which to deduce conclusions. In other words, *dianoia* observes certain intelligible truths that are reflected in the invariable characteristics of the sensible world, gathers the most general and useful of these into a set of hypotheses, and then from these, deduces conclusions. The relevant 'images', then, are only secondarily the diagrams used in mathematical constructions, insofar as they are uncluttered and generalised examples of invariable patterns observed in the sensible world.⁷⁰)

69 This view of how hypotheses and images are related is similar to Robinson 1941, 161–62. See also Cross and Woosley 1964, 244–46.

70 See 529D7–8, where the movements of celestial bodies can also function as images. When it comes to diagrams, I take Plato's concern to be the conceptual object described by, e.g.,

My conclusion is that *dianoia* fails to give explanatory accounts *because* it relies on—is ‘set over’—sensibles, and this failure explains the specific manner in which it lacks clarity. This helps us to pin down its equivalence to *pistis*. Sensibles can provide people with the resources for limited success in their judgements, at least in certain areas. Carpenters or farmers, for example, can do their jobs well, and offer sound reasons for their judgements and choices. But they nonetheless face the familiar Platonic limitation that no matter how expert they are in their domains, they will never be able to fully explain their judgements, so long as they rely on sensibles. Similarly, a student trained in music and gymnastics—a figure I will consider again shortly—acquires reliably true ethical judgements, but crucially does so ‘before he is able to grasp the reason’ (402A2–3). My proposal, then, is that the defining limitation of both *dianoia* and *pistis* is their inability to give explanatory accounts. For both, this is the manner in which they lack clarity, and the cause in both cases is their reliance on sensibles.

An objection here might be that I’ve exaggerated the extent to which *dianoia* lacks an explanatory account, since it is after all in the business of providing proofs for its conclusions. But while we might be quite comfortable with mathematics’ use of unexplained hypotheses, Plato evidently is not. It would be hard to exaggerate the importance Plato places on a *particular kind* of explanation, centred on answering ‘What is F?’ questions: explanations that provide accounts of fundamental natures or essences. Plato is explicit that only *noēsis* can provide accounts of ‘what each thing is’ (533A10–C3). The ability to be partially or locally explanatory, or to offer sound or even conclusive reasons, is something different, and not unique to mathematics. Consider again carpenters or farmers, who presumably are proficient in explaining the techniques of their crafts, or the decent person in book 10 who believes that one ought to respond to misfortune calmly, based on four reasons that, apparently, in Plato’s view, are true and succeed in explaining why this response is best (603E4–604D3). This piece of ethical reasoning falls short of full knowledge—of *noēsis*—in a comparable way to mathematics: it is locally explanatory, and deduces a sound conclusion from true premises, but it is based on unexplained assumptions, in this case assumptions about the virtues and the good. To

‘a triangle ABC with a square on AB’, not the many possible drawings of this, using different lengths and angles. Contrast Patterson 2007.

be sure, mathematical deductions are considerably more complex and impressive, but this, while perhaps conducive to intellectual training, is not a sign of clarity.⁷¹ What matters is how well one's conclusions reveal the nature of things, not the complexity or simplicity of the route one takes to get there.

6.2 *Dianoia in education: a mathematical interlude*

The period in the guardians' education corresponding to *dianoia* is ten years of pure mathematics. Why? At least partly, it is instrumental. Plato describes it as a 'necessary preparatory education [*προπαιδεία*] for dialectic' (536D4–6; cf. 531D6–8). It makes the guardians familiar and receptive to the study of intelligible entities—'turning the soul towards the study of what is,' as Plato puts it. Some commentators argue that, in addition, the content of mathematics is essential to the study of ethical concepts.⁷² But even then the idea is not that the ten years of mathematics involves actually addressing questions like 'what is justice?' or 'what is the good?', but that the mathematical conclusions learned during this time will later be applied to dialectical analyses of ethical concepts. During their ten years of mathematics, the guardians are simply studying mathematics.

An obvious implication of this is that during these ten years, they do not appear to study any ethics or even philosophy, as we would understand it. So while they advance in mathematics, their understanding in other areas appears to plateau. Specifically, Plato gives us no reason to think that they gain any direct or immediate improvement in their ability to answer practical or philosophical questions (even if mathematical studies prime them to answer them once they move on to dialectic). It is, as such, a mathematical interlude in an otherwise ethical-cum-philosophical education.

Accordingly, we find an overlap in the questions addressed by the subjects that come before and after mathematics: music and gymnastics, before, and dialectic, after. Specifically, the overlap is ethical. Although music and gymnastics use non-cognitive means, they result in ethical judgments. A person well trained in music 'most sharply perceives' (401E3)

71 Socrates says, for example, that those trained in mathematics will become sharper *even if they derive no other benefit* (526B5–9), where the implication is that this sharpness is distinct from the benefit of the ontological enlightenment it can engender.

