# The Object of Thought (*Dianoia*) in Plato's Divided Line, 509d1-511e5

KAWASHIMA Akira Doctoral Student, Tohoku University

Abstract: Each of the four subsections of the divided line seems to represent a certain type of entity (pace Fine). What is represented by the second subsection, which corresponds to thought (dianoia)? Following Adam, Burnyeat, and Denver, I contend that it stands for mathematical entities that are intermediary between Forms and sensibles, rather than for Forms themselves (Ross, Murphy, et al.); for propositions concerned with Forms via sensibles (Gonzalez et al.); or for certain sensibles (Smith et al.). My main reason for favoring this interpretation is that it can make good sense of the geometrician's practice: when dealing with a triangle, she does not deal with the visible triangle that she has drawn, but with the intelligible triangle that it represents. Yet this triangle is different from the Form of Triangle, in that there are many such geometrical triangles while there is only one Triangle. I suggest that the geometrician's triangles derive their identity from the geometrical problems that she deals with. The emphasis of the word 'itself,' as in 'the square itself' (510d7-8) does not have to indicate that the Form is in question. It can, instead, contrast the geometrical square itself with the inaccurately drawn figure. Finally, although Socrates speaks of the intelligible realm as being inhabited by Forms, this may not mean that the Forms are the only inhabitants but just that they are representative ones. I conclude by addressing the question of what to make of the equality in length of the two middle subsections of the line. In my view, what is represented by one of these subsections (thought) is actually 'clearer' than what is represented by the other (belief); hence, the two subsections should not have been equal. By planting this inadequacy, I would suggest that Plato is warning the reader of the limits of a simile.

After comparing the Good to the sun (507a7-509b9), Socrates invites Glaucon to imagine a line (AE) that is divided into two unequal sections (AC and

44

CE, presumably with the former being longer<sup>1</sup>). AC represents the intelligible realm and CE the visible one. These sections are each to be divided in the same proportion as AC to CE (AC is divided into AB and BC; and CE into CD and DE). Socrates distributes four 'states of mind' (*pathēmata en tē[i] psychē[i]*) amongst these four subsections: intellect (*noēsis*) is assigned to AB; thought (*dianoia*) to BC; belief (*pistis*) to CD; and imagination (*eikasia*) to DE. Intellect partakes of the highest degree of clearness (*saphēneia*). It is followed in order by thought, belief, and imagination. Socrates attributes thought to mathematicians, including geometricians, and intellect to dialecticians. Their practices are distinguished in the following two respects. First, whereas the mathematician takes her hypotheses for granted and deduces conclusions from them (510b4-d3), the dialectician moves from her hypotheses back to their ultimate 'principle' (*archē*) (511b1-c1)<sup>2</sup>. Second, the geometrician, unlike the dialectician, makes use of visible figures as assistance for her inquiry (510d5-511c2).

In this paper, I shall consider what subsection BC is meant to represent. Most interpreters agree that each subsection stands for a certain *type of entity*, i.e., the object of its corresponding cognitive state of mind. (More than one subsection may represent the same type of objects as being dealt with in different manners.) By contrast, Gail Fine holds that  $(1)^3$  the four subsections represent four *modes of reasoning*.

As for the majority interpretation, it seems generally agreed that AB stands for Forms; CD for visible entities such as animals, plants, and artifacts; and DE for images of these, such as shadows and reflections in water. But what does BC stand for? I.e., what are the objects of thought? Four kinds of answers have been proposed<sup>4</sup>:

I am most grateful to Giovanni Ferrari, who generously helped me write an early version of the present paper as my advisor during my stay as a Visiting Student Researcher at the Department of Classics of the University of California, Berkeley, from August 2015 to June 2016.

<sup>&</sup>lt;sup>1</sup> Cf. Smith, 27-8. Denyer contends, though, that it does not really matter which section is meant to be longer. Denyer, 292-4.

<sup>&</sup>lt;sup>2</sup> For the method of hypothesis, cf. *Meno*, 86e1-87e4, *Phaedo*, 99d4-102a3.

<sup>&</sup>lt;sup>3</sup> I shall number interpretations in this way.

<sup>&</sup>lt;sup>4</sup> Some interpreters give no definite answer. Annas examines and rejects (2) and (3). She finds (3) to be in conflict with the contention at 510d, which is that mathematicians talk about 'the square itself' and 'the diagonal itself'; Annas takes these to refer to the Forms. (But see Section Three, below.) In (2), Annas argues, the original-image relationship of the bottom part of the line (between CD and DE) would have no real analogy in the top part (between AB and BC), which would mean a break-down of the scheme of the divided line.

