

## Why Aristotle Needs Imagination

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In *De anima* 3.3, Aristotle argues at length that animals have a distinct, new capacity he calls ‘phantasia.’ But the point of this exercise – not to mention its urgency – is left unclear. The treatise hardly prepares us for it, having mentioned phantasia earlier only in passing; and the chapter’s serpentine argument nowhere announces its motives in a forthright way. Aristotle is clearly articulating something of key importance to his psychology. But the exact nature of his aims and results is hotly disputed.<sup>1</sup>

To confuse matters still further, ‘phantasia’ is commonly translated as ‘imagination,’ which, in spite of its historical connections,<sup>2</sup> makes little

sense of Aristotle’s arguments.<sup>3</sup> And while the secondary literature standardly takes note of the discrepancy, it is difficult to remain uninfluenced. Appeal is often made to later discussions of the imagination – to the British Empiricists, for example, or Kant, or even Wittgenstein – in an effort to illuminate the text. But Aristotle stands at the beginning of this history, when imagination was not an established topic of discussion yet. To find out what he had in mind, then, we should start by asking why Aristotle needs “imagination,” or rather phantasia, in the first place.

A close reading of the opening of *De anima* 3.3 – a passage which has received scant attention in the literature<sup>4</sup> – reveals that the chapter is centrally concerned with *the problem of error*, that is, the problem of explaining how the content of mental states could ever *diverge* from what is actually in the world.<sup>5</sup> Aristotle poses this as a difficulty for his predecessors’ views on perception and thought, and taunts them for being unable to solve it. But the exact same complaint could be made of his own theory of sensation and conception, which he regards as the most basic forms of

<sup>1</sup> I mention here only some of the more important pieces in a steadily growing literature: J. Freudenthal, *Ueber den Begriff des Wortes ΦΑΝΤΑΣΙΑ bei Aristoteles* (Göttingen 1863); K. Lycos, “Aristotle and Plato on ‘Appearing,’” *Mind* 73 (1964), 496-514; D. A. Rees, “Aristotle’s Treatment of Φαντασία,” in J. P. Anton and G. L. Kustas (eds.), *Essays in Ancient Greek Philosophy* (Albany 1971), 491-504; J. Engmann, “Imagination and Truth in Aristotle,” *The Journal of the History of Philosophy* 14 (1976), 259-65; M. Schofield, “Aristotle on the Imagination,” in G. E. R. Lloyd and G. E. L. Owen (eds.), *Aristotle on Mind and the Senses* (Cambridge 1978), 99-141; M. C. Nussbaum, “The Role of Phantasia in Aristotle’s Explanation of Action” in *Aristotle’s De motu animalium* (Princeton 1978), 221-69; G. Watson, “Φαντασία in Aristotle, *De anima* 3.3,” *Classical Quarterly* 32 (1982), 100-13; J.-L. Labarrière, “Imagination humaine et imagination animale chez Aristote,” *Phronesis* 29 (1984), 17-49; D. Modrak, “Φαντασία Reconsidered,” *Archiv für Geschichte der Philosophie* 68 (1986), 47-69, and *Aristotle: The Power of Perception* (Chicago 1987), 81-110; M. V. Wedin, *Mind and Imagination in Aristotle* (New Haven 1988); D. Frede, “The Cognitive Role of phantasia in Aristotle,” in M. C. Nussbaum and A. O. Rorty (eds.), *Essays on Aristotle’s De Anima* (Oxford 1992), 279-95.

<sup>2</sup> For attempts to trace the historical connections between ancient and modern conceptions in this area, see the excellent piece of T. Rosenmeyer, “Φαντασία und Einbildungskraft: Zur Vorgeschichte eines Leitbegriffs der europäischen Aesthetik,” *Poetica* 18 (1986), 197-248; and more generally, G. Watson’s valuable *Phantasia in Classical Thought* (Galway 1988) and “The Concept of ‘Phantasia’ from the Late Hellenistic Period to Early Neoplatonism,” in W. Haase (ed.), *Aufstieg und Niedergang der römischen Welt* II.36.7 (1994), 4765-4810. Other studies include M. W. Bundy, *The Theory of Imagination in Classical and Medieval Thought* (Urbana 1927) and J. M. Cocking, *Imagination: A Study in the History of Ideas* (London 1991).

<sup>3</sup> Phantasia is not unrelated to imagination, insofar as Aristotle appeals to phantasia to explain visualizing and dreams. But he similarly appeals to phantasia to explain memory, expectation, thought, reasoning, desires, deliberation, passions, speech, and action (see n. 46 below); and there is no evidence that he thinks viewing mental images is involved in all of these. On the contrary, as he describes it, a good deal of phantasia’s activity must occur *outside* of consciousness: it is something that *can* eventuate in imagistic experience, but *need not* (see pp. 51-52 below). In this respect, we go less astray if we start with Plato’s use of the term to describe that fact that things literally “appear” to us in a certain way (φαίνεσθαι), that we *take* them to be thus and so, an activity that *prima facie* need not involve mental images at all. But we would still go astray. In *De an.* 3.3, Aristotle argues directly against Plato’s account, because even this is too strong. See p. 45 below.

<sup>4</sup> Apart from the line-by-line commentaries, I have been unable to find any discussion of the opening passage in the secondary literature.

<sup>5</sup> Error will occur both (i) when there are no objects corresponding to the content of a mental state and (ii) when these objects exist, but with different characteristics than are represented. Several clarifications are in order, though. (1) ‘Error,’ in the sense I am using it, extends more widely than propositional contents, so as to include *inaccuracy* in nonpropositional contents as well – an inaccurate portrait, for example, errs without being false in any strict propositional sense. Aristotle similarly vacillates in his use of ‘false,’ insisting most often on a strict propositional sense, but sometimes using it more broadly in the way I have just described for ‘error.’ (See below, n. 53.) (2) The sense of ‘error’ I am using here should be distinguished from a stronger sense that implies not only a divergence from reality, but also our being *deceived* or *taken in* by this divergence. The problem of error, however, only concerns how such divergences are possible in the first place, *not* the further and separate problem of why we are sometimes taken in by them. It is thus the weaker sense of ‘error,’ which does *not* imply acceptance or assertion, in which we will be interested.

perception and thought. And it is for exactly this reason, I suggest, that he introduces phantasia: to preempt charges that he cannot explain the possibility of error himself. For this strategy to work, he must show first that phantasia is distinct from sensation and conception; and secondly that, unlike those states, its content genuinely does admit of error. That is precisely what the remaining sections of *De anima* 3.3 set out to do.

