



Images, Appearances, and *Phantasia* in Aristotle

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Abstract

Aristotle's account of *phantasia* in *De Anima* 3.3 is notoriously difficult to decipher. At one point he describes *phantasia* as a capacity for producing images, but then later in the same chapter it is clear *phantasia* is supposed to explain appearances, such as why the sun appears to be a foot wide. Many commentators argue that images cannot explain appearances, and so they claim that Aristotle is using *phantasia* in two different ways. In this paper I argue that images actually explain perceptual appearances for Aristotle, and so *phantasia* always refers to images. I take a new approach to interpreting *DA* 3.3, reading it alongside Plato's *Theaetetus* and *Sophist*. In the *Theaetetus*, Socrates explains how memory gives rise to perceptual appearance. I claim that Aristotle adopts Socrates' account of perceptual appearance, but what Socrates calls memory, Aristotle calls *phantasia*.

Keywords

Aristotle, Plato, *phantasia*, imagination, perception, memory

1. Introduction

Phantasia is one of the most important pieces of Aristotle's psychology.¹ It is necessary for dreaming, remembering, recollecting and even thinking. And yet, as many commentators have noted, *De Anima* 3.3, his most extensive discussion on *phantasia*, is extremely unclear.² Towards the beginning

¹ Unless otherwise stated, translations of Plato are from Cooper (1997), and translations of Aristotle from Barnes (1984). The word *phantasia* is usually translated as 'imagination' for Aristotle, but since this translation presupposes a particular interpretation of *phantasia*, I leave it untranslated.

² There have been many important contributions to the discussion of *phantasia*, including Caston (1996), Dow (2010), Rees (1971), Frede (1992), Freudenthal (1863), Lorenz

of the chapter he describes *phantasia* as that which produces images, such as in memory (*DA* 3.3, 427b19-20). But he does not explain what this means or how we use these images. Instead he focuses on the differences between *phantasia*, judgment (*hupolēpsis*), and perception. As he makes these distinctions it becomes quite clear that *phantasia* does more than just produce images; *phantasia* is supposed to explain appearances, such as why the sun appears to be a foot wide even though we believe it is quite large (*DA* 3.3, 428b2-4).

Many commentators claim that the way something appears to us cannot be explained through mental images, and so they argue that Aristotle is either using *phantasia* in more than one way in *De Anima* 3.3 or he does not really think *phantasia* is a capacity for producing images.³ Martha Nussbaum argues that images cannot explain perceptual appearances, but her critique stems from a narrow conception of what an image is for Aristotle. She interprets images as pictorial representations that bring about perceptual appearance through two 'distinct processes', namely having an image and inspecting or contemplating the image to see how it maps onto the world (1978: 224-5, 230). Images, however, are not merely pictorial for Aristotle. We can have an image of any perceptual experience, not just visual perceptions. Furthermore, as we will see, images do not bring about perceptual appearances through two distinct processes. In this paper I argue that Aristotle consistently uses *phantasia* to refer to images and, what is more, these images are the key to understanding perceptual appearances.⁴

(2006), Lycos (1964), Modrak (1986), Nussbaum (1978), Schofield (1992), Turnbull (1994), Watson (1982), Wedin (1988), and White (1985). This is by no means a comprehensive list.

³ Many commentators claim that Aristotle simply does not have a unified view of *phantasia*. Hamlyn, for instance, declares that *DA* 3.3 has 'a disjointed look, its principle of unity being a loose one' (1968a, 129). Nussbaum thinks Aristotle uses *phantasia* in more than one way but, as we will see, she argues that overall 'images do not seem central to his theory' of *phantasia* (1978, 223). She reads *phantasia* as an interpretative faculty necessary for desire and animal action. Schofield argues that Aristotle does have a unified theory of *phantasia*, but he does not think *phantasia* refers to images. He interprets *phantasiai* as 'non-paradigmatic sensory experiences' (1992, 252).

⁴ Those who read *phantasia* as a capacity for producing images include Frede (1992), Lorenz (2006, see esp. 133-4), Sorabji (1972), and Turnbull (1994). There has not been a lot of focus on how images bring about perceptual appearances, apart from Turnbull's paper and a paper by Cashdollar (1973) on incidental perception.

In Section 2, I present Aristotle's account of perception and explain how it gives rise to *phantasia*. I conclude that *phantasia* is a capacity to recall previous sense perceptions, i.e. images. In Section 3, I take a detailed look at what kinds of images Aristotle has in mind when he talks about *phantasia*, which is crucial for making an 'image' view of *phantasia* plausible. Once we have a clear picture of what images are, we are ready to consider whether or not images can explain appearances. We would expect Aristotle to offer an account of how images give rise to appearances in *DA* 3.3, if indeed this is his view, since he invokes *phantasia* in order to explain how our thoughts and perceptions can be in error. (Our thoughts and perceptions are in error when things appear contrary to the way they actually are.) But, contrary to our expectations, he does not do this. In Section 4, I claim that the reason there is no account of how *phantasia* brings about perceptual error (and appearance) in *DA* 3.3 is because Plato has already solved this problem in the *Theaetetus* and the point of this chapter is mainly to revise and correct Platonic terminology.

I suggest that we read *DA* 3.3 alongside Plato's *Theaetetus* and *Sophist*. If we do, we will see that Aristotle is most likely embracing Socrates' suggestion in the *Theaetetus* that memory explains how we perceive objects under a certain aspect, but what Socrates calls 'memory', Aristotle calls *phantasia*. What is more, this change in terminology forces Aristotle to correct Plato's account of *phantasia* in the *Sophist* as a 'blending of perception and belief' (264b2),⁵ which is why so much of *DA* 3.3 is focused on rejecting the claim that *phantasia* is any combination of perception and belief. Once we have a plausible story of how images are involved in bringing about perceptual appearance there is no longer a reason to think that Aristotle is inconsistent in *DA* 3.3 and every reason to adopt an 'image' view of *phantasia*.

2. Perception and *Phantasia*

Aristotle's account of perception in *De Anima* looks at both the physiology and psychology of perception. Where the physiological account of perception focuses solely on the mechanics of perception, the psychological

⁵ Plato actually uses the verb *phainetai* here, usually translated 'to appear', and not the verbal noun *phantasia* (φαίνεται δὲ ὃ λέγομεν σύμμιξις αἰσθήσεως καὶ δόξης). But he does use *phantasia* a few lines earlier when he asks Theaetetus what else we could call belief that arises through perception (264a5-6).

account examines the way perception affects the organism, the kinds of things perceptive organisms can do in virtue of this capacity, and the relationship between perception and the other capacities of the soul. Generally, Aristotle's physiological account of our cognitive capacities has been underplayed and undervalued by interpreters because we now know it to be empirically incorrect, and so it might appear to be less philosophically interesting. But it is a mistake to separate Aristotle's physiology from his psychology, since his psychology is almost always deeply informed by his physiology. In fact, the first thing we learn about the capacities of the soul in *De Anima* is that they involve the body (1.1, 403a16-17).⁶ Aristotle's understanding of human and animal physiology constrains and informs his psychology; we need to understand both in order to adequately grasp the more philosophically salient aspects of his psychological works. This will thus be our general strategy in examining his account of perception and *phantasia*.