- (2) Forms (Shorey, Nettleship, Cornford, Hackforth, Murphy, Ross, Cross & Woozley, and Ota).
- (3) Mathematical entities, which are intermediary between Forms and sensibles (Adam, Burnyeat, and Denyer).
- (4) Propositions that are concerned with Forms via sensibles (Boyle and Gonzalez).
- (5) Sensibles (Fogelin, Bedu-Addo, White, N. P., and Smith).

In what follows, I shall support interpretation (3). I do not mean to present a decisive argument for it or against alternative interpretations. My only aim is to show how I find (3) especially plausible. In Section One I will briefly explain the five interpretations. In Section Two I will state why I am reluctant to adopt (1), (2), (4), or (5). In Section Three I will respond to certain objections to my favored interpretation. In Section Four I will present two considerations that could support (3). And in Section Five I will consider a related issue, on the basis of my foregoing discussion.

#### 1. Five Kinds of Interpretations

According to interpretation (1), e.g., Fine's<sup>5</sup>, the four subsections represent four types of reasoning. AB and BC represent two sorts of knowledge, and CD and DE two sorts of beliefs (*doxa*). DE, i.e., imagination, is a state of mind in which one cannot systematically discriminate between images and their originals. In CD, i.e., belief, one can do so but cannot adequately explain their difference. In BC, i.e., thought, one knows certain Forms without knowing that they are Forms<sup>6</sup>. In AB, i.e., intellect, one not only knows Forms but also knows that they are Forms. Fine's interpretation of the divided line constitutes part of her broader project of showing that Plato, in the *Republic*, does not analyze knowledge or other cognitive states in terms of their objects, and that he is not committed to the view that knowledge is concerned with Forms and only with Forms<sup>7</sup>.

Annas finds this problem insoluble. Annas (1981), 251-2. Cf. also Benson, 203, n. 3, Foley, 3. <sup>5</sup> Fine, 101-6.

<sup>&</sup>lt;sup>6</sup> Fine, 101-12.

<sup>&</sup>lt;sup>7</sup> Fine, 85-116.

The other interpretations, i.e., (2) to (5), presuppose that BC stands for a certain type of object. Interpretation (2) identifies it as Forms. Although intellect and thought are both concerned with Forms, they do so in different manners<sup>8</sup>. Mathematicians<sup>9</sup> study Forms indirectly, while dialecticians study them directly and purely, proceeding through Forms to Forms. There are three main points that seem to support this interpretation. First, as Ross remarks<sup>10</sup>. Socrates gives no special explanation of the mathematicals in the divided line passage. (This point is also an objection to interpretation (3), to which I shall respond in Section Three.) Secondly, as Murphy points out<sup>11</sup>, the upper subsections (AB and BC), which stand for '*noēton* eidos' (509d4) or 'nooumenon genos' (509d8), can naturally be taken as the subdivisions of the Forms. For, in the simile of the sun, Socrates has spoken of what is intelligible solely in terms of the Forms<sup>12</sup>. (This constitutes another objection to (3).) Finally, at 510d7-8, Socrates speaks of 'tou tetragonou autou' (the square itself) and '*diametrou autes*' (diagonal itself) to refer to objects of geometry<sup>13</sup>. But in the middle dialogues such locutions are frequently used to refer to Forms<sup>14</sup>. (This is vet another objection to (3).) In this interpretation, the reason for which Socrates tells Glaucon not to embark on the further division of the intelligible realm, at VII, 534a5-8, would be that the objects of intellect are actually identical to those of thought.

According to interpretation (3), e.g., Adam's, the objects of thought are intermediaries between Forms and sensibles. When geometricians draw figures, they are not really dealing with the figures *qua* visible but the figure *qua* intelligible, represented by the former. Such figures are among the intermediaries. They are

<sup>&</sup>lt;sup>8</sup> E.g., Cross & Woozley, 237-8.

<sup>&</sup>lt;sup>9</sup> Is mathematics the only context in which one can have thought? Murphy and Ross answer in the affirmative. Murphy, 168-72, Ross, 63. By contrast, Nettleship maintains that the zoologist, e.g., can have thought insofar as she considers the essence of each animal, which is a Form. Nettleship, 250. See also Hackforth, 2, 7, Fine, 106, Gonzalez, 363, n. 19, Ota, 20. <sup>10</sup> Ross (1951), 59. However, he admits that interpretation (3) is attractive.

<sup>&</sup>lt;sup>11</sup> Murphy, 167.