Phantasia, then, is crucial for Aristotle's account of *intentionality* – his account of how mental states can be *of* or *about* things, or more generally possess content. Sensation and conception are, of course, intentional states. But they do not provide Aristotle with a model that will explain intentionality in general. As he recognizes himself at the outset of the chapter, the content of most intentional states can fail to correspond to what is in the world; and his account of sensation and conception precludes just such divergence.<sup>6</sup> But he is also confident that phantasia *can* explain the possibility of error, and he regularly appeals to it in explaining the content of other intentional states. *De anima* 3.3 thus testifies to Aristotle's concern with problems arising from intentionality and his effort to solve them.<sup>7</sup>

### 1. The Position of *De anima* 3.3

This discussion is all the more striking because of its placement in the *De anima*'s architectonic plan. The first half of the treatise is foundational, consisting of a review of his predecessors' opinions (1.1-1.5) and the definition of the soul (2.1-2.3). It then ascends through the basic powers of the soul, insofar as they divide living things into three successive kingdoms: first, the capacity for digestion, growth, and reproduction (2.4), the sole powers found in plants; secondly, the capacity for perception (2.5-3.2), which animals possess in addition; and finally, conceptual and reasoning powers (3.4-3.8), which humans alone possess, along with all the other powers. The sequence of chapters thus mirrors the hierarchy Aristotle finds

<sup>6</sup> Aristotle's account of sensation and conception might have the resources to explain other peculiarities of intentional content, such as the failure of intersubstitutivity. But even if his account did have the resources, Aristotle would be unwilling to use them. He does not think that "failure of intersubstitutivity" is a problem at all. On the contrary, he regards the inference as a *fallacy* and explicitly rejects an attempt to solve it by reference to the peculiarity of psychological contexts: *De soph. elen.* 24, *passim*, but esp. 179b7-18.

<sup>7</sup> I thus disagree both with Modrak "Φαντασία Reconsidered" (see n. 1 above), pp. 68-69, when she claims that Aristotle does not have a general account of intentionality, but takes it for granted instead; and with Modrak, *Aristotle: The Power of Perception* (see n. 1 above), pp. 32, 148-49, when she argues that Aristotle offers just such an account in his theory of sensation.

in the soul and in nature at large. He leaves until afterwards the discussion of other powers, such as desire and action (3.9-3.11), that mark no important taxonomic distinction. They belong to virtually all animals and so are nearly coextensive with the perceptual powers.<sup>8</sup>

Phantasia breaks this pattern. It also belongs to every (or almost every) animal.<sup>9</sup> But it is not dealt with afterwards like the others, coming instead at the critical juncture between perception and thought, in *De anima* 3.3. The placement of this chapter might be nothing more than an accident of composition or the work of later editors.<sup>10</sup> But we cannot discount another

<sup>8</sup> For desire, cf. especially *De an.* 3.7, 431a13-14 and 3.9, 432b3-4, together with the argument of n. 9. Regarding action, nothing that moves is without sensation, even though there may be a few animals that cannot move (*De an.* 3.12, 434a30-b8; for further references, see Hicks' note *ad* 1.5, 410b18-20). Aristotle recognizes elsewhere that some testaceans may be a problem case, insofar as they show some evidence of motion, but very weak evidence of sensation (*Hist. anim.* 8.1, 588b16-23).

<sup>9</sup> Pace Freudenthal 1863, 8. Despite some hesitation on the point (δοκεῖ δ' οὐ, *De an.* 3.3, 428a10-11), in the *De anima* Aristotle is in fact committed to strict coextension – i.e., phantasia belongs to *every* animal, including stationary animals. On a number of occasions, he argues that any thing which has at least one sense can feel pleasure and pain, and if so, will have appetite and hence desire (2.2, 413b22-23; 2.3, 414b4-5; 3.11, 434a2-3); but all animals have at least one sense (2.2, 413b2-4; 2.3, 414b3; 3.12, 434b13-14, b23-24; 3.13, 435b5-7, b17; *De sensu* 1, 436b13-14; *Hist. an.* 1.3, 489a17-18); consequently, all animals will have desire (cf. *De an.* 3.7, 431a13-14). But given that there cannot be desire of any sort on his view without phantasia (3.10, 433b28-29), these claims together imply that all animals have phantasia (cf. 2.2, 413b22-23) – the only mortal beings that can be without it, therefore, will be plants (cf. 2.3, 415a8-11). And Aristotle explicitly accepts this consequence at *De an.* 3.11, 434a4-5. To assuage any lingering uneasiness, he conjectures here that the lowest animals, who have only the sense of touch, might possess phantasia only "indeterminately" (ἀορίστως). Since even stationary animals have the sense of touch (3.12, 434a30-b24), phantasia will have a wider extension even than the ability to change place. Outside the *De anima*, Aristotle is even clearer: in general what is capable of phantasia and of perception are the same thing, even though these two abilities differ in essence (καὶ ἔστι μὲν τὸ αὐτὸ τῷ αἰσθητικῷ τὸ φανταστικόν, τὸ δ' εἶναι φανταστικῷ καὶ αἰσθητικῷ ἕτερον, *De insomn.* 1, 459a15-17).

<sup>10</sup> One need only recall the extraordinary assessment of G. H. Lewes at the end of his chapter on the *De anima* in *Aristotle: A Chapter from the History of Science, including Analyses of Aristotle's Scientific Writings* (London 1864), pp. 244-45: "we shall note here, as in almost every one of [Aristotle's] scientific works, the want of masterly and logical arrangement of subject, and the want of the elementary requisites of good composition. There is no progression, no culmination. One chapter might be transposed in the place of another, one paragraph might precede its predecessor without affecting the symmetry, or rather the asymmetry of the work. Were this not equally observable in other works, we might not unreasonably lay the blame at the door of the earlier editors and copyists; but such an argument is untenable in the presence of compositions so uniformly defective."

possibility, namely, that *phantasia* is somehow necessary at this stage of Aristotle's exposition, prior to his accounts of thought, desire, and action. Instead of interrupting the sequence, *De anima* 3.3 might constitute an integral part of it.

Aristotle is sensitive to the question of continuity himself in this chapter. Having just finished his discussion of perceptual functions, he returns to the treatise's larger framework in the first sentence of *De anima* 3.3 by recalling two popular criteria for soul:

[People] define soul by two differentia most of all: (i) change in place and (ii) conceiving, thinking, and perceiving. Both conceiving and thinking seem to be like a kind of perceiving.<sup>11</sup> (427a17-20)

In the *De anima*, the criteria of motion and perception form a leitmotiv. Introduced near the beginning of the treatise, they are sounded throughout the first book; and in the third book, they can be heard in Aristotle's own voice.<sup>12</sup> In the passage cited above, the second criterion is modified to include conceiving and thinking. So revised, the two criteria neatly foreshadow the treatise's two remaining topics of thought and action.

Yet this reformulation also poses a difficulty. Aristotle only says here that thought *seems* to be like perception. It is a reputable view or *ἔνδοξον*, from which it is appropriate to start and which, when construed in a particular way, he can later accept himself (3.4, 429a13-18). But it cannot stand as it is. The first third of *De anima* 3.3 is a concerted attack to show that thought is crucially *not* like perception, in a way that requires a distinct new ability, like *phantasia*. And the argument turns precisely on the problem of error.