Perception, according to Aristotle, is a kind of movement in the body that is stimulated by a physical object such as a tree, stone, or chair. Physical objects are made up of sensible forms, such as color, texture, temperature, flavor, and odor. Sensible forms are attributes of physical objects and have the power to act on a perceiver, thus causing perception. Perception is possible when the sense organ receives the sensible form of a physical object without the matter (*DA* 2.12, 424a17-19). Aristotle gives the example of a signet ring making an impression on a piece of wax:

Generally, about all perception, we can say that a sense is what has the power of receiving into itself the sensible forms of things without matter, in the way in which a piece of wax takes on the impress (*sēmeion*) of a signet ring without the iron or gold; what produces the impression (*sēmeion*) is a signet of bronze or gold, but not *qua* bronze or gold: in a similar way the sense is affected by what is coloured or flavoured or sounding not insofar as each is what it is, but insofar as it is of such and such a sort and according to its *logos* (*DA* 2.12, 424a17-24).

⁶ He leaves open the possibility that thought is an affection of the soul that does not involve the body, but he later says that all human thought requires *phantasia*, which would entail that all human thought involves the body (*DA* 1.1, 403a8-10, 3.7, 431a14-17, *DM* 449b31-450a1). Of course, this is not to say that *all* thought involves the body, since the unmoved mover, which is thought thinking itself, presumably does not require *phantasia* (*Meta.* 12.9, 1074b33-35; see also Nussbaum 1978, 267).

The signet ring makes an impression on a piece of wax without imparting any of the matter from the ring onto the wax. Likewise, when we see a white coffee cup our eye receives the sensible form of whiteness, which exists in the coffee cup, but our eye does not receive any of the matter that makes up the coffee cup. Aristotle does not explain how color can act on a perceiver without imparting matter, but this is unimportant for our purposes.⁷ All we need to know is that sensible forms are active powers of physical objects that can act on and alter the respective sense organs.⁸

Perception is possible when we receive the sensible form of an object, but the alteration in the sense organ does not itself count as perception. When we touch something cold we perceive the coldness in our hand because we have the additional capacity to perceive the alteration that takes place when our hand becomes cold. The fact that an object is capable of receiving the sensible form does not entail that we will perceive the sensible form. Plants are altered when they come into contact with coldness (as is evidenced by the fact that many plants die after a frost), but plants do not have the capacity to perceive this alteration (*DA* 2.12, 424a32-b1, *Physics* 7.2, 244b12-15). Thus, perception involves both being physically altered in some way by a sensible form *and* being aware of the alteration.⁹

⁷ There is an ongoing debate regarding how to read Aristotle's account of perception. On the one hand, there are those who take literally Aristotle's claim that perception involves a physical alteration in the body. On this view, the eye literally becomes white when it perceives the sensible form of whiteness. Sorabji (1974, 1992) is the first to articulate this position. Everson (1999) develops a similar view. On the other hand, there are those who take a 'spiritualist' reading of perception and argue that Aristotle does not think our sense organs are actually altered during perception (see Burnyeat 1992; Johansen 1998). For the purposes of this paper I do not need to take a stand on this debate, but I do tend to sympathize with the literalist view only insofar as I think Aristotle is serious when he says (repeatedly) that the sense organs are affected during perception and undergo a real physical alteration. Moreover, I think this physical alteration is part of what it is to perceive an object. What exactly this alteration consists in I am not sure; however, I agree with Caston (2005) that it cannot be the case, for Aristotle, that the sensible form of whiteness actually *turns* the eye white.

⁸ Magee makes the interesting point that a sensible form cannot exist in the sense organ in exactly the same way it exists in the physical object, since once the sensible form is perceived it cannot cause another impression (2000, 323).

⁹ As I have already noted, there is a question regarding what kind of physical process the sense organs undergo during perception. Johansen (1997) and Magee (2000) both argue (against the literalist interpretation of sense perception) that the sense organs do not undergo a simple qualitative change the way that the plant does when it is cold. Magee, for

In addition to the five sense organs, perception requires a primary sense organ, where all sensation takes place.¹⁰ Aristotle identifies the heart as the primary sense organ and as the seat of perception.¹¹ In *De Partibus Animalium* he claims that ‘an animal is defined by its ability to perceive; and the first perceptive part is that which first has blood; such is the heart’ (3.4, 666a34-35, translation mine). He further states that ‘in all animals there must be some central and commanding part of the body, to lodge the sensory portion of the soul and the source of life’ (*PA* 4.5, 678b2-4). Again in *De Generatione Animalium* he claims that the ‘passages of all the sense-organs, as has been said in the treatise on sensation, run to the heart, or to its analogue in creatures that have no heart’ (5.1, 781a20-23). And in a rather lengthy passage from his treatise *De Somno* he states again that the heart is the seat of sense perception (adding that the heart is also where movement originates) (455b34-456a6).

The alteration that occurs in the individual sense organs is transferred to the primary sense organ through the blood vessels, which connect the heart to the sense organs, carrying the sense impressions made in the individual sense organs to the primary sense organ. Aristotle is fairly explicit about how this works when he is explaining how the ears and nose are affected. He states that the ears and nose contain ‘passages connecting with the external air and are full themselves of innate breath; these passages end at the small blood-vessels about the brain which run thither from the heart’

instance, claims that ‘the physical processes which sense organs undergo are not standard qualitative changes (i.e. alterations), but activities or the actualizations of potencies in the material constituents of living animal bodies’ (307). For a similar point see also Rorty (1984, 530). I am not convinced that there is absolutely no qualitative change in the sense organs during perception, but that is a topic for another occasion.

¹⁰ Even though in *De Anima* Aristotle often talks about the special senses as independent he is fairly clear in the *Parva Naturalia* and in his biological treatises that perception requires a primary sense organ that acts as the seat of perception. This is somewhat reminiscent of Socrates’ claim in the *Theaetetus* that there must be one ‘single form, soul or whatever one ought to call it, to which all these [perceptions] converge’ (184d2-4). See also Kahn (1966, 10), who argues that ‘the special senses must be regarded not as ultimately independent faculties but rather as converging lines, joined at the centre in a single, generalised faculty of sense’. For more on the common sense and the primary sense organ see Gregoric (2007), Hamlyn (1968b), Johansen (1997), and Modrak (1981).

¹¹ For Aristotle, the brain is not the seat of perception (or thought) (*PA* 656a24-27; see also Johansen 1997, 78-81). The brain appears to be a cooling device, necessary for regulating the temperature of the body (see *De Somno* 457b26-458a9).

(*GA* 2.6, 744a1-5). The passages that connect the external air with the blood vessels inside the head are capable of being affected by the sound or scent that affects the external air. The sound or scent travels through the blood vessels to the heart.¹²

We now have a complete account of sense perception. When we perceive a physical object, the sensible form which exists in the physical object alters our sense organ, making an impression on the actual organ. The impression is then carried through the blood to the heart at which point we are able to perceive the sensible object. When we see a white coffee cup, the whiteness of the coffee cup makes an impression on our eyes, causing a physical alteration in our eye. This impression is then carried through the blood to the primary sense organ, i.e. the heart.