<sup>&</sup>lt;sup>12</sup> Murphy also points out that the phrase '*ditta eidē* (twofold kind)' at 509d4 is reminiscent of 507a7-b10, where Socrates distinguishes *the Forms* from the sensibles. Murphy, 167, n. 2. <sup>13</sup> E.g., Cornford, 62-3, Hackforth, 3, Ota, 17. Also, Wedberg holds that the Square and the Diagonal mentioned here are archetypes, of which their participants are imitations. Wedberg, 44, n. 21. Some interpreters, while rejecting (2), consider the Square and the Diagonal to be Forms. Fine, 105-6, n. 35, Boyle (1973), 5, Bedu-Addo, 101, Smith, 33.

<sup>&</sup>lt;sup>14</sup> Symposium, 211d3, Phaedo, 65d4-5, e3, 74a12, c1, c4-5, d6, e7, 75b6, c11-d1, 78d1, 100b6-7, c4-5, d5, 102d6, 103b4, *Republic*, 490b2-3, 507b4, 532a7, b1, 597a2, c3, *Phaedrus*, 247d6-7, 250e2.

different from sensibles in that they are eternal, and different from Forms in that – whereas the Form of the Triangle, for example, is unique – there are many 'intermediary' triangles, such as the right triangle and the equilateral one, as Burnyeat suggests<sup>15</sup>. Adam says, "since *dianoia* is intermediate between *nous* and *doxa* (511 D), we may reasonably suppose that its objects are likewise intermediate between the higher *noēta* and *doxasta*.<sup>16</sup>" So there are *four* kinds of objects corresponding to the *four* states of mind. This accords with the fact that Socrates, at 511e1-3, implies that the four states of mind participate in clearness (*saphēneia*), to the same degree as their objects participate in truth (*alētheia*). Ascribing the idea of the mathematicals to Plato is as old as Aristotle. He reports that Plato postulated 'the intermediates' (*ta metaxu*) between Forms and sensibles (*Metaph*. A.6.987b14-8, Z.2.1028b19<sup>17</sup>), although he does not tell us in which period of life Plato came up with this idea<sup>18</sup>.

According to interpretation (4), e.g., Gonzalez', the objects of thought are *propositions* that mirror Forms in a deficient way, and that state universal (though abstract) truths mirrored by a plurality of sensible objects<sup>19</sup>. Since the proportion of AB to BC is equal to that of CD to DE, and since DE stands for images of what CD stands for, Gonzalez argues that BC must represent some images of what AB represents, i.e., of Forms. These images are, in turn, imaged by sensibles. To support his claim that propositions are considered to be images of Forms, he cites *Phaedo* 99d4-e6, where Socrates compares '*ta onta*' (beings) to the sun and '*logoi*' (propositions) to images of the sun reflected on water<sup>20</sup>.

<sup>20</sup> Gonzalez (1998), 363, n. 19.

<sup>&</sup>lt;sup>15</sup> Cf. Burnyeat, 34-5.

<sup>&</sup>lt;sup>16</sup> Adam, 68-9.

<sup>&</sup>lt;sup>17</sup> Cf. M.13.1086a12. Ross lists the passages in the *Metaphysics* where Aristotle talks about the doctrine of the intermediaries. Ross (1924), 166. Annas suggests that the attribution of the idea of the intermediaries to Plato may derive from an attempt on Aristotle's part to make sense of everything that Plato says about the numbers. Annas (1976), 21.

<sup>&</sup>lt;sup>18</sup> Annas maintains that, in Platonic dialogues, there is no textual evidence for the kind of intermediates that Aristotle ascribes to Plato in the *Metaphysics*. Annas (1975), 156-64.

<sup>&</sup>lt;sup>19</sup> Gonzalez (1998), 219-20. Gonzalez follows Boyle in thinking that the following point constitutes a reason for rejecting interpretation (3). Gonzalez (1998), 363, n. 19. As Boyle says, the objects of thought should be images of the objects of intellect, i.e., Forms. But it seems impossible for 'intermediaries' to be images of Forms. Generally speaking, an image requires a medium for it to be in, but it is not clear what the medium would be in this case. Boyle (1973), 3-4, (1974), 7. Response to this objection to interpretation (3) could be that the geometrical space may serve as the medium for geometricals to inhabit. Both the geometrical space and the realm of Forms belong to the intelligible realm, but the former, unlike the latter, is spatially extended.