72 See Burnyeat 2000, Sedley 2007, 269–71, and Payne 2017. For recent criticisms of this view, see Broadie 2021, 176–95, and Smith 2019, 167–73. I remain neutral in this debate.

when something is fine or shameful, leading them to praise and hate the right things, and ultimately to acquire reliable judgements about the virtues' sensible instances (402B9–C6). When explaining the courage of the auxiliaries as one of its results, Socrates describes the general effect of music and gymnastics as follows:

Because they had the proper nature and upbringing, they would absorb the laws in the finest possible way, just like a dye, so that their belief about what they should fear and all the rest would become so fast that even such extremely effective detergents as pleasure, pain, fear, and desire wouldn't wash it out. (430A2–B3)

Thus, music and gymnastics produce robustly stable 'right belief' (ὀρθὴ δόξα; 430B4) about ethical matters. As a higher kind of belief sensitive to the difference between image and reality (402A7–C8), these are evidently examples of *pistis*, which is exactly what we expect if we fit the Line to the *Republic's* educational curriculum.⁷³

However, and crucially for present purposes, these are beliefs that lack an accompanying explanatory account. A person trained in music acquires the right judgements 'before he is able to grasp the reason [λόγος], although when the reason arrives, someone raised in this way would welcome it' (402A2–3).⁷⁴ So when *does* the reason arrive? Since ethical questions are not addressed (at least directly) during their study of mathematics, it must be after this, when the guardians turn to dialectic and situate their ethical judgements in a comprehensive understanding of reality, grounded in knowledge of the Form of the Good. There is, then, a salient gap in the student's ethical progress: reliable ethical beliefs (taught by

73 As Plato intends us to. See Malcolm's defence of this claim in both his original paper (1962) and a later paper (1981) written to address the fact that this claim was not widely adopted. It is still not as widely adopted as we would expect, though silence rather than disagreement is the most common position. This is perhaps because of the tendency to consider the Sun, Line, and Cave in isolation, as sources of information about Plato's metaphysics and epistemology. Yet Plato is explicit that they are introduced to aid the extended discussion of the education of the guardians (504A2–507A5), which takes up almost all of books 6 and 7. Indeed, he tells us that the Cave is an allegory for 'education and the lack of it' (514A1–2), and in this respect the Cave presumably carries the Line with it.

74 In the *Laws* we find a succinct statement of the same idea: 'I call 'education' the initial acquisition of virtue by the child, when the feelings of pleasure and affection, pain and hatred, that well up in his soul are channelled in the right courses before he can grasp the reason [λόγος]. Then when he does grasp it, his reason and his emotions agree in telling him that he has been properly trained by inculcation of appropriate habits' (653B1–6).

music and gymnastics); mathematical knowledge (taught by mathematics); and, finally, ethical-cum-philosophical knowledge (taught by dialectic). Put another way, we can say that the subject of dialectic is preceded by subjects that, while unrelated to each other in subject-matter, are both, in different ways, propaedeutics to dialectic. Music and gymnastics prepares one to 'welcome' the kinds of ethical reasons discovered through dialectic, or in Socrates' metaphor of education in book 7, it helps us to turn the 'whole' soul towards what is: that is, to turn not just one's rational part, but also one's appetitive and spirited sensibilities (518B7–D7).⁷⁵ Mathematics, in contrast, prepares one intellectually for the intelligible realm in which these discoveries are made, turning the intellectual 'eye' of the soul towards what is (and, if we follow Burnyeat and others, teaches us mathematical concepts used to articulate these discoveries).

One reaction to this shift in subject-matter might be to ask: is the guardians' grasp of mathematical properties clearer than their earlier grasp of ethical properties? I will shortly compare mathematical and ethical properties, but now I want to point out how this question misses the point. The question asks us to assess the guardians' curriculum in terms of linear intellectual progress, but the curriculum's shift in subject-matter suggests a different view of education. Socrates describes education as a way of 'turning the soul around' (518B7–519B5): that is, education is a way to direct our natural abilities towards the right ends (see section 5.4), which is ultimately knowledge of the Form of the Good. Rather than a series of increasingly advanced philosophy classes, the subjects in this kind of education can have distinct subject matters and teaching methods, yet all still contribute, in unique and incommensurable ways, to the same ultimate pedagogical goal. Consonantly, mathematics is praised not for any improved clarity or usefulness in its conclusions, but for its unique ability to turn a student's soul towards intelligibles in a way that prepares them for dialectic. It doesn't make sense to compare its success in this task with the earlier achievements of music and gymnastics, since that was not a task music and gymnastics even attempted. So at least from the perspective of its pedagogical *raison d'être*, mathematics appears above all to be different

75 On this metaphor and what it tells us about the educational role of music and gymnastics, see my forthcoming.

from, rather than clearer or better than, the musical and gymnastic education that came before it.⁷⁶

6.3 *Not all properties are equal*

Bringing the previous two claims together, my proposal is that prior to dialectic, Plato's students reach the same imperfect level of clarity in two different areas, ethical judgement and mathematical judgements, where the imperfection is explained by the lack of the kind of explanation needed for a full, clear understanding. This tells us how and why *pistis* and *dianoia* are, in one specific respect, the same. Yet in other respects they are hugely different, as are a musical and gymnastic education and a mathematical education. Why is there a remarkable equality in cognitions, and subjects, that are otherwise so different?