<sup>11</sup> All translations are my own. Aristotle's use of 'φρονεῖν' here does not have the technical meaning it has elsewhere in his corpus, of practical wisdom, but designates instead thinking in a very broad sense, which is fitting given the similarly broad usage in his predecessors' citations. Aristotle's use of 'νοεῖν' can also be broad; but it is often used in the *De anima* to distinguish a special type of thinking, which I refer to as 'conceiving,' that is distinct from discursive thought and reasoning, which he often calls 'διάνοια.' Finally, since Aristotle uses 'perception' (αἰσθάνεσθαι) equally for three different types of perceptual activity distinguished in *De an.* 2.6, only context will tell whether he has a specific type in mind. I will use 'sensation' to refer to the most basic form of perception, the perception of "proper" perceptibles (ἰδία αἰσθητά) for purposes of clarity.

Regarding the ἐπεὶ that begins the quotation above, I follow Hicks and Rodier (who in turn follow Alexander of Aphrodisias, *apud* Ps.-Philop., *In De an.* 489.9) in accepting anacolouthon. None of the later clauses other commentators have proposed as an apodosis makes good philological or philosophical sense. For a full discussion of the different opinions, see G. Rodier, *Aristote, Traité de l'âme* (Paris 1900), 2.397 *ad loc.*

<sup>12</sup> *De an.* 1.2, 403b25-26; 1.2, 404b7-10, b28-30, 405b11-12; 1.5, 409b19-25. He endorses these criteria *in propria persona* at 3.9, 432a15-17.

## II. The Thesis that Thinking and Perceiving are "the Same"

Aristotle begins by explaining why the view that thinking is like a kind of perceiving might be found reputable. He offers two sets of reasons.<sup>13</sup> First, there is a general similarity: thinking and perceiving are both cognitive attitudes. In each case, he notes, "the soul discriminates and knows something that is" (427a20-21). But the analogy also has authority on its side. For "in addition, the ancients say that thinking and perceiving are *the same*" (οἱ γε ἀρχαῖοι τὸ φρονεῖν καὶ τὸ αἰσθάνεσθαι ταῦτόν εἶναι φασιν, 427a21-22). The evidence Aristotle provides for this historical claim, though, seems frail:

as Empedocles said, "for men's insight increases in relation to what is present" and elsewhere, "hence thinking too continually presents different sorts of things to them." Homer's phrase, "for [their] mind is of this sort," means the same thing. (427a22-26)

None of these citations mentions perception, and the second in its original context is not about thinking either, but dreams.<sup>14</sup> At most, these citations share the very general position that a person's thoughts depend in some way on his environment and on his bodily condition.<sup>15</sup> But that hardly amounts to an *identification* of thinking with perception. Even the ancient commentators are openly critical.<sup>16</sup>

<sup>13</sup> Rodier, Hicks, Apelt, and Ross show by their punctuation that they take there to be only one such reason: they restrict the force of the γάρ by isolating the first reason in parentheses (ἐν ἀμφοτέροις γὰρ . . . τῶν ὄντων, a20-21). But it is clear that Aristotle's explanation also includes the next line (καὶ οἱ γε ἀρχαῖοι . . . , a21 ff.), the force of the γε in καὶ . . . γε being precisely to emphasize the addition made by καί – see J.D. Denniston, *The Greek Particles*<sup>2</sup> (Oxford 1966), 157. Older editors, such as Bekker, Trendelenburg, Torstrik, and Biehl, correctly omit parentheses.

<sup>14</sup> Both Ps.-Philoponus (*In De an.* 486.13-16; cf. 486.34 – 487.3) and Simplicius (*In De an.* 202.30-34) indicate that in its original context the second citation (DK 31 B 108) is about dreams, with Ps.-Philoponus explicitly drawing attention to the fact that 'φρονεῖν' does not bear its later, technical sense here.

<sup>15</sup> In context, the first citation from Empedocles (DK 31 B 106) concerns the dependence of knowledge on what is present in one's surroundings, while the second (DK 31 B 108) concerns the dependence of experiences on changes in one's bodily condition. Similarly, the passage from Homer (*Od.* 18.136) makes the observation that one's outlook, whether optimistic or pessimistic, reflects the poverty or prosperity of one's immediate circumstances.

<sup>16</sup> Ps.-Philoponus takes the first citation from Empedocles to be inappropriate, unlike the second (*In De an.* 486.11-13); but he considers the interpretation of Homer so far off that he reprimands Aristotle directly in the second person (486.22-34). Simplicius argues that neither Empedocles nor Homer is committed to the position Aristotle claims (*In De an.* 202.25-26), but that nevertheless "one ought not to disbelieve that some men, whether naturalists or sophists, thought in this manner" in light of Plato's efforts in the

Aristotle immediately goes on, though, to defend his reading with the following argument:

For they all assume that (a) conceiving, like perceiving, is bodily and (b) [one] perceives and thinks like by like, as we also noted in the arguments at the beginning. (427a26-29)

Aristotle's appeal to inference is a silent admission that he can only defend a more modest claim: that his predecessors are *committed* to the thesis that perceiving and thinking "are the same," whether or not they ever say so explicitly. But this is for the best. We are in a better position to analyze Aristotle's arguments than to evaluate the historical accuracy of his remarks, and it is his arguments, in any case, which matter most for understanding his position.

The argument he makes above, for example, makes clear what he means when he says that thinking and perceiving are "the same." For, if his inference is to be valid, this thesis must only maintain that

(1) Thinking consists in the *same kind* of process as perceiving rather than the strict identity claim that

(1') Thinking does not differ from perceiving in any way at all.

One could consistently maintain both, of course. But the evidence Aristotle offers only requires similarity, not identity – it implies (1), and not (1'). This weaker reading also gains support from Aristotle's student and later colleague, Theophrastus, who observes that Empedocles took thinking and perceiving to be "either the same or nearly the same" (ἢ τὰ αὐτὸν ἢ παρὰ πηλὴσιον ὄν, *De sens.* 10, 502.7-9 Diels *Doxogr.*).<sup>17</sup> Two things cannot be "nearly identical." But they can be nearly the same *sort* of thing.

Even so, (1) is quite a general thesis, and there are presumably many reasons one might hold it. Aristotle offers the following two reasons on his predecessors' behalf:

- (2) Thinking and perceiving are both bodily processes
- (3) One thinks and perceives like by like.

Though each is a sufficient condition for (1), neither (2) nor (3) is a necessary condition. Thinking and perceiving might still consist in the same sort of process, even if they were not *both* bodily or did not *both* consist in like

*Theaetetus* (151E – 157D, but esp. 152E), viz., to show that his predecessors were committed to the thesis that knowledge is perception and consequently the view that all appearances are true (202.23-24). On the latter thesis, see pp. 33 – 38.