Finally, interpretation (5) assumes that the objects of thought are sensibles, such as figures drawn by geometricians. Like Gonzalez, Smith supposes that the equality of the proportion of CD to DE, and of AB to BC, shows that BC stands for images of what AC stands for<sup>21</sup>. However, unlike Gonzalez, he takes these images to be sensibles such as drawn figures. For, Smith thinks, the original-image relationship that Plato generally speaks of in the middle dialogues lies between Forms and sensible participants in them. If Plato introduced some non-sensibles as images of intelligible originals, he would deviate from his normal pattern without telling us anything about this deviation<sup>22</sup>. (This point constitutes an objection to (2), (3), and (4), which identify the objects of thought as some kind of non-sensibles.) So, Smith thinks, if we are to exempt Plato from a failure in explanation, we should assume that he places the objects of thought in the sensible realm.

### 2. Why I Hesitate to Take Interpretations (1), (2), (4), or (5)

In this section, I shall point out difficulties in interpretations (1), (2), (4), and (5). First, let me examine (1) (Fine's). In this interpretation, Plato would be presenting his idea in a highly misleading way. When Socrates introduces images such as shadows and reflections and, second, their originals (509d9-510a7), he says nothing about the modes of reasoning that would correspond to imagination and belief. Socrates only talks about different types of entities. This strongly suggests that it is in terms of the types of objects that these two states of mind are distinguished. If, as Fine holds, the distinction concerns the mode of reasoning, Socrates' way of speaking would be pointless and misleading.

Let me next examine interpretation (2). Certainly, within the passage of the divided line (509d1-511e5), there may seem to be no evidence that the objects of thought are *not* Forms. However, let us turn our eyes to 532b6-c4, where Socrates connects the description of the cave with his foregoing discussion of mathematical sciences. He says:

And the release from chains? The turning away from the shadows towards the images and the firelight? The upward path from the underground cave to the daylight, and the ability there to look, not in the first instance at animals and

Tetsugaku, Vol.1, 2017

<sup>&</sup>lt;sup>21</sup> Smith, 34-40. For the same kind of reading, see Fogelin, 375-82, White, N. P., 184-6, and Bedu-Addo, 93-103.

<sup>&</sup>lt;sup>22</sup> Smith, 36.

plants and the light of the sun, but *at their divine reflections in water and the shadows of the real things*, rather than the shadows of models cast by a light which is itself a shadow in comparison with the sun?<sup>23</sup> (Italics mine).

Socrates tells us that mathematical sciences finally enable the released prisoner, outside the cave, to look at the 'shadows' (*skias*) or 'reflections' (*phantasmata*) of the 'real things.' Since these 'real things' should represent the Forms, and since their 'reflections' and 'shadows' should be distinct from 'the real things,' mathematical sciences are supposed here *not* to be concerned with Forms themselves, but with something less real that is still located in the intelligible realm. Here Socrates seems clearly to imply that mathematics and dialectic have different types of entities as their objects.

Let me then consider interpretation (4). It seems implausible that the objects of thought are propositions. As Gonzalez agrees, the objects of intellect are Forms, entities that the dialectician is concerned with. So the parallelism seems to require that the objects of thought are entities that the mathematician is concerned with. If the objects of thought were mathematical propositions, the objects of intellect would be dialectical propositions and not Forms. (True, Gonzalez is aware that what the dialectician knows is irreducible to any set of propositions. But the same can be said of what the mathematician knows.)

Regarding interpretation (5), my main reason for rejecting it has been pointed out by Ota<sup>24</sup>. Smith identifies the objects of thought as "objects with which thinkers at the level of thought are most aptly associated,"<sup>25</sup> in other words, objects *by means of which* mathematicians engage in their study<sup>26</sup>. However, it seems stretched to take the objects of thought in this way. At 511a4-8, Socrates identifies the lesser part of the intelligible realm as *what is studied*. He says:

This is the class that I described as intelligible, it is true, but with the reservation first that the soul is compelled to employ assumptions in the investigation *of it* (*peri tēn zētēsin autou*)...<sup>27</sup>

<sup>27</sup> Shorey's translation.

<sup>&</sup>lt;sup>23</sup> Griffith's translation.

<sup>&</sup>lt;sup>24</sup> Ota, 17.

<sup>&</sup>lt;sup>25</sup> Smith, 39.

 $<sup>^{26}</sup>$  Similarly, Bedu-Addo says that we must distinguish between what one, in the state of thought, thinks about – i.e., per his reading, Forms – on the one hand and, on the other hand, the objects that correspond to BC. Bedu-Addo, 101-2.

Here, '*autou*' refers to what BC represents, and Socrates speaks of it as the object, not a means, of investigation. This suggests that the objects of thought are not sensibles but intelligibles<sup>28</sup>.