With this account of perception in hand, we can now turn to *phantasia*. Aristotle claims that *phantasia* is found only where perception is found (*DA* 3.3, 427b14-16) and is impossible without perception (*DA* 3.3, 428b11-12), so that only those organisms capable of perception are capable of *phantasia*. In the *Rhetoric*, one of Aristotle's earlier works, he describes *phantasia* as 'a weak sort of perception' (1.11, 1370a28-29). And in his treatise on dreams, he suggests that there is an actual identity relation between the faculty of *phantasia* (the *phantastikon*) and the faculty of perception (the *aisthētikon*):

The faculty of *phantasia* is the same as the perceptive faculty, though the being of the faculty of *phantasia* is different from that of the perceptive faculty, and since *phantasia* is a movement set up by the actuality of sense perception, and a dream appears to be an image... it is clear that dreaming belongs to the perceptive faculty, but belongs to this faculty *qua* faculty of *phantasia* (*De Insomniis* 459a16-21, translation mine).

¹² Johansen is skeptical that blood plays a role in perception proper (although he is willing to admit it may play a role in *phantasia*) (1997, 91-3). Aristotle is clear that there must be something connecting the sense organs to the heart, but Johansen does not think Aristotle has a clear idea about what the connecting substance is. He takes Aristotle's point elsewhere that blood does not have any perceptive power as evidence that blood is not involved in perception proper. Aristotle states that 'as neither the blood itself, nor yet any part which is bloodless, is endowed with sensation, it is plain that that part which first has blood, and which holds it as it were in a receptacle, must be the primary source [i.e. the heart]' (*PA* 3.4, 666a16-18). I read this passage a little differently. I take it that Aristotle needs to make sure that one does not mistakenly assign perception to the blood, rather than the heart, given the important role it plays in perception, namely carrying sensible forms to the heart.

The trick to understanding this passage is figuring out in what way the faculty of *phantasia* (the *phantastikon*) can be the same as that of perception (the *aisthētikon*), while at the same time remaining essentially different from it.¹³

First, let us consider the ways in which *phantasia* is the same as perception. In *De Anima* 3.3 Aristotle repeats his claim from *De Insomniis* that *phantasia* is a movement similar to perception (428b11-12) ‘resulting from the actuality of sense perception’ (429a1-2, translation mine). We may wonder in what sense *phantasia* is a movement similar to and resulting from perception. He gives us a clue in *De Insomniis* when he says that ‘even when the external object of perception (*aisthēton*) has departed, the impressions (*aisthēmata*) it has made persist, and are themselves objects of perception (*aisthēta*)’ (460b2-3). Granted he does not mention *phantasia* in this particular passage, it nevertheless seems likely given his earlier characterization of *phantasia* as weak sense perception and as a movement similar to perception, that the perceptions, which persist and become themselves objects of perception, are in fact objects of *phantasia*.

So far we can conclude that when we experience *phantasia* the body is affected in a way similar to the way in which it is affected during perception. What is more, the objects of *phantasia* are the same as the objects of perception, which we identified earlier as sensible forms. Thus, when Aristotle claims in *De Insomniis* (459a16) that the faculty of *phantasia* (the *phantastikon*) is the same as the faculty of perception (the *aisthētikon*), he must mean that *phantasia* is the same sort of physiological affection as perception, being affected by the same objects, namely sensible forms, and undergoing the same movements in (at least some of) the same parts of

¹³ We have at least some idea what Aristotle has in mind from other works where he talks about things that are one in number, but two in account. In the *Physics* he talks about being a ‘man’ and being ‘musical’ as being the same thing (i.e. one in number) insofar as ‘man’ and ‘musical (man)’ consist of numerically identical matter (*Physics* 1.7, 190a13-21, 190b23-29). But ‘man’ and ‘musical’ are two in being since being a ‘man’ and being ‘musical’ are essentially different. One is a ‘man’ insofar as he has the capacity for rational thought, whereas one is ‘musical’ insofar as one has the capacity to produce music. Again, in *De Gen. et Corr.* Aristotle explains that ‘in all instances of coming-to-be the matter is inseparable, being numerically identical and one, though not one in definition (*logos*)’ (320b12-14). What makes ‘man’ the same as the ‘musical (man)’ is the fact that they consist of the same matter. Given these passages we should not be surprised when it turns out that *phantasia* and perception will be the same with respect to matter (i.e. the body).

the body. Now we must determine in what way *phantasia* is essentially different.

There are three ways in which *phantasia* is different from perception. First, Aristotle claims that *phantasia* 'lies within our own power whenever we wish' (*DA* 3.3, 427b18). Perception, however, is not within our own power. We can choose to open or close our eyes, but when our eyes are open and our perceptive faculty is functioning properly, we necessarily perceive (at least some of) whatever is in our field of vision.¹⁴ The objects of *phantasia* are not necessarily determined in this way. We can call up the sensible form of red, or purple or white, regardless of whether or not there is something red, purple or white in our field of vision (so long as we have experienced these colors before). This leads to the second difference between perception and *phantasia*, namely perception *requires* the presence of a physical object, whereas *phantasia* does not. In dreams we can have visual experiences even though our eyes are closed and our visual faculty is not engaged (*DA* 3.3, 428a6-8). Thirdly, all animals have the capacity to perceive, but not all animals have the faculty of *phantasia* (428a8-11). In particular, Aristotle points to grubs as animals lacking *phantasia* even though they have perception. He appears to change his mind on this point later in *De Anima*, claiming that all animals have *phantasia* in at least some indefinite way (see, for example, *DA* 3.11, 434a1-7). Whatever his view is in the end, the fact that he entertains the possibility that some animals lack *phantasia* is quite telling.¹⁵ Specifically, it tells us that he considers it at least conceptually possible to have perception without *phantasia* even if in reality there are no cases of perceptive animals lacking *phantasia*.

From the differences outlined above we can conclude that while the content of *phantasia* may be the same as perception, namely sensible forms, the immediate cause of *phantasia* is different from perception. The cause of perception is a physical object that acts on the sense organ via sensible forms, whereas the immediate cause of *phantasia* is something else.¹⁶ Aristotle does not tell us exactly what arouses *phantasia* in dreams

¹⁴ I say 'at least some' because it is presumably possible on Aristotle's account of perception to have the sense organ affected by a sensible object, but fail to be aware of the object.

¹⁵ For more on the question of whether or not all animals have *phantasia* see Lorenz (2006).

¹⁶ Granted the originating cause of *phantasia* can be traced back to the physical object, the immediate cause that calls up an image from the primary sense organ is not a physical object.

and memory, but it is clear that it is not the physical object since we can dream and remember in the absence of the object we are dreaming about or remembering.