<sup>17</sup> A similar qualification occurs in Themistius: "for they make perception *practically the same* [σχεδὸν . . . τὰ αὐτὸ] as reason" (*In De an.* 87.20).

being known by like. But then the question arises as to how widely Aristotle intends his remarks to extend – in particular, whether his critique is aimed at (1) quite generally, or only insofar as a theorist *also* accepts (2) and (3); or perhaps insofar as a theorist accepts some, but not all, of these.<sup>18</sup> To find out, we must look carefully at the specific criticisms Aristotle goes on to make.

### III. The Problem of Error

Having argued that (1) has a certain intuitive plausibility and enjoys some currency among his predecessors, Aristotle now turns to attack it.<sup>19</sup> He directs our attention to the widespread phenomenon of error and challenges his predecessors to account for it:

Yet at the same time they should have said something about being in error, too, since this is particularly endemic to animals and the soul spends rather a lot of time in this state.<sup>20</sup> (*De an.* 3.3, 427a29-b2)

Aristotle taunts his predecessors for not discussing error precisely because he thinks they cannot – theories like theirs do not have sufficient resources to explain error. For given their views, he argues,

It is necessary either that

- (i) all appearances are true (as some have said); or that
- (ii) contact with what is unlike is error (since that is the opposite of recognizing like by like). (427b2-5)

That is, his predecessors must either (i) forestall the problem at the outset, by simply *denying that error ever occurs*; or (ii) offer the only model their theory seems to allow, one in which a mental state occurs, but not in the way required – when some sort of malfunction occurs. If like is known by like, though, this could only occur when unlikes interact. Neither horn of

<sup>18</sup> Aristotle certainly did not believe that all of his predecessors accepted all three theses. An important exception is Anaxagoras. See below, p. 35.

<sup>19</sup> Ross oddly puts this entire argument in parentheses, as if it were a digression. If I am right, it contains the whole thrust of the first section and so the entire chapter.

<sup>20</sup> I have translated *ὀλκείότερον* and *πλείω* with merely intensive force here, since to take them literally as comparatives would conflict with Aristotle's more general epistemological outlook: if error were *more* endemic to animals than veridical cognition, and if the soul actually spent *more of its time* in this state, then one might well ask whether our abilities were well-adapted to life, and indeed whether the natural exercise of these abilities – what occurs for the most part – was not cognition after all, but error. Neither outcome is acceptable for Aristotle. Animals have sensation for the sake of survival and this, according to Aristotle, presupposes that our perceptual apparatus naturally discriminates real differences in the environment: *De sens.* 1, 436b18 – 437a3; cf. *De an.* 3.12, 434a30-b1.

the dilemma is meant to be acceptable. Aristotle intends each as a *reductio ad absurdum*.

The argument has some affinities with an earlier Platonic argument. In the first half of the *Theaetetus*, Socrates examines the thesis (A) that knowledge is perception – a close relative of (1) – and argues that it is inextricably linked to the thesis (B) that all appearances are true, as well as to something he calls the “Secret Doctrine,” which holds, roughly speaking, (C) that perception and what is perceived exist only in the interaction between subject and object.<sup>21</sup> Adherence to this last doctrine is practically universal, Socrates argues – “with the exception of Parmenides, all the sages one after another agree about this” – and he specifically names Empedocles and Homer among others (153E). What connections actually hold between these doctrines is a matter of some dispute. But if, as Myles Burnyeat has argued, they are supposed to mutually imply each other,<sup>22</sup> then Plato may have believed that adherence to (A), the thesis that knowledge is perception, committed his predecessors to (B), the thesis that all appearances are true. Like Aristotle, then, he might also have believed that widespread accounts of thought were unable to account for error.

Similarities such as these suggest Aristotle might have drawn his inspiration from Plato. But the resulting arguments are quite different. Aristotle’s interests here are primarily psychological, not epistemological: knowledge and justification are not even on the table yet. Nor is the structure of the arguments all that close. Instead of the “Secret Doctrine,” Aristotle appeals to more prosaic premises, such as (2) and (3); and his conclusion is *not* that all appearances are true – that is only one horn of his dilemma. At most, he has adapted Platonic material to his own ends, and for our purposes what matters more are the details of that argument. Let us turn, then, to a closer consideration of each horn.

#### A. The First Horn of the Dilemma

In Aristotle’s eyes, the first horn is a complete nonstarter. He offers no further argument against it here, but is content to stand on the assertion that error is, in fact, prevalent. Aristotle is not always so complacent.<sup>23</sup> But

<sup>21</sup> Socrates elaborates these ideas (on Theaetetus’ behalf) throughout 151E – 160E; but the thesis that knowledge is perception occurs first at 151E; the thesis that all appearances are true at 152BC; and the “Secret Doctrine” at 152D ff.

<sup>22</sup> M. F. Burnyeat, *The Theaetetus of Plato* (Indianapolis 1990), pp. 7-65.

<sup>23</sup> In *Metaphysics* 4.5, for example, Aristotle recognizes that some sort of rebuttal may be felt necessary, even though proof in the strict sense is impossible over so fundamental a principle.

psychology is not the place for such arguments. Error is a datum that must be accounted for if a theory is to count as a *psychological* theory at all. In all fairness, then, his own theory must be measured against this desideratum, too. Aristotle cannot afford to be smug if he cannot solve the problem himself. (See Section V below.)

The difficulty is in seeing how the conclusion that all appearances are true could follow. By itself, the thesis that (1) thinking and perceiving are the same sort of process hardly implies infallibility. But (2), the thesis that thinking and perceiving are bodily processes, is not of much help either. It is unclear (to say the very least) how the corporeality of a process could imply its infallibility. The author of the *Phaedo* would certainly reject such an inference, and it is hard to see how Aristotle could allow it either: he takes many corporeal processes to be subject to error. It is rather (3), the thesis that one thinks and perceives like by like, that leads to the dilemma. For when the Presocratic citations are taken in context, it is evident that ‘perceiving’ and ‘thinking’ do not stand for two isolated processes, but rather *all* mental states; and understood as a general thesis, (3) leaves very few alternatives.

The reason is that (3) runs together two issues which are rarely distinguished in ancient discussions – indeed, one upshot of *De anima* 3.3 is precisely that a successful psychology must distinguish them. For the claim that one knows “like by like” addresses two quite different questions: first, how a certain mental state is *brought about*; and second, what the resulting state *is* about, i. e., what its *content* is. An object is known *because* it interacts with something in the subject “like” itself.<sup>24</sup> A mental state will consequently be about what brings it about. That (3) is, in part, a thesis about content is usually masked by the emphasis given to the causal half of the story, which is often quite elaborate. On Empedocles’ view, for example, a person sees a fire when effluences of fiery material flowing from a fire find their way into the eye and meet the fiery material enclosed there (*apud* Theophr., *De sens.* 7-8, 500.19-501.11 Diels *Doxogr.*; = DK 31 A 86). The resulting state comes about because like *affects* like. But what determines the content of this state – what makes it a case of seeing *the fire* – is that there is actually something present in the eye exactly like this original cause. ‘Content’ is no metaphor here. A mental state, on Empedo-

<sup>24</sup> Presumably, ‘like’ here means *exactly* similar. If ‘like’ only meant similar *in some respect or other*, the thesis would become hopelessly trivial. Given that any pair of items will be similar in some respect or other (cf. Plato, *Prot.* 331D), the thesis would apply indiscriminately to any case imaginable and so would remain true regardless of the theory one adopts.

cles' view, is about *X* only when something like *X* is *contained*, literally, inside of us. So literal a conception is not necessary to (3). But it displays vividly the role that content plays in it.