## 3. Replies to the Objections to (3)

In Section One, when presenting some of the interpretations, I mentioned main points that are supposed to support them. Some of these points constitute substantially reasons for not taking on (3). In this section, I shall respond to three such objections to my favored interpretation.

First, we saw some interpreters object to (3), in that there is no special account of mathematicals in the text<sup>29</sup>. To respond to this objection, I would point out that Plato, especially in the middle dialogues, tends to avoid the full consideration of highly detailed or subtle issues, which might lead to a huge undesirable digression. In such a case, Plato is inclined to touch upon those issues only in passing, in order to focus on his main discussion. One example of this tendency is found at *Phaedo*, 100c9-d8, where Plato, before proceeding on to the final argument for the immortality of the soul, has Socrates hint that there could be a problem with regard to the relation of the Form to its participant. He then immediately sets aside this issue to return to the main one<sup>30</sup>. Another example is at *Republic*, V, 476a7: Socrates refers to the 'association' (*koinōnia*) of the Forms with one another, without explicating or developing this idea<sup>31</sup>. In the same vein, as Burnyeat points out<sup>32</sup>, when Socrates prevents Glaucon from further division of the intelligible realm, at 534a5-8, this could be taken as an example of such avoidance on the part of Plato. So, it seems possible to suppose that Plato purposely avoids

<sup>&</sup>lt;sup>28</sup> Moreover, Socrates' encapsulation of the points of the divided line at 534a1-5 seems to speak against Smith's reading. After having called the higher two states of mind, respectively, '*epistēmē*' and '*dianoia*', Socrates puts them together as '*noēsis*,' and remarks that '*noēsis*' is about '*ousia*' (being). Whatever '*ousia*' in this context may mean, it certainly is not sensible. So it seems to be implied here that neither intellect nor thought is concerned with sensibles as their objects.

<sup>&</sup>lt;sup>29</sup> Ross (1951), 59, Boyle, 3-4, Smith, 36.

<sup>&</sup>lt;sup>30</sup> This issue is going to be fully discussed at *Parmenides*, 130a2-133a10.

<sup>&</sup>lt;sup>31</sup> Plato will tackle this issue at *Sophist*, 251d5-259d8. I do not mean that whenever Plato avoids discussing a cumbersome issue, he will give a fuller treatment in a later dialogue. <sup>32</sup> Burnveat, 33-4.

offering a full account of the difference between Forms and mathematicals in the *Republic,* because he is not willing to develop the point there.

Second, we saw Murphy object to (3), stating that since, in the simile of the sun, Socrates speaks of what is intelligible solely in terms of the Forms, it is difficult to take '*noēton eidos*' or '*nooumenon genos*' in the divided line—i.e., what the upper section (AC) stands for—as containing items other than Forms. This objection presupposes that, in the sun analogy, Socrates means that the intelligible realm is *exclusively* composed of Forms. However, this presupposition is not so obvious; he may simply mean that the Forms are *representative* inhabitants in this realm. This consideration could be supported by observing an analogous case as regards the visible realm: although Socrates, in the simile of the sun, never mentions images such as shadows and reflections in water, he suddenly tells us that they are contained in '*horaton eidos*' or '*horōmenon genos*' at the beginning of the divided line passage (509d8-510a3). In the same vein, we could naturally assume that Socrates, in the divided line, considers '*noēton eidos*' or '*nooumenon genos*' to include other intelligible objects, i.e., mathematicals, even if he has never mentioned them before.

The third objection to (3) is that locutions such as 'tou tetragonou autou' and 'diametrou autēs,' at 510d7-8, indicate that the Forms are in question here. However, as Denyer correctly points  $out^{33}$ , such locutions do not always refer to the Forms. As he explains, the emphasis of 'itself' in 'the square itself' and 'a diagonal itself' can be taken to indicate only that the square and the diagonal that the geometrician speaks about are free of "something that clutters their diagram," such as the breadth and imperfect straightness of the sides<sup>34</sup>. So 510d7-8 is compatible with the view that Socrates conceives of the geometrical figures as intermediaries.

#### 4. Considerations in Favor of (3)

I shall make two considerations in favor of interpretation (3). First and most importantly, as I have said in section two, this reading can make good sense of the mathematicians', especially the geometricians', practice and allow Plato to describe

<sup>&</sup>lt;sup>33</sup> Denyer, 304. For instance, when Plato uses 'the poet himself' (*autou tou poiētou*) at 394c2 or 'fire itself' (*auto[i] to[i] puri*) at 404c4, he does not mean the Form of the Poet or Fire at all.