Thus, the essential difference between perception and *phantasia* lies in their immediate cause. Sensible forms make up the content of *phantasia*, just as they make up the content of perception. Moreover, they involve many of the same alterations that occur during perception, which means that the faculty of perception and the faculty of *phantasia* must have the same physiological structure. The only difference is that *phantasia* does not require the immediate presence of the physical object, whereas perception always does. When we perceive white, the sensible form that acts on our eye is contained in the physical object. But for *phantasia* the sensible form of ‘whiteness’ has been stored somewhere in us, namely in the primary sense organ,¹⁷ and we are able to recall the sensible form and ‘see’ white even though there is no white object in the room.

In sum, we have established three very important facts about *phantasia*. First, *phantasia* involves many of the same bodily movements as perception. Secondly, it does not require the presence of the physical object. And thirdly, the objects of *phantasia* are sensible forms. Aristotle does not actually call the objects of *phantasia* ‘sensible forms’. Rather he calls them ‘images’, sometimes using the Greek word *eidōla* (*DA* 3.3, 427b20, *De Insomn.* 462a11-17), but more often using a cognate of *phantasia*, namely *phantasmata* (see, for example, *DA* 3.3, 428a1, *De Insomn.* 458b18-25). Thus, *phantasia* can be defined as a capacity for producing images, which are sensible forms that were first acquired through perception. *Phantasia* is quite different from perception, which, we saw, is confined to whatever is presently acting on the sense organs. We cannot perceive white unless there is something white in our field of vision. But *phantasia* is not restricted in this way, allowing us to recall an image of ‘white’ whenever we wish (assuming we have experienced white in the past).

So far our examples have focused on special perceptibles (*idia aisthēta*), which are those sensible forms that can be perceived by only one of the five

¹⁷ It is fairly certain that the images of *phantasia* are stored in the primary sense organ. In *De Memoria* Aristotle emphasizes that recollection literally involves searching for an image (*phantasma*) in the body (453a14-15). He claims that moisture around the ‘perceptive part’ (*aisthētikos topos*) affects the movements of the images (453a23-26). The perceptive part he is talking about is almost certainly the heart.

senses (*DA* 2.6, 418a11-17, *De Sensu* 439a6-12). Sight, for example, is the only sense that perceives color; no other sense organ, other than the eyes, can sense color, making color the special object of sight (*DA* 2.6, 418a13). Likewise the special object of hearing is sound, that of smelling is odor, that of tasting is flavor and that of touching is tactile sensation (*DA* 2.6, 418a13-14; 2.11, 422b23-26). But special perceptibles, like the color white and the smell of lavender, are not the only things that we can perceive and store in *phantasia*. We can also perceive white coffee cups, lavender cakes, and our parents' 50th wedding anniversary. But how do we come to have perceptions (and then images) of coffee cups when there are no sensible forms of coffee cups? Sensible forms inhere in and make up physical objects so that when we see a coffee cup the sensible form that acts on our eye is not the form of *coffee cup*, but something white and cylindrical. In the next section I explain how we go from having perceptions (and images) of special perceptibles to more complex perceptions and images of coffee cups and cakes.

3. Unified Images and Incidental Perception

In this section, I take a closer look at the objects of perception, which Aristotle divides into three categories. First, there are the special perceptibles, which are color, sound, odor, flavor and tactile sensations (those we discussed briefly in the previous section). Secondly, there are the common perceptibles (*koina aisthēta*), such as number and movement, which we will discuss in the next section (*DA* 2.6, 418a17-20). Finally, there are the incidental perceptibles (*aisthēta kata sumbebēkos*), which are things like *coffee cups* and *cakes* (*DA* 2.6, 418a20-23). In this section we will focus on incidental perception because, as we will see, this is one instance of perceptual appearance. If we can explain how we move from perception of sensible forms (like color and odor) to perception of incidental perceptibles, we will have the resources to explain many cases of perceptual appearance, which Nussbaum (and others) are so concerned with. We will see that incidental perception comes about in virtue of *phantasia* and our ability to combine images of special perceptibles (in the primary sense organ) to produce more complex images that in turn give rise to more complex perceptions.

Incidental perceptibles are things like *man*, *coffee cup*, and *cake*. Incidental perception differs from perception of the special perceptibles. Special

perceptibles are perceived directly because they act on our sense organs. When we see a white coffee cup the whiteness of the cup acts on our eye causing us to see white, but there is no sensible form of *coffee cup* that causes us to see the cup. We do not perceive incidental perceptibles directly, but only indirectly. So how do we come to perceive things like coffee cups?

Aristotle offers little information as to how incidental perception comes about, but we get some idea of how this happens in *Posterior Analytics* 2.19 where he explains how we come to have knowledge through sense perception:¹⁸

So from perception comes memory (*mnēmē*), as we call it, and from memory (when it occurs often in connection with the same thing), experience (*empeiria*); for memories that are many in number form a single experience. And from experience, or from the whole universal that comes to rest in the soul, the one from the many, whatever is one and the same in all those things, there comes a principle of skill (*technē*) and *epistēmē* (*Posterior Analytics* 2.19, 100a3-8).

In this passage Aristotle explains that all animals have the discriminatory capacity to perceive, but only some have the additional capacity to retain sense perceptions through memory (*mnēmē*). Note that Aristotle uses the word *mnēmē*, meaning 'memory', and not *phantasia* in this passage. We should not let this confuse us. What Aristotle is talking about in this passage when he uses the word 'memory' is the preservation of sense perception, which we saw above, is a function of *phantasia*.¹⁹

Aristotle goes on to say in the passage above that some animals, which have the ability to store perceptions in their memory, are able to combine similar perceptions into a single experience. It is this notion of combining similar perceptions into a single, unified experience that interests us. The ability to combine stored sense impressions means that our images are not limited to the exact impression of a single perception. When we perceive the oak tree in our front yard and we store this perception in our memory, the image that we have is of that particular oak tree. When

¹⁸ See also *Metaphysics* 1.1.

¹⁹ More than likely, Aristotle is using the Platonic notion of memory as the 'preservation of sense perceptions' (*Philebus* 34a10-11), rather than his more sophisticated account of memory developed in *De Memoria* as an image (*phantasma*) accompanied by the perception of time (449b25). Either way we can attribute what he says about memory to *phantasia*, since memory on Aristotle's account requires *phantasia*.

we perceive another oak tree, one in our neighbor's yard, we retain this sense impression, and so on until we have several individual impressions of oak trees. At some point, according to Aristotle, these individual impressions of oak trees combine to form a single image. When these impressions combine to form a new 'unified' image, the particulars (e.g. height, width, color) that differentiated our oak tree from our neighbor's oak tree disappear, and all that remains are the features every oak tree we have ever experienced has, such as leaves that bud and change color in the Fall, acorns that hang off the branches, and so on. The unified image cannot be traced back to a single perceptual experience, and so we now have an image that we never directly experienced, but that is a conglomeration of several independent perceptions, and so still originates in perception.