Here we need to pay attention to an often neglected feature of Plato's metaphysics. In addition to the distinction between different ontological levels, there is a less well recognised distinction between properties at the *same* ontological level. Normative properties are the first example. It is not difficult to achieve *pistis* about 'the animals around us, all the plants, and the whole class of manufactured things' (510A5–6). Relying on perception alone, we can reliably recognise sensibles like chairs or trees, distinguish them from mere images, and make various other reasonably accurate judgements about them. But *pistis* with respect to normative properties is more difficult: without education, people have very unreliable judgements about what is good, just, or honourable. A decent grasp of normative properties is achieved only via the surprising route of an education in music and gymnastics. This involves training a person to be pleased and pained by the right things and, consequently, to form reliable judgements about what is good, just, and honourable. Crucially, we have no reason to think that a person educated in music and gymnastics grasps normative properties with greater clarity than most people grasp ordinary sensible objects like chairs or trees. The problem, rather, is that normative properties are more *difficult* to grasp, so it is a significant educational achievement to grasp them with the *same* clarity with which most people grasp ordinary sensibles.⁷⁷

76 Compare Stocks 1911, 76: 'it does not make sense to say that the μαθηματικόν is the same thing as the ζῶον in a clearer form.'

77 On the difference between normative and other properties, see *Stm.* 285D9–286A4 and *Phdr.* 250B1–5.

We can, then, contrast ‘vertical’ and ‘horizontal’ differences in Plato’s metaphysics: vertical differences are differences between ontological kinds, such as sensibles and Forms; horizontal differences are differences between one kind of sensible and another, or one kind of Form and another. Since far more attention is given to the vertical differences in Plato’s metaphysics, these are the differences that commentators expect to see when they consider *pistis* and *dianoia*. Yet when Socrates himself first describes the educational benefit of mathematics, at 523A–525A, he draws our attention to a horizontal difference. He points out that for properties like being a finger we can get a decent grasp of them from what we see. This is true of many of the ordinary sensibles that *pistis* is set over. But for other kinds of properties, perception is unhelpful. To perception, one’s ring finger is as large as it is small (compared with the little and middle finger), so we are compelled to use reason, rather than perception, to grasp what largeness is. This subset of sensible properties, which Socrates calls ‘summoners’ (523C1–2), stimulates the kind of ontological enlightenment discussed in section 5.4, compelling us to recognise that largeness itself is something distinct from the largeness of perceptual things like fingers—that it is something intelligible. Ordinary people may not develop this thought very far, but mathematics makes one study such properties in a reasoned and rigorous way: ‘it compels [the soul] to discuss the numbers themselves, never permitting anyone to propose for discussion numbers attached to visible or tangible bodies’ (525D5–8). As such, it is a study that ‘draws the soul from the realm of becoming to the realm of what is’ (521D4–5).

This is a complex and controversial passage, but the observation I wish to make is relatively simple: Socrates’ aim is not to show that mathematicians can answer ‘what is a number?’ more clearly than ‘what is a finger?’ The point is rather that we grasp fingers in a way that is *different* from how we grasp numbers, and a way that is less demanding: for a finger, ‘the judgement of perception is itself adequate’ (523B1–2), but for number properties perception is ‘inadequate’ and leaves the soul ‘puzzled’ (523E1–525A1), which creates a unique need to call on reason. This being so, the most obvious candidate for a comparison in clarity goes in the opposite direction than we might expect: by perception alone, we get a *clearer* grasp of properties like being a finger than we do of number properties. Indeed, it would be natural to take the implication to be that it requires reasoning, and thus more work, to get an *equally* adequate grasp of number properties, just as

it appears to require more work to get an equally adequate grasp of normative properties. But whether that is the case or not, what is important is that Socrates' rationale for training the guardians in mathematics has nothing to do with it allowing us to grasp mathematical properties more clearly than something else. His reason is that these properties, because they engage our reason in a unique way, are singularly suited to the pedagogical role of preparing students for the philosophical subject of dialectic.⁷⁸

If we have only the vertical differences in view, the objects of *pistis* and *dianoia* look the same: they are equally sensible. But the sensible realm is not a homogeneous whole for Plato. There are different kinds of truths to learn from sensibles, different ways of learning them, and different psychological and intellectual results. So mathematical and ethical judgements (for example) can be different types of judgments even if both only make direct contact with sensibles, and thus lack the kind of explanations accessible to *noēsis*. Much of the incredulity at the equal clarity of *pistis* and *dianoia* stems from a failure to look beyond vertical differences in Plato's metaphysics and recognise the other resources he uses in book 7 to explain what makes *dianoia* unique.⁷⁹

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78 Compare Cornford 1932, 38–39, who also appeals to a horizontal difference between mathematical and ethical properties.

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Dianoia & Plato's Divided Line

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