<sup>&</sup>lt;sup>34</sup> Denyer, 294, 305.

their practice accurately<sup>35</sup>. There are two points to be made. First, e.g., triangles in geometry, unlike the Triangle Itself, are spacially extended<sup>36</sup>. Second, when a geometrician considers a triangle, she considers the very triangle that is at issue in the problem she is dealing with. If the problem specifies the triangle just as an isosceles, it is an isosceles, and it is *indeterminate* how many degrees any of its angles has. In this sense, the geometrician's triangles, unlike the dialectician's Triangle, derive their identity from the specific geometrical problems at hand. True, the geometrician can consider the general properties of the triangle. Yet she, at each time, deals with *a certain* problem about *a certain* general property, or the relation between *certain* general properties, of the triangle. This context of the specific geometrical problem gives the triangle in question a special identity that may not be shared by triangles considered in other geometrical problems or, a fortiori, by a triangle considered in a non-mathematical context $^{37}$ . (This is not to deny that there may be a unified system of geometrical problems.) By contrast, when the dialectician studies the Triangle, I suggest that she focuses on the essence of the triangle *qua* triangle and thereby on the place that it occupies in the whole reality. This should involve placing the geometricals as a whole in the totality of beings. Similarly, I would suggest that the mathematician's numbers derive their identity from the mathematical problems that she deals with<sup>38</sup>.

Another consideration in favor of interpretation (3) is that our reading

<sup>&</sup>lt;sup>35</sup> For other Platonic discussions of the practice of mathematicians, see also *Meno*, 82b9-87b2, *Philebus*, 56c8-57a4, *Laws* VII, 817e5-822d1.

<sup>&</sup>lt;sup>36</sup> See footnote 19 above.

<sup>&</sup>lt;sup>37</sup> However, to deny that mathematicians deal with the Forms is not to say that Plato criticizes their practice. Rather, he seems to see mathematical sciences quite positively. To the question of why the future rulers of the ideal city must gain an 'overall picture' (sunopsin) of the mathematical sciences' kinship with one another after a long term of training (537b8-c3), Burnyeat illuminatingly answers that Plato regards the kind of systematic thinking acquired through the study of mathematics as a constitutive part of the knowledge of the Good, and not as a mere instrument that leads to it. The significance of the systematic thinking attained through the mathematical study is illustrated by the image of dialectic as the 'coping stone' (thrinkos) of the curriculum (534e2). Burnyeat, 34, 74-80. This insightful interpretation helps us understand why Plato puts so much emphasis on mathematics as a prelude to dialectic. For a criticism of Burnyeat, see White, M. J., 233, 241. <sup>38</sup> The mathematician's care to keep 'one' equal in its every occurrence (526a1-5) may be taken to concern the context of dealing with specific mathematical problems. Pace Shorey (1903), 83-5, (1937), 164. There is a Platonic tradition according to which the 'monadic' (monadikos), arithmetical number is an image of the 'substantial' (ousiodes) number, which ontologically ranks above the former. Plotinus, Ennead, VI 6. 9. 33-6. For the monadic number, cf. Aristotle, Metaph. M 8.1083b16-7, 1092b20.

harmonizes with Plato's general attitude toward the image in the *Republic*. As we have seen, at 532b6-c4 Socrates claims that the study of mathematical sciences finally enables one to look at the shadows or reflections of the animals, the stars, etc. outside the cave. Here, Plato seems to expect readers to take these images as representing intelligibles other than Forms. For it seems that throughout the Republic he emphasizes both the distinction between images and their originals and the superiority of the latter to the former. When Socrates distributes four states of mind to four subsections of the line (511d6-e4), he treats images and their originals as different types of entities, with the former participating in a lesser degree of truth. Furthermore, in Book X, 596a5-598d7, when Plato downgrades imitative painters and poets on the grounds that they create mere images  $(eid\bar{o}la)^{39}$ , he remarks that the former are at three removes from Forms, while the latter are just two removes away. Given that both this distinction and the superiority of originals to images are congenial to Plato's general view of images in the *Republic*, it is likely that he also maintains this at 532b6-c4, in a description of the cave analogy. So it seems a plausible guess that the shadows and reflections outside the cave represent intelligible entities other than Forms, most likely, mathematical entities.