Implicit in Aristotle's empirical story is the idea that before we have the unified image of an oak tree, we cannot perceive things as oak trees, that is, we cannot perceive incidental perceptibles. Before we have acquired a unified image, we can perceive only the special perceptibles, e.g. colors, odors, tactile sensations. Unified images allow us to distinguish objects from one another *as* physical objects and so it is only *after* we form a unified image of an oak tree that we can see the object *as* an oak tree.²⁰

So far we have established that our perceptual experiences can be stored and unified. Through multiple experiences of similar objects our sense impressions come to be unified (in the primary sense organ) so that they now represent a physical object, like an oak tree. Perception of the special perceptibles, like color, sound, and odor, do not require previous experience, that is, they do not require *phantasia*. We can see the color red without first having experiences of red, since perception of red occurs when the sensible form 'redness' is impressed upon the eye. Recognizing red *as* 'red', however, does require experience, since this kind of recognition involves seeing red as a member of a certain class, namely, the class of red things.²¹

²⁰ We should take this example with a grain of salt since realistically we would probably have unified images of 'leaves', 'bark', 'seeds', etc. before we form unified images of oak trees, so that our perceptual experiences of oak trees would not really be just of the special perceptibles. But at some point in our cognitive history we do have to begin with *just* the special perceptibles, and that is the point to hold on to.

²¹ Presumably both animals and humans (as long as they have *phantasia*) can have unified images. But whereas animals are able to use these unified images only to discriminate one group of objects from another, human beings can actually understand what it is about these unified images that differentiate them from other unified images (because humans have

At this point, we have shown that we must have a unified image of an object, like an oak tree, in order to see it as an oak tree, but we have not yet explained how this works. The common reading seems to be that images for Aristotle function like ‘mental pictures’ that we study in order to extract information.²² And indeed Aristotle sometimes talks about images as kinds of ‘mental pictures’, such as in *De Memoria* where he claims that images are required for thought the way that drawings are necessary to demonstrate geometrical truths (449b30-450a7). Thinking, according to Aristotle, sometimes consists in comparing an image, such as that of a triangle, just as we would a drawing of a triangle, and taking the image as a representation of all existing triangles. From the mental image of a triangle we are then able to extract all sorts of information about actually existing triangles.

Sometimes, for Aristotle, mental images do stand in as paradigmatic examples of what one is thinking about, doing the same work as an actual drawing (if not quite as effectively). This does not mean that images always function in this way. Moreover, it is unlikely that Aristotle thinks incidental perception is like comparing picture A (our current perception of an object) to picture B (a unified image stored in the primary sense organ). But then how *do* images bring about incidental perception? To answer this question, we need to turn our attention back to *DA* 3.3.

4. The Move from Platonic Memory to Aristotelian *Phantasia*

Aristotle opens *DA* 3.3 with a puzzle about error, which goes back to the ‘ancients’ (specifically he quotes Homer and Empedocles) and which is also treated by Plato in the *Theaetetus* and the *Sophist*. The puzzle stems from the principle that ‘like is understood and perceived by like’ (427a27-28).²³ On the ‘ancient’ view, an oak tree is the only thing that can cause

nous). Animals can have a unified experience of tiny, sweet, red objects and recognize these objects as different from hard, grey tasteless objects, but what animals cannot do that humans can is understand what it is to be a raspberry and what it is that makes a raspberry different from a rock. Animals cannot grasp the essential nature of a thing because they do not have reason or language.

²² For example, see Sorabji (1972, 6) and Nussbaum (1978, 224).

²³ Aristotle foreshadows the above puzzle in *De Anima* 1.2 where he presents earlier accounts of the soul from Thales to Plato. He claims that all his predecessors viewed the

perception of an oak tree. A telephone pole cannot cause us to see an oak tree, since the telephone pole is *unlike* the oak tree. Yet Aristotle observes that our perceptions and thoughts are often in error. Sometimes we do see an oak tree when we are actually looking at a telephone pole. Aristotle wants to maintain the ancient principle, like causes like, while still accounting for error. Thus, he must add something to perception and thought in order to explain how it is that we are sometimes in error; what he adds is *phantasia*.

For Aristotle, perception of special perceptibles is never in error (*DA* 2.6, 418a14-16, 3.3, 428b18-19). When we perceive color or sound, for instance, the sensible form acts directly on our sense organ. The only thing that can cause us to see white is the sensible form of 'whiteness', and so we can be sure, according to Aristotle, that there is something white in the world acting on our eye. Only perception of the incidental and common perceptibles are ever in error. According to Aristotle, 'the perception that there is white before us cannot be false; the perception that what is white is this or that may be false' (428b21-22).²⁴ In other words, that I perceive white cannot be in error, but that I perceive a coffee cup can be in error.

Aristotle's purpose in *DA* 3.3 is to establish how incidental and common perceptibles can be in error.²⁵ Once we understand his solution to the problem of error we will understand how incidental perception is

soul as the source of movement and thought. Moreover, all of these philosophers (except for Anaxagoras) thought the soul was made out of one or more of the elements (namely, earth, fire, air or water). Aristotle's predecessors (except, again, Anaxagoras) adhere to the principle 'like is understood by like' and since everything that can be known is a material body (i.e. made out of one or more of the elements) the soul must also be a material body (made out of the elements). Aristotle does not agree that the soul is a body, but he wants to preserve the above principle, and so he must explain how it is that we are sometimes in error with respect to perception and thought.

²⁴ Aristotle must be assuming in this passage that the sense organs are functioning properly. If one is sick or the sense organ is damaged in some way, he seems perfectly willing to admit that we can be in error that what we perceive is white. For example, in *Metaphysics* he claims that 'not even at different moments does one sense disagree about the quality, but only about that to which the quality belongs. I mean, for instance, the same wine might seem, if either it or one's body changed, at one time sweet and at another time not sweet; but at least the sweet, such as it is when it exists, has never yet changed, but one is always right about it, and that which is to be sweet must of necessity be of such and such a nature' (4.5, 1010b19-26). See also Block (1961, 4) for more on this point.

²⁵ He also wants to explain how it is that our thoughts are in error.

possible. Yet when we turn to *DA* 3.3, we notice that, while Aristotle presents *phantasia* as the solution to the ancient puzzle of error, he surprisingly does not tell us how *phantasia* actually explains error. Rather, he skips over this part and spends the majority of the chapter differentiating *phantasia* from belief (*doxa*) and perception (which is why so many commentators read *DA* 3.3 as a chapter on *phantasia*, rather than a chapter on error).²⁶ Nevertheless there is a way to read this chapter that will make sense of all the elements and tell us how *phantasia* explains error. I suggest we read the chapter in tandem with Plato's *Theaetetus* where Socrates presents a possible solution to the problem of error. (Whether or not Plato – or the character Socrates – actually endorses the solution is debatable.)