(3) thus marries content to cause. A mental state arises whenever an object interacts in the appropriate way, specifically when like affects like; and the resulting mental state will be about its cause. We can therefore reformulate (3) in terms of the following two subtheses:

- (3a) One perceives or thinks whenever like is affected by like
- (3b) Whatever one perceives or thinks on a given occasion corresponds exactly to whatever brings that state about.

In general, someone who accepts (3) will tend to hold (3b) *because* he accepts (3a), because there is something like in the subject. But considered in themselves, (3a) and (3b) are logically independent of one another – it is possible to accept one without being committed to the other. Someone might, for example, reject (3a), while accepting (3b) on other grounds; in fact, on Aristotle's interpretation, that is exactly Anaxagoras' position (see p. 35 below). This option is significant. For from (3b) alone, it trivially follows that

- (4) Whatever one perceives or thinks on a given occasion corresponds exactly to something in the environment.

since, of course, a cause must exist, if its effect does; and, on Aristotle's view, they will exist at the same time as well.<sup>25</sup> Such correspondence, though, clearly precludes error, (despite a certain vagueness in the phrase 'what a subject perceives or thinks').<sup>26</sup> Propositional attitudes, such as *believing that p*, will be brought about by that very state of affairs, *p*; while nonpropositional attitudes, such as *thinking about X* or *desiring X*, will be brought about by that stuff, property, or individual, *X*. The content of these states cannot diverge from reality. If this thesis applies to all mental states, error will be impossible.<sup>27</sup> (3), that is, would imply that

<sup>25</sup> The functioning of the agent and the patient occurs "at the same time" (ἐμα, *De an.* 3.2, 425b31, 426a17-19; *Phys.* 3.2, 202a6-7; cf. *Metaph.* 9.8, 1050a28-29).

<sup>26</sup> Aristotle himself has grave doubts about how far Empedocles' theory can be extended beyond the case of perceiving simple materials – in particular, whether his theory can handle familiar composite objects such as humans, not to mention nonsensible properties such as goodness (*De an.* 1.5, 409b26 – 410a23).

<sup>27</sup> This conclusion follows straightforwardly for nonpropositional attitudes and for assertive propositional attitudes. Negative propositional attitudes are no difficulty either, if defined in terms of assertive propositional attitudes: if, for example, *denying that p* is construed as *believing or asserting that not-p*. Similarly, the absence of an assertive propositional attitudes, such as *not believing that p*, should not be a problem either. But what we might call "neutral" propositional attitudes, such as *entertaining the thought*

- (5) All appearances are true

just as the first horn of the dilemma states. One cannot accept a completely general reading of (3) *and* hold that error is possible, on pain of contradiction.

To allow for the existence of error, then, an adherent of (3) must restrict its scope. The only way to do this, while preserving the general character of the thesis, would be to say that (3) applies to all and only *veridical* mental states: in that way, it can apply within every *type* of mental state without necessarily applying to every *token* of every type, thus leaving room for nonveridical states. On this reading, the implication of (5) from (3) is no longer a liability. For once we have added the restriction to veridical states, (5) only amounts to the tautology that all *veridical* appearances are true. In fact, (3b) even offers a natural explanation of why these states are veridical. Naturally, there is a tradeoff. The proponent of this restricted version of (3) no longer has a fully general explanation of *content*, which (3) used to provide, so there is a lacuna in his story that needs to be filled. He cannot explain the content of the remaining states through the interaction of likes without falling back on the first horn. Consequently, provided that these states occur as the result of *some* sort of interaction, it follows that they must be due to the interaction of *unlikes* – just as Aristotle says in the second horn.<sup>28</sup> The dilemma Aristotle invokes is thus a genuine one, brought about by thesis (3), that like is known by like, when this is understood as a thesis about mental states *in general*.

## B. The Second Horn of the Dilemma

Unlike the first horn, Aristotle cannot just rule the second one out as absurd. It acknowledges the existence of error and attempts to account for it, and so

*that p* or *considering whether p is the case or not* seem to pose more of difficulty, at least if we try to preserve the intuition that we are free to hold such attitudes independently of what is the case in reality. If, however, someone is committed to (4), then to remain consistent he will just have to bite the bullet and conclude that one *cannot* entertain what is not the case.

<sup>28</sup> Empedocles, it appears, may have endorsed this second horn. Theophrastus, at any rate, reports that he took "ignorance to be by unlikes" (τὸ δ' ἀγνοεῖν τοῖς ἀνομοίοις, *De sens.* 10, 502.7-9; 23, 506.10-12 Diels *Doxogr.*). The switch from 'error' to 'ignorance' may not be of any significance. Themistius, for example, shifts indifferently between the two in setting up the dilemma (ἐξαπατᾶσθαι, *In De an.* 87.33, 88.5 and 7; ἀγνοεῖν, 88.1, 3, and 4). But for Aristotle it would make a difference, since he clearly distinguishes between the two himself, *Metaph.* 9.10, 1052a2; cf. *De long. et brev. vitae* 2, 465a21-23.

satisfies Aristotle's desideratum for psychological theories. If he rejects it, it can only be because he believes it to be false; and that requires argument. All he offers is the following highly compressed objection:

But both error and knowledge of contraries seem to be the same. (427b5-6)

This is not Aristotle's own view, of course – it is extremely unlikely he believes any instances of error and knowledge are the same – but something he takes to follow from the second horn of the dilemma. So understood, his argument constitutes a simple *reductio ad absurdum*: if error were due to the interaction of unlikes, then error and knowledge *would* coincide in the case of contraries; but error and knowledge never coincide; therefore, error cannot be due to the interaction of unlikes.

The difficulty, of course, lies in the first inference. How, given this model of error, could error and knowledge coincide? Knowledge always involves a pairing of likes on this account, error a pairing of unlikes. But such pairings never coincide, even when we consider contrary objects: neither  $A:A$  nor  $B:B$  coincides with either  $A:B$  or  $B:A$  (where 'A' and 'B' designate contraries). As it stands, the second horn of the dilemma remains unscathed.

Charity requires us to look for a reconstruction that gives Aristotle a valid argument. Modern commentators such as Hicks and Ross have been tempted to add a premise which Aristotle shares with the Academy, namely, that "the knowledge of contraries is the same" – i. e., that both members of a pair of contraries always fall within a single subject-area, since both belong to a single genus.<sup>29</sup> But as this gloss makes clear, the reconstruction appeals to a different sense of ἐπιστήμη. The opening of *De anima* 3.3 is not concerned with knowledge as a subject-area (i. e., *scientia*, *Wissenschaft*), but as a kind of mental act. It is only in this second sense that specific cases of knowledge can be meaningfully contrasted with specific cases of error.