#### 5. Further Consideration

So far, I have shown how I find it plausible to assume, with Adam, Denyer, and Burnyeat, that for Plato the objects of thought are, at least for one thing, the mathematical entities that are intermediary between Forms and sensibles. Given this interpretation, let me then turn to a related issue: the fact that BC and CD are made equal in length seems to imply that the two states of mind corresponding to these subsections, i.e., belief and thought, are meant to participate in the *same* degree of clearness<sup>40</sup>. However, this is contrary not only to our anticipation that thought should be better than belief in clearness but also to what Socrates himself implies at 533d4-6, i.e., that thought (*dianoia*) is clearer than *doxa*, which consists of belief (*pistis*) and imagination (*eikasia*). Plato, again, does not explicate this shocking

<sup>&</sup>lt;sup>39</sup> Furthermore, at 598b3-5 Socrates asks whether the painting imitates appearance (*phantasma*) or truth. Plato uses the same word, '*phantasma*,' at 510a1-2 (in the divided line passage), to mention examples of the image ( $eik\bar{o}n$ ), i.e., reflections in water and on smooth surfaces.

<sup>&</sup>lt;sup>40</sup> Moreover, the objects of those two states of mind also would partake in the same degree of truth.

implication in the divided line passage. Although this is a separate issue from the main one for the present paper, I wish to address it, partly because of its own interest and partly because some of the foregoing consideration can help us here.

Foley believes that there is no coherent solution to this problem, and that Plato expects readers to progress sequentially through the four states of mind presented in the divided line. Upon first reading of the divided line passage, they may uncritically accept the image (imagination); then they may notice, when seeing the line drawn, that the two middle subsections may be equal (belief); next they ascertain, by mathematical proof, that these subsections are really equal (thought); and they deal with the difficulty of making sense of the implication of this equality in regard to the relation between belief and thought (intellect)<sup>41</sup>. I agree with Foley that there is no coherent solution to the problem of equality, and that Plato sends us some messages by posing this problem. However, I am inclined to see differently Plato's reason for doing so. It seems a slight stretch to claim, as Foley does, that upon the first reading of the divided line, one is in the state of imagination, comparable to the state of looking at shadows or reflections. For one thing, even if one is captured by the description, one is unlikely to forget that it is a simile.

Denyer enumerates three possible reasons that might explain why Plato makes the middle subsections equal in length (though he avoids choosing any of these as his own answer)<sup>42</sup>: (i) Plato is suggesting that since an image always falls short of the original of which it is an image, and since the divided line is itself an image, the divided line, too, is defective<sup>43</sup>; (ii) he is hinting that thought is actually no better than belief, unless it develops to the finest state of mind, i.e., intellect; and (iii) by writing the text in such a way as to allow these two incompatible interpretations, he is provoking the reader to go beyond the contradictory appearances, just as in the case of the largeness or smallness of fingers (523b9-524d7)<sup>44</sup>.

<sup>&</sup>lt;sup>41</sup> Foley, 19-23.

<sup>&</sup>lt;sup>42</sup> Denyer, 296.

<sup>&</sup>lt;sup>43</sup> For the same line of suggestion, see also Smith, 43.

<sup>&</sup>lt;sup>44</sup> Bedu-Addo explains the equality by saying that both BC and CD represent the same objects, i.e., sensibles. Yet mathematicians, when dealing with the sensible figures that they draw, take them as images of Forms, while ordinary people are unaware that sensibles can be images of Forms, since they are unaware of Forms. That both BC and CD stand for sensibles is, Bedu-Addo claims, confirmed by the fact that what BC represents (i.e., reflections and shadows outside the cave), and what CD does (i.e., statuettes and puppets in the cave), are ontologically the same type of objects, in that both are direct images of the real things outside the cave. Bedu-Addo, 103-8. Smith, although he agrees with Bedu-Addo

Of these three, I consider (i) to be the most plausible. For one thing, this interpretation seems to harmonize with Plato's overall view that we have seen, which is that images are bound to suffer from imperfection. And that intentional (as I believe) 'defect' in Plato's presentation of the divided line would be understood as his implicit warning not to rely totally on images, not even ones of his own<sup>45</sup>. Secondly, both (ii) and (iii) entail that thought is actually no better than belief, but it is difficult to believe that Plato really thinks so. It would be odd if the state of mind acquired by a long term of mathematical training should be merely as clear as that of ordinary people.

Some related issues should be discussed on later occasions. One such issue is how the dialectician will treat mathematics.

### Bibliography

Adam, J., ed. and comm. The Republic of Plato, 2nd ed. Cambridge, 1963.