In the *Theaetetus*, Socrates, like Aristotle, claims that something must be added to thought and perception in order to explain how it is that we are sometimes in error; but whereas Aristotle adds *phantasia*, Socrates adds memory. I argue that Aristotle accepts Socrates' solution, but he thinks that 'memory' is too narrow and shows us in *DA* 3.3 that what Socrates is calling 'memory' should really be called *phantasia*. In order to make this change in terminology, however, he must explain what *he* means by *phantasia* so that it will not be confused with Plato's use of *phantasia*, which in both the *Theaetetus* and *Sophist* refers to appearances, usually false ones, such as something appearing small when it is in fact quite large. We will see that while Aristotle thinks *phantasia* explains appearances, he does not use *phantasia* to refer exclusively to appearances.²⁷ He wants to use the word *phantasia* much more broadly to refer to the capacity to produce images.²⁸ If we read *DA* 3.3 in this context, that is, with Plato in mind, we will see

²⁶ Caston (1996) also reads *DA* 3.3 as a chapter on error. Other commentators note that Aristotle discusses error in this chapter, but do not seem to recognize that the chapter is organized around the problem of error.

²⁷ Thus, I disagree with Nussbaum, who thinks Aristotle is following Plato's use of the word *phantasia* as 'appearing' (1978, 242). Aristotle is not following Plato, but using *phantasia* to refer to the capacity to produce images. These images, however, explain why objects appear to us as they do.

²⁸ Most commentators agree that Aristotle is the first to use *phantasia* in a technical way to refer to a faculty of the soul (though they differ on how to understand this faculty). *Phantasia* is also a fairly new word in ancient Greek literature. As far as I know it never appears in any of the Presocratic fragments, and only appears in Plato's middle and late dialogues. (For examples, see Plato, *Republic* 382e10, *Theaetetus* 152c1, 161e8, *Sophist* 260e4, 263d6, 264a6; see also Ross 1961, 38.)

that there can be little doubt that Aristotle is indeed turning *phantasia* into a technical word signifying an image-producing capacity of the soul.

Plato uses the word *phantasia* twice (152c1, 161e8) and *phantasmata* only once (167b3) in the *Theaetetus*, and neither word refers to images, but instead to the way things appear to us. For example, the first use of *phantasia* occurs when Socrates considers the fact that the wind may feel hot to one person but cold to another, even though it is the same wind. From this, he concludes that ‘the appearing (*phantasia*) of things... is the same as perception, in the case of hot and things like that’ (152c1-2). In the *Sophist*, the visitor again uses *phantasia* to refer to appearances (usually false appearances) and states that appearing is ‘the blending of perception and belief’ (264b2). Aristotle explicitly rejects the *Sophist* definition of *phantasia*, arguing at length in *DA* 3.3 against the claim that *phantasia* is a ‘blending’ of perception and belief. Let us begin with the explanation of error in the *Theaetetus*, which is noticeably missing from *DA* 3.3, and then we will look at how Aristotle goes about correcting the account of *phantasia* in the *Sophist* so that there is no confusion regarding his own account in *De Anima*.

In the *Theaetetus*, Socrates and Theaetetus set out to address the epistemological question, what is knowledge, but take an interesting detour into the problem of error when Theaetetus suggests that knowledge is true belief (*doxa*). Socrates is eager to pursue this line of thought but, for some reason, deviates from the task ‘to go back to an old point about *doxa*’ (187c7), specifically a point about false belief. He claims that it is a problem that has been bothering him for quite some time, and he vacillates over whether the present discussion (about knowledge) is the best time to address the issue. He eventually gives in and asks Theaetetus how error is possible.

After a number of failed attempts to explain error, Socrates suggests that error is possible through ‘a gift of Memory’ (191d3-4). He asks us to suppose that ‘we have in our souls a block of wax’ that is different for everyone (191c8-9). For some people it is large, for others it is small, for some it is hard and for others it is soft (191c9-d1). He claims that we impress upon the wax everything we wish to remember among the things we see, hear and think:

We make impressions upon this of everything we wish to remember among the things we have seen or heard or thought of ourselves; we hold the wax under our perceptions

and thoughts and take a stamp from them, in the way in which we take the imprints (*sēmeia*) of signet rings. Whatever is impressed upon the wax we remember and know so long as the image (*eidōlon*) remains in the wax; whatever is obliterated or cannot be impressed, we forget and do not know (191d4-e1).²⁹

Once Socrates explains how we store sense impressions he goes on to explain how our perceptions are sometimes in error. He claims that we judge falsely, that is, we have a false belief (*doxa*), when we recall one of these impressions (*eidōla*) and apply it to the present perception. Socrates provides Theaetetus with an example:

I know both you and Theodorus; I have imprints (*sēmeia*) for each upon that block of wax, like the imprints of rings. Then I see you both in the distance, but cannot see you well enough; but I am in a hurry to refer the proper imprint to the proper visual perception (*opsis*), and so get this fitted into the trace of itself, that recognition may take place. This I fail to do; I get them out of line, applying the visual perception of the one to the imprint (*sēmeion*) of the other (193b10-c6).³⁰

In this passage, Socrates explains that we see Theodorus *as* Theodorus when we combine our current perception of him with the memory of our past perceptions of him, or with the ‘imprint’ (*sēmeion*) we have stored in our memory that represents him. If we apply the correct imprint to our perception, then we will have a true belief, but if we apply the wrong imprint, then we will have a false belief.³¹ For Socrates, impressions, which are left behind by sense perceptions, are stored in our memory and it is through our capacity for memory that we recall these impressions and combine them with our immediate sense perceptions so that we see an object *as* a particular object and form a belief about the object we perceive.

²⁹ We should note that Socrates uses *eidōlon* in this passage, which is a word that Aristotle also uses at times to refer to images.

³⁰ I have made one slight change to the Levett / Burnyeat translation in Cooper (1997), translating *sēmeion* as ‘imprint’ rather than ‘sign’.

³¹ Socrates and Theaetetus eventually abandon this picture of false belief because it seems to lead to a paradox of simultaneously knowing and not knowing the same thing at the same time. But the reason it leads to a paradox is because, as we discover later in the dialogue, they had the wrong understanding of ‘knowledge’. It is not clear whether or not Socrates accepts this account of belief and error once they have a better definition of ‘knowledge’, but in any case there is no indication that Socrates finds this account of belief and error to be flawed. It is also worth noting that in order to have a false belief, according to Socrates, one must first have a false or inaccurate perception.

The first thing to notice is that Aristotle's description of *phantasia* is very similar to Socrates' account of memory. Aristotle describes *phantasia* as that which 'produces something before the eye, just like the image-making (*eidōlopoiountes*) that occurs in memory' (*DA* 427b18-20, translation mine). Aristotle uses language very similar to Socrates' language in the *Theaetetus*, using a cognate of *eidōlon* rather than his typical word for 'image', *phantasma*.³² But why would Aristotle want to change Socrates' terminology? Why not just stick with memory? The reason, of course, is that for Aristotle memory is not just the preservation of past sense perceptions. In *De Memoria* he explains that memory involves recognizing images as things that we have experienced in the past. In other words, memory is an image that is accompanied by the perception of time (449b24-30). But not all images involve the perception of time; specifically, images involved in thought, dreaming, and perception will not require the perception of time. And so, in *DA* 3.3, Aristotle chooses a different word for the very broad category of past sense impressions, namely *phantasia*.