To obtain the requisite sense, we need a slightly different claim, such as we find in *Nicomachean Ethics* 5.1, when Aristotle asserts that "a contrary

state is often recognized *from* its contrary," as happens, for example, when we realize what it is to be out of shape by looking at someone who is in shape (1129a17 ff.; cf. *De an.* 3.6, 430b21-24). The position is also elaborated early in the *De anima*:

One part of the contrariety is sufficient to discriminate both it and what corresponds to it. For by means of the straight we recognize both it and the curved – for the carpenter's rule is a standard for both, whereas the curved is not [a standard] either for itself or for the straight. (*De an.* 1.5, 411a3-7)

For Aristotle's purposes, a single counterexample will do.<sup>30</sup> Once this is added as a tacit premise – e. g., that we know the unhealthy by means of the healthy – then his *reductio* is valid. Since it involves an interaction of unlikes, on his opponents' view it will also be a case of error. But then it follows that it is both a case of knowledge and a case of error, which is absurd. One of the premises must be rejected.

Aristotle's opponents are free, of course, to deny the premise which has been smuggled in. But Aristotle would not be troubled over it. He often judges theories on grounds his opponents might deny, if he thinks these grounds are independently reputable – to save a position by denying such evidence would be eristical, and Aristotle has little patience for it. His *reductio* is therefore not intended to be *ad hominem*, but such as a reasonable judge would accept.

His counterexample has further significance, though. For it shows that Aristotle, if faced with the dilemma himself, could not accept the second horn. And this is critical, since, as we shall see below, he *is* confronted with a form of the dilemma. He will therefore be driven towards the first horn, something he considers anathema. The problem of error thus constitutes the real challenge for him.

#### IV. The Thesis that All Appearances are True

It should be clear from the previous section that Aristotle overstates his case somewhat in *De anima* 3.3. Though genuine, the dilemma does not follow from the original premise

- (1) Thinking consists in the same kind of process as perceiving

by itself, but rather from one of the premises he offers in its support, namely,

<sup>30</sup> It thus makes no difference, as commentators since Simplicius (*In De an.* 72.24 – 73.1) have pointed out, that this claim holds mostly for privations, and not contraries or contradictories in general.

<sup>29</sup> R. D. Hicks, *Aristotle, De anima* (Cambridge 1907), p. 455 *ad loc.* and W. D. Ross, *Aristotle, De anima* (Oxford 1961), pp. 284-85 *ad loc.* Hicks cites the following passages for this doctrine: *Anal. Pr.* 1.1, 24a21; 1.36, 48b5; *Top.* 1.14, 105b5 f., b23 f.; *Phys.* 8.1, 251a30; *Metaph.* 996a20 f.; *Eth. Nic.* 5.1, 1129a13 f. The first passage from *Topics* 1.14 suggests that the same doctrine should also be extended to sensation, by which Aristotle presumably means that contrary sense qualities fall within the range of a single sense modality (as, e. g., sweet and sour both belong to the sense of taste): *De sensu* 7, 447b26-29; cf. *De sensu* 6, 445b20-29; *De an.* 2.11, 422b23-32.

The ancient commentators also seem to have assumed that something like this underlies Aristotle's argument: cf. Themistius' baroque reconstruction (*In De an.* 88.4-8) and Ps.-Philoponus' more fumbling one (*In De an.* 490.5-10).

- (3) One thinks and perceives like by like.

If (3) is taken as a general thesis, applying to mental states of all types, the dilemma follows straightaway. In particular, the first horn of the dilemma,

- (5) All appearances are true

follows if (3) is taken as a completely general thesis applying to every token mental state. Consequently, it may be possible to avoid the dilemma while continuing to maintain (1), provided that one rejects (3). But, as Aristotle well knows, some of his predecessors *do* accept (1) while rejecting (3). So the crucial question is whether on *their* version of (1) they are free of the dilemma, or whether in some form they are still subject to it.

In *Metaphysics* 4.5, Aristotle goes some of the way towards closing this loophole. He offers a different argument for why his predecessors are committed to (5) that crucially does *not* appeal to (3):

In general, it is *because* they suppose (i) perception is thought and (ii) this is alteration, that they say (iii) perceptual appearance is of necessity true. For these reasons Empedocles, Democritus, and virtually all the rest have been committed to such views. (*Metaph.* 4.5, 1009b12-17)

Here Aristotle argues for a conclusion about perceptual appearances from more general principles about thought and alterations. If perception is a kind of thought (φρόνησις) – as Aristotle thinks his predecessors believe – then whatever holds of thought in general will apply to perception as well. But, Aristotle claims, all his predecessors take thought to be a type of alteration (ἀλλοίωσις).<sup>31</sup> So they are committed to the conclusion that perception is a kind of alteration as well. But *that*, Aristotle suggests, implies that all perceptual appearances are true.<sup>32</sup>

<sup>31</sup> Aristotle cites quotations from Empedocles, Parmenides, Anaxagoras, and Homer that all speak of thought in this way (1009b17-31). As for Democritus, Theophrastus records that “he seems to have fallen in line with those who analyze thinking completely in terms of alteration, which in fact is the oldest doctrine, since all the ancients, both poets and wise men, explain thinking in terms of one’s condition” (*De sens.* 72, 520.13-16 Diels *Doxogr.*).

<sup>32</sup> I assume here that Aristotle is not offering a merely psychological explanation for his predecessors’ statements, but a logical analysis of their commitments. This presupposes, in turn, that Aristotle takes the explanation offered to constitute a *valid* argument for their position, even if he thinks it is unsound. If he thought their reasoning was invalid, he would have offered an explanation of what misled them.

Alexander of Aphrodisias, we may note, reconstructs the argument very differently. The central mechanism of the argument in his view turns not on alteration, but on an auxiliary assumption not in the text, namely, that φρόνησις is always correct (*In Metaph.* 306.6, 11, 16-17, 307.12). But this would make the argument turn on a very questionable point. For while cognates of φρόνησις do occur in most of the passages he cites, they are plainly not used in the technical Aristotelian sense Alexander is relying on: Homer is explicitly referring to delusional states and Empedocles to dreams (on the context of the latter, see n. 14 above). In addition, Alexander ignores an explicit premise

This last move, on the simplest and most plausible reconstruction, is an inference *a fortiori* from a more general principle: if thought is an alteration, then *all* appearances related to it are true. If that is right, then we can reformulate the argument in terms of our previous discussion. Aristotle believes “virtually of all his predecessors” are committed to the following two premises:

- (1) Thinking consists in the same kind of process as perceiving  
and

- (6) Thinking and perceiving are both alterations.

But from these two premises, he thinks, it follows that

- (5) All appearances are true

in line with the first horn of the dilemma in *De anima* 3.3. The arguments are broadly similar. But their differences are instructive.