- Annas, J. "On the "Intermediates." *Archiv für Geschichte der Philosophie* 57 (1975): 146-66.
- -----. Aristotle's Metaphysics: Books M and N. Oxford, 1976.
- ----. An introduction to Plato's Republic. Oxford, 1981.
- Bedu-Addo, J. T. "Διάνοια and the Images of Forms in Plato's *Republic* VI-VII." *Platon* 30 (1979): 89-110.
- Benson, H. H. "Plato's Philosophical Method in the *Republic*: the Divided Line (510-511d)." In *Plato's* Republic: A Critical Guide, edited by McPherran, M. L, 188-208. Cambridge, 2010.

Boyle, A. J. "Plato's Divided Line: Essay I." Apeiron 7, no. 2 (1973): 1-11.

-----. "Plato's Divided Line: Essay II." Apeiron 8, no. 1 (1974): 7-21.

- Burnyeat, M. F. "Plato on Why Mathematics is Good for the Soul." In *Mathematics and Necessity*, edited by Smiley, T., 1-81. Oxford, 2000.
- Cornford, F. M. "Mathematics and Dialectic in the Republic VI-VII." In Studies in

in taking the objects of thought to be sensibles, considers him to fail to explain why thought and belief are supposed to participate in the same degree of clearness. Smith, 40-2.

 $<sup>^{45}</sup>$  Cf. 506d7-e3, where Socrates confesses that he is unable to state what the Good is itself, and-proposes to present an image or simile of it instead. For Socrates' cognitive condition in this dependence on images, see Gonzalez (1996), n. 50, 273, Ferber, 236-7. See also *Timaeus*, 27d5-29d3, where Timaeus says that he cannot offer an exact but only a likely account (*eikōs logos*) of the generation of the universe.

*Plato's Metaphysics*, edited by Allen, R. E, 61-95. New York, 1965. Originally published in *Mind* 41 (1932): 37-52.

- Cross, R. C., and Woozley, A. D. Plato's Republic. London, 1964.
- Denyer, N. "Sun and Line: The Role of the Good." In *The Cambridge Companion to Plato's* Republic, edited by Ferrari, G. R. F., 284-309. Cambridge, 2007.
- Ferber, R. "Ho de diōkei men hapasa psychē kai toutou heneka panta prattei." In Dialogues on Plato's Politeia (Republic): Selected Papers from the Ninth Symposium Platonicum, edited by Notomi, N. and Brisson, L., 233-41. Sankt Augustin, 2013.
- Fine, G. Plato on Knowledge and Forms: Selected Essays. Oxford, 2003.
- Fogelin, R. J. "Three Platonic Analogies." *The Philosophical Review* 80, no. 3 (1971): 371-82.
- Foley, R. "Plato's Undividable Line: Contradiction and Method in *Republic* VI." *Journal of the History of Philosophy* 46, no. 1 (2008): 1-24.
- Gonzalez, F. "Propositions or Objects? A Critique of Gail Fine on Knowledge and Belief in *Republic* V." *Phronesis* 41 (1996): 245-75.
- ——. Dialectic and Dialogue: Plato's Practice of Philosophical Inquiry. Evanston, 1998.
- Griffith, T., trans., and Ferrari, G. R. F., ed. Plato: The Republic. Cambridge, 2000.
- Hackforth, R. "Plato's Divided Line and Dialectic." *The Classical Quarterly* 36, no. 1/2 (1942): 1-9.
- Murphy, N. R. The Interpretation of Plato's Republic. Oxford, 1951.
- Nettleship, R. L. Lectures on the Republic of Plato. London, 1922.
- Ota, K. "Division of *tò voŋtóv* in Plato's Simile of the Line [線分の比喩における 可知界の区分—プラトン『国家』509d6-511e5—]." *Journal of Classical Studies* [『西洋古典学研究』], 62 (2013): 13-23.
- Ross, W. D. Aristotle's Metaphysics. Oxford, 1924.
- -----. Plato's Theory of Ideas. Oxford, 1951.
- Shorey, P. The Unity of Plato's Thought. Chicago, 1903.
- -----., ed. and trans. *Plato: The* Republic, 2nd edn. Cambridge, 1937.
- Smith, N. D. "Plato's Divided Line." Ancient Philosophy, 16 (1996): 25-46.
- Wedberg, A. "The Theory of Ideas." In *Plato I: Metaphysics and Epistemology*, edited by Vlastos, G., 28-52. Notre Dame, 1978.
- White, M. J. "Plato and Mathematics." In *A Companion to Plato*, edited by Benson, H. H, 228-43. Hoboken, 2009.
- White, N. P. A Companion to Plato's Republic. Indianapolis, 1979.