A few lines down from his first account of *phantasia* in *DA* 3.3, Aristotle states that *phantasia* produces images (*phatasmata*) 'non-metaphorically' (*mē...kata metaphoran*) (*DA* 428a2). In the *Theaetetus*, we saw that Socrates explains memory using a wax metaphor, but here Aristotle further distances himself from Plato, emphasizing that he is not speaking metaphorically. When he claims that *phantasia* produces images, he means it quite literally. There is no figurative block of wax in our soul, for Aristotle. As we saw in the section on perception, the sense organs, the blood, and the heart are all made up of the kind of material that can be affected and altered by the sensible forms. The impressions that sensible forms make on the sense organs and are stored in the primary sense organ are *real* impressions that were formed through sense perception and are capable of being recalled at another time.

In the *Theaetetus*, Socrates claims that we come to have true or false beliefs by combining our memories with our current perception. But whereas Socrates posits memory, Aristotle posits *phantasia*. Moreover, where Socrates uses the metaphorical block of wax, Aristotle is talking about actual impressions, i.e. images that are stored in the primary sense organ. From what has been said so far, we can conclude that these images

³²) Also we should note his use of the wax metaphor to explain perception in *DA* 2.12, 424a17-24 (quoted earlier in the paper), which may be another indication that he has Plato in mind throughout his discussion on perception and *phantasia*.

are combined with our current sense perceptions, not metaphorically, but actually. When we perceive an oak tree, the sensible forms that exist in the oak tree make an impression on our eye that makes its way to the primary sense-organ where it is combined with the impression, i.e. the unified image, of *oak tree*, causing us to see, not just green and brown patches, but an actual oak tree. When the perception of the sensible forms, as in the green and brown color patches of an oak tree, combines with the correct image, in this case an image of *oak tree*, our perception is accurate. When it is combined with the wrong image, an image of a telephone pole, our perception is in error.

We still have one final question we must answer before we can move on, namely, how does the image *oak tree* get combined with our current perception? The answer lies in Aristotle's account of recollection in *De Memoria*. Recollection, according to Aristotle, involves combining and associating images in various ways. For Aristotle, images stored in the primary sense organ come to be associated with one another so that remembering one image, which is not the thing we are trying to remember, can lead us to the image we want. For example, if we are trying to recall where we left our keys, we can start with our most recent memories and trace them back until we get to the memory of setting down our keys on the kitchen counter. Of course, images do not have to be associated chronologically. Aristotle claims that we can 'pass swiftly from one point to another, e.g. from milk to white, from white to mist, and thence to moist, from which one remembers Autumn if this be the season he is trying to recollect' (*DM* 452a13-16).

The ways in which images become associated with each other has a real physiological explanation. Aristotle claims that recollection is a bodily affection (*DM* 453a14-15) and possible because 'one movement has by nature another that succeeds it' (*DM* 451b10-11). He further states that when we recollect 'we are experiencing one of the antecedent movements until finally we experience the one after which customarily comes that which we seek' (*DM* 451b16-18). Recollection is possible because the images that are stored in the primary sense organ are physical alterations, or movements, and each movement becomes associated with other movements, generally through habit or custom, so that when one is set into motion the other one is also set into motion.

Aristotle's account of recollection shows that one movement in the primary sense organ can set into motion other movements. Incidental

perception is importantly different from recollection, which, according to Aristotle, is a 'mode of inference' and belongs to only those who have the faculty of deliberation (*DM* 453a10-14). But Aristotle's theory of recollection shows that he does see the images in the primary sense organ as movements that can set other images in motion. If images can stir up and recall other images, then surely our current perceptual experiences can stir up images, since perception is the same kind of movement as *phantasia*. On this reading, then, the combination of *phantasia* and perception, which occurs during incidental perception, does not require inference or deliberation. Instead, it is entirely possible for our current perception of an object to set into motion the image that most closely resembles or is often associated with the perception so that the two are combined in the primary sense organ, thus producing incidental perception.³³

So far I have argued that Aristotle uses Socrates' solution to the problem of error in the *Theaetetus* and combines *phantasia*, which just is Platonic *mnēmē*, with our current perceptions. I further claim that for Aristotle *phantasia* and perception are *literally* combined in the primary sense organ. When combined with his physiology, this produces what I take to be an extremely plausible analysis of Aristotle's overall view. What is more, on this reading we avoid invoking the awkward use of images in perception that Nussbaum and other opponents of the 'image' view are worried about. Perceptual appearance does not involve two distinct processes: calling up an image and reflecting on or contemplating that image to see if our current perceptual experience matches up with that image. For one thing, the images involved in perceptual appearance are not mere copies of past perceptual experiences; they are accumulations of numerous past experiences that have combined to make a single unified image that cannot be

³³) Cashdollar (1973) offers an account of incidental perception for Aristotle that is very similar to the one I have presented in this section. He states that to perceive a 'colored object as y, I surely must have y stored as an image and one which becomes spontaneously conjoined with a certain proper sensible when it is perceived. The single awareness of that conjunction is incidental perception. It is probable that, in general terms and with the differences noted above, Aristotle would allow that this association is similar to that of memory and recollection, i.e. that "habit" (451b12, 452a27) plays an important part in associating 'likenesses' one with another' (169). Cashdollar, however, does not tie Aristotle's discussion of incidental perception to the problem of error or to Plato's *Theaetetus* as I do. His interest is in perception, not *phantasia*.

traced back to any one particular perception. Secondly, when we have a perceptual experience that resembles this unified image, the perception automatically sets our perceptual system in motion, calling up the image and then combining with that image. The combination of *phantasia* (i.e. images) with perception explains how we come to perceive incidental perceptibles and why our perceptual experiences are sometimes in error.

Once Aristotle replaces Platonic *mnēmē* with *phantasia* he must make sure that his use of *phantasia* as a capacity for producing images is not confused with Plato's use of *phantasia*, which in the *Sophist* he describes as a 'blending of perception and belief' (264b2).³⁴ And so we see in *DA* 3.3 that Aristotle makes a point of distancing himself from Plato's use of the term, emphasizing that on his account, *phantasia* is in no way a combination of belief and perception:

It is clear then that *phantasia* cannot be belief (*doxa*) plus perception, or belief arrived at through perception, or a blend of belief and perception; both for these reasons and because the content of the supposed belief cannot be different from that of the perception (I mean that *phantasia* will be a blending of the perception of white with the belief that it is white: it could scarcely be a blend of the belief that it is good with the perception that it is white): so that to appear (*phainesthai*) will be to believe (*doxazein*) the same as what one perceives non-incidentally. And yet something false appears, about which at the same time there is a true judgment; e.g. the sun appears (*phainetai*) a foot wide, though we are convinced that it is larger than the inhabited part of the earth. Thus either while the fact has not changed and the observer has neither forgotten nor lost conviction in the true belief which he had, that belief has disappeared, or if he retains it then his belief is at once true and false. A true belief, however, becomes false only when the fact alters without being noticed (428a24-b8).³⁵

Those who object to the 'image' view of *phantasia* often cite the sun example presented in the passage above. Malcolm Schofield, for example, claims that images cannot explain how *phantasia* and belief differ. He states that if *phantasma* does mean 'image' and *phantasia* refers to the capacity for producing such images, then 'it will take great ingenuity to explain on

³⁴ The problem of error reappears in the *Sophist*, but this time the discussion focuses on semantic concerns regarding truth and falsity, examining what makes an utterance or thought true or false, rather than how our thoughts and perceptions are in error (260b8-264b7).