Aristotle’s argument here has much wider scope. Instead of (2) and (3), which require cognition to be a bodily process of like by like, Aristotle now appeals to the much broader premise (6). This allows him to include other philosophers who would have rejected (2) or (3) or even both, like Anaxagoras: on Aristotle’s interpretation, Anaxagoras takes thought to be entirely incorporeal, against (2);<sup>33</sup> while Theophrastus repeatedly cites him as making cognition due to the interaction of *unlikes*, against (3).<sup>34</sup> To Aristotle’s mind, then, the problem has *nothing to do with whether cognition is a bodily process or not*. Nor does it depend on the details of “like by like” theories. All that is required is that a theory make thinking and perceiving “alterations”; and if it does, Aristotle claims, it will be unable to explain error.<sup>35</sup>

If Aristotle’s criticism is to be interpreted charitably, ‘alteration’ or ‘ἀλλοίωσις’ should not be taken here in the technical sense it has in his own theories, of a change in the category of quality (κίνησις κατὰ τὸ ποιόν),<sup>36</sup>

in favor of a tacit one. He has almost no use for Aristotle’s emphasis on alteration, even though it is alteration that features in each of the citations Aristotle gives, not infallibility.

<sup>33</sup> This, at any rate, is how Aristotle interprets Anaxagoras’ remarks that intellect is “simple, unmixed, and pure” (*De an.* 1.2, 405a16-17; cf. 3.4, 429a18) and has “nothing in common with anything” (*De an.* 1.2, 405b21; 3.4, 429b24).

<sup>34</sup> *Apud* Theophr., *De sens.* 1, 499.3-4; 27, 507.7-8; 29, 507.21-23; 31, 508.5-8 Diels *Doxogr.* Theophrastus also seems to think that Heraclitus and perhaps Democritus rejected (3) as well: *De sens.* 1, 499.3-4 and 49, 513.10-16 Diels *Doxogr.*, respectively.

<sup>35</sup> Another difference between these arguments is that the one offered in *Metaph.* 4.5 is not dilemmatic. But this is natural, if the thesis about alteration is construed as applying to all token mental states. See p. 37 below.

<sup>36</sup> *Categ.* 14, 15b12; *Phys.* 5.2, 226a26; 7.2, 243a36-38; *De gen. et corr.* 1.4, 319b33; *Metaph.* 12.2, 1069b9-12; 14.1, 1088a32. Cf. *De gen. et corr.* 1.2, 317a27; 1.5, 320a14.



since the nature of alteration is a matter of dispute among these thinkers – Democritus, for example, will recognize only spatial changes, explaining other “changes” in terms of them. The sense of ‘ἀλλοίωσις’ therefore should be broader, along the lines suggested by its etymology: it is a process of coming to be *in a different state* (ἀλλοίως). But in this sense, it seems extremely difficult to deny we undergo alteration when we come to have a mental state; and equally hard to see why Aristotle should think such a process would always be veridical. Is this all he thinks his opponents are claiming?

Probably not. When Aristotle explains how Empedocles and Parmenides appeal to alteration, he stresses that this change determines *what* a person experiences. It determines, that is, the *content* of the resulting mental state:

For Empedocles says that, because they change their state, their thinking changes – “for mens’ insight increases in relation to what is present.” He also says elsewhere that “to the extent they develop in different sorts of ways (ἀλλοίως), to that extent, too, thinking continually presents different sorts of things (ἀλλοῖα) to them.” Parmenides also makes the same sort of claim: “for in just the way one has a tempering on each occasion of much-wandering limbs, in that way too is thinking present to men, since that which thinks – i. e., the constitution of the limbs – is the same for each and every man. For what exceeds is a thought.” (*Metaph.* 4.5, 1009b17-25)

The passage from Parmenides also occurs in Theophrastus, who brings out the parallel still more clearly: because thought depends on the balance of the elements, “whenever the hot or the cold preponderates, thought comes to be *different*” (ἄλλην . . . τὴν διάνοιαν, *De sens.* 3, 499.14-16 Diels *Doxogr.*). The connection between alteration and content also explains why Homer is relevant. For he says, in a line not extant in the text which has reached us, that when Hector had been “knocked out of his senses by a blow, he lay there thinking in a *different* fashion” (ἄλλοφρονέοντα, *Metaph.* 4.5, 1009b29-30), a point on which Democritus seems to have voiced his approval.<sup>37</sup> For these theorists, then, alterations in the body determine the content of one’s mental states.<sup>38</sup> If Anaxagoras also belongs here, as

Theophrastus seems to use ‘alteration’ in a even more restricted sense, for the interaction of unlikes *in contrast with* the interaction of likes (*De sens.* 2, 499.7-9; 49, 513.11-12 Diels *Doxogr.*).

<sup>37</sup> Democritus is reported to have said (λέγει) that ‘Homer put it correctly’ (καλῶς ποιῆσαι τὸν Ὅμηρον, Aristotle *De an.* 1.2, 404a26-30) and that the ‘ancients surmised correctly’ (καλῶς τοῦθ’ ὑπολαβεῖν, Theophrastus *De sens.* 58, 515.25-26 Diels *Doxogr.*) when Homer said that Hector lay ‘thinking other thoughts.’

<sup>38</sup> The notion of determination is also stressed by the ancient commentators. Alexander represents Parmenides as holding that thinking is “consequent (ἀκολουθοῦσης) on the temperament and state of the body” (*In Metaph.* 306.31-33) and “depends (ἡρτημένον) on the bodily temperament” (307.1-3). Similarly, Asclepius twice frames Empedocles’ view using the title of Galen’s treatise ‘That the powers of the soul follow the temperament of the body’ (*In Metaph.* 277.8, 16).

Aristotle seems to think (1009b26-28), then the point should be extended to alterations in general, *whether* or not they are bodily.

This hardly solves our problem, though. Determining the content of a mental state clearly does not guarantee its truth. Ingesting hallucinogens alters the content of one’s mental states, but it would be preposterous to think those states were *eo ipso* true; and the same goes for dreams and delusory states, the subject of the citations from Empedocles and Homer. Perhaps Aristotle’s thought is this. His overall concern is whether error is possible on his predecessors’ theory of content – or, at any rate, on such theory as he thinks available to them. But it is not enough for a theory of content to say *that* a mental state with a particular content results from a particular alteration, without also saying something about *why* that kind of alteration is connected with that kind of content. And on his predecessors’ view, there are precious few options. The trouble is not that they appeal to alteration to explain the occurrence of a mental state, but rather that there is *nothing else* which they invoke that *could* explain the content of that state.

There seem to be two quite general strategies such a theorist could adopt. First, he might hold a trimmed down version of the view attacked in *De anima* 3.3, by opting for just (3b), the thesis that a mental state is about the cause that brings it about. This principle, after all, is common to both Empedocles’ and Anaxagoras’ theories, in spite of their differences over (3a), the principle that like is *affected* by like. Because he rejects (3a), Anaxagoras cannot endorse (3), the thesis that like is *known* by like. But that is entirely compatible with his accepting (3b), which says nothing about the specific processes involved. And (3b), when taken as applying to all token mental states, is sufficient to imply (5), the thesis that all appearances are true, as we have seen.