³⁵ I have in places slightly altered the translation by Smith in Barnes (1984).

Aristotle's behalf why examples such as those of the sun appearing to be a foot across or of an indistinctly perceived thing looking like a man are pertinent to a discussion of *phantasia*. In neither of these examples does it seem plausible to suppose that the contemplation of mental images is involved; nor does Aristotle in presenting them suggest that it is' (1992: 265). According to Schofield, we cannot make sense of the sun example using 'images'. So let us take a closer look at the passage above and see if we can explain why the sun appears a foot across using images.

Let us first get clear on what Aristotle is objecting to. For Plato, the sun appears to be a foot wide *because* we believe that our perception of the sun as a foot wide is accurate. But as Aristotle points out, we can have the belief that the sun is actually quite large, even while the sun appears to be only a foot wide. If Plato's account of *phantasia* were true, one of two things would have to be the case. Either, when the sun appears small we forget our true belief that it is actually quite large and momentarily hold the false belief that it is only a foot wide. Or we hold a belief about the sun that is simultaneously both true and false.³⁶ But, as Aristotle points out, both of these descriptions are contrary to our experience. We can hold the belief that the sun is larger than the inhabitable earth, even though it appears small.

We should note that when Aristotle is talking about how things appear (*phainetai*) to us he is not simply referring to the images we call up through memory or imagination. Rather he is talking about perceptual appearances. Aristotle is pointing out in the passage quoted above that sometimes we *know* our perceptual experiences are not accurate, and so there are times when we maintain a true belief even while we are experiencing a false or inaccurate sense perception.

³⁶ It is not entirely clear what Aristotle means when he says that the belief is both true and false, nor is it clear which belief is supposed to be true and false. Is it the belief that the sun is a foot wide or the belief that the sun is larger than the earth? There have been attempts to work this out by Dow (2010, 156-62), Lycos (1964, 496-514), and Ross (1961, 287-8). I tend to think Dow's interpretation is the most promising. He states: 'The difficulty comes from the mixture theorist's claim that I take the same kind of stance (i.e. belief) towards the sun's being a foot across as I do towards its being huge. But a little reflection tells us that it is precisely *not* the same kind of stance. In fact, as Aristotle wants to insist, the whole of my believing about the size of the sun is true' (2010, 161-2).

We saw in the previous section that perception of special perceptibles is never in error, but incidental and common perception can be. Perceiving the sun as a foot wide is not perception of special perceptibles (e.g. color or odor), but of common perceptibles, which include things like movement, rest, figure, magnitude, number, unity – those things that can be perceived by more than one sense organ (*DA* 3.1, 425b5-6; 3.3, 428b23-24; *De Sensu* 437a9). Every sense organ is capable of perceiving movement, since all perception results in a movement in the body. Number, Aristotle claims, ‘is perceived by the negation of continuity’, which is also perceptible through each and every sense organ (3.1, 425a19). We perceive that the horn honked three times because we perceive the lack of continuity in the sound. We perceive that there are two coffee cups on the table because we perceive a lack of continuity in color. But perceiving movement as movement and ‘lack of continuity’ as number is not something we arrive at simply through the perception of special perceptibles. Like incidental perception, common perception is not reducible to an alteration in the individual sense organs.

Aristotle does not explain exactly how we perceive movement and number, but we can imagine that it is similar to incidental perception. Previously, I argued that incidental perception involves combining our current perceptual experiences with a unified image. Green and brown patches *appear* to be a tree when they are combined with the unified image, *tree*. Something similar must be going on when we experience common perceptibles. In order for an object to *appear* to be a foot wide the perception we are having must be similar to other perceptions we have had in the past that proved to be a foot wide. When we look at the sun, the impression the sun makes on the eye sets into motion and combines with other *foot-wide* images that are stored in the primary sense organ. The sun looks small because it is far away and the distance determines the size of the impression that the sun is able to make on our eye. When we say the sun appears to be a foot in diameter, we are comparing our perception of the sun to other past sense perceptions (or perhaps even current perceptions).³⁷ We are

³⁷ Frede compares the sun example in *DA* 3.3 to *De Sensu* 448b13 and notes that in both passages ‘the explanation seems rather that estimating the size of something is what one might expect from *phantasia* as a kind of comparative seeing, perhaps by comparing the size of the sun with that of tree-tops or chimney-pots. If *phantasia* renders a fuller picture than

recalling other objects that have had a similar effect on our eye and have turned out to actually measure a foot in diameter. Thus, to say that something appears to be one way or another is simply to say that the present perception I have of X is very similar to my image of Y and so X *appears* to be Y. But this is not necessarily a contemplative or conscious act in the way that Nussbaum and Schofield seem to think it must be. Our current perceptual experiences set in motion and combine with similar or associated images. When Aristotle says that appearances are often false he means that our perceptual experiences (which are combinations of the current perception of special perceptibles and the unified image it calls up) do not correspond to the way things really are.

The sun appears to be a foot in diameter and this appearance is false because the image does not accurately represent the object (i.e. the sun). But, as Aristotle points out, our beliefs are not constrained by our current perceptual experiences. We see the sun *as* a foot wide, but we know that the sun is a great distance from the earth and we also know that as things move further away from us they take up less space in our visual field and therefore look smaller. Because we know more facts about the sun than what is presented to us in any single perceptual experience, we are able to maintain the true belief that the sun is quite large while still experiencing the sun as a foot wide. Not only are images relevant to the sun example, they explain why appearances persist despite the fact that we know things are not as they appear.

5. Conclusion

The main hurdle to accepting an ‘image’ view of *phantasia* is the worry that images cannot bring about perceptual appearances, such as the sun appearing to be a foot across. I have taken great care to show exactly how images combine with sense perception in order to bring about perceptual appearances. Although Aristotle does not actually explain how images cause perceptual appearance, the explanation I have given is supported by his physiological account of perception (and *phantasia*) and gains support

the different senses themselves, then it is clear why it is often depicted as the counterpart of *doxa* (*Insomn.* 462a1, 461b1) (1992, 286).

when we read *DA* 3.3 in conjunction with Plato's *Theaetetus* and *Sophist*. Once we read *DA* 3.3 as a conversation with Plato, many long-standing interpretative problems disappear and what emerges is a coherent account of *phantasia* as a capacity for producing images that explains how perceptual appearances are possible and why they are sometimes in error.³⁸

³⁸) I am especially indebted to Susan Sauvé Meyer for her insightful comments and helpful conversations on this paper, which has also benefited greatly from remarks by Elisabeth Camp, Gary Hatfield, Charles Kahn, Jon McGinnis, and Warren Schmaus. Thanks also to the participants of the 29th Annual Joint Meeting of the Society for Ancient Greek Philosophy and the Society for the Study of Islamic Philosophy at Fordham University (2011) where I presented a version of this paper, as well as the anonymous readers for *Phronesis*.

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