An adherent of (6) might, on the other hand, pursue a different line instead, and hold that the relation between a given kind of alteration and a given kind of content is just a brute fact, not capable of further explanation, however regular the connection between the two. Democritus appears to hold such a view concerning sensation. He takes pains to describe the correlations between the atomic features of various stimuli and the perceptual experiences that result. But the qualities we experience, on his view, are not part of the external world: the way things seem is quite different from the way they are in actual fact.<sup>39</sup> Aristotle vacillates when he charac-

<sup>39</sup> See Theophrastus *De sens.* 60-67, 516.13-519.4 and 73-78, 520.24-522.25 Diels *Doxogr.*, in particular Democritus’ claim that, apart from weight and hardness, “none of the other perceptibles has a nature (φύσιν), but all are affections (πάθη) of perception when undergoing alteration, from which appearance arises” (63, 517.7-10).

terizes this sort of antirealism, sometimes describing it as committed to the thesis that *every* appearance is true, at other times as committed to the thesis that *no* appearance is.<sup>40</sup> But it may not matter which characterization we prefer. For Aristotle, what is significant is that on this view all perceptual experiences are *on a par* as regards the truth. It doesn't matter whether you label them 'true' or 'false': differences over the nature of the external world only affect the valence, so to speak, of mental states. They do not provide a distinction *among* mental states, between the true and the false. And in that context, 'error' is no longer a meaningful term. There cannot be *deviations* – 'error' in its etymological sense – unless there are true mental states *as well as* false ones; and that requires that we have *some* grip on reality, without our being too tightly bound to it. Error is impossible on such a theory, even if it claims that all appearances are *false*.<sup>41</sup>

Aristotle's point, then, may be summarized as follows. The problem with his predecessors' accounts is *not* that they are materialists. According to Aristotle, Anaxagoras is not a materialist, and yet he is still saddled with the difficulty. Nor is it that his predecessors explain the *occurrence* of mental states in terms of change. No one could avoid doing that. It is that they offer no account of the *content* of such states that goes beyond this simple causal interaction. If, on the one hand, the content of a mental state always corresponds to its cause, error will be impossible. On the other hand, if the content of a mental state is not explicable in terms of its causes at all, we lose error again, Aristotle seems to say. For error to be possible, content must bear *some* relation to cause. But it must be possible for *content and cause to diverge*. The relation between a mental state and what it is about cannot be simply identified with the relation between an effect and its cause.

<sup>40</sup> In *Metaphysics* 4.5, for example, Aristotle says that Democritus thinks "*nothing* is true, or at any rate [that everything is] unclear to us" (1009b11-12) and then, just a few lines later, that Democritus is committed, along with Empedocles and "practically all the others," to the position that *every* appearance is true (1009b15-17). In the *De anima*, Aristotle repeats this second characterization and again alludes to Homer's line about Hector's "thinking differently" (1.2, 404a27-31).

The confusion may be due to Democritus himself – Theophrastus, at any rate, criticizes him for making both of these statements: *De sens.* 69, 519.19-22 Diels *Doxogr.*

<sup>41</sup> In this respect, the logic of 'error' and 'falseness' are different, since the former, but not the latter is privative. Not all contradictories are privative terms; nor is it even always the case that one member of a contradictory pair is a privative term. In order for a contradictory  $\sim C$  to be privative, its contradictory  $C$  must be not merely conceptually prior to  $\sim C$ , but existentially prior as well: it must be impossible for there ever to be instances of  $\sim C$  unless there is at some point an instance of  $C$ , but not vice versa.

## V. Aristotle's Dilemma

Aristotle does not mention his predecessors out of some quaint reverence from the past. Here as elsewhere, it plays a crucial role in his methodology. He begins with his predecessors because he believes there must be something right in what they say – their persuasiveness could not have been purely rhetorical. But to find out what is worth holding on to, one has to apply criticisms to etch away untruth and misconception; and what remains, ideally, will be the outlines of truth. Working from that basis, Aristotle thinks, it should be possible to resolve the difficulties faced by earlier theories.<sup>42</sup>

The question naturally arises, then, as to how he fares on his own standards. For Aristotle can reasonably be interpreted as committed to the problematic theses (1), (3), and (6); and if so, we can justly ask whether he is committed to (5), the thesis that all appearances are true. His commitments to (1), (3), and (6) are admittedly qualified in various ways. But these qualifications do not free him from the main difficulty. The problem Aristotle raises for his predecessors is a problem for himself as well.

To begin with, he is clearly committed to a version of thesis (1). For, whatever their differences, Aristotle thinks sensation and conception have similar accounts of content: "the intellect is related to the objects of conception in just the same way as what can sense is related to the objects of sense" (*De an.* 3.4, 429a16-17). As we have seen, this is just the point that leads to difficulty; and it is not ameliorated by the various disanalogies Aristotle finds between sensation and conception. In particular, it makes no difference that conception is not the activity of a bodily organ (*De an.* 3.4, 429a18-27; *De gen. anim.* 2.3, 736b28-29), against thesis (2). As we have seen, incorporeality does not explain how error is possible.

Aristotle also endorses a version of (3), the thesis that one senses like by like, in *De anima* 2.5. He thinks that theorists like Anaxagoras are right only to this extent: the sense must *initially* be unlike the object in actuality, if they are to interact at all.<sup>43</sup> But, in Aristotle's view, the sense must also be potentially like the object at the outset; and during sensation it becomes like the object in actuality as well (417a18-20, 418a3-6; 3.2, 425b22-23). He thus only rules out versions of (3a) that demand actual likeness at the

<sup>42</sup> For the classic account of Aristotle's methodology, see G. E. L. Owen, "*Tithenai ta phainomena*," in S. Mansion (ed.), *Aristote et les problèmes de méthode* (Louvain 1961), 83-103.

<sup>43</sup> *De an.* 2.5, 417a1-2 alludes to Aristotle's discussion and resolution of this difficulty at *De gen. et corr.* 1.7.

beginning. The likeness that occurs during sensation, moreover, shows that he is fully committed to (3b): sensation, for Aristotle, is clearly about its cause. The account of conceiving in *De anima* 3.4 is framed in similar terms (429a13-18). At the outset, the conceptual capacity is like its objects only in potentiality (429a16, a24; cf. 3.8, 431b22-28); but during conception it becomes like its object in actuality (430a3-5; cf. 3.8, 431b28-29), as a result of the object's acting on it (429a14; cf. *Metaph.* 12.7, 1072a30). In both sensation and conception, then, content and cause coincide. All Aristotle rejects is a version of (3a). So long as these states are about what brings them about, the relevant "appearances" will always be true.

The same result follows from Aristotle's commitment to (6) as well. His hesitation over describing sensation and conception as alterations<sup>44</sup> is entirely due to his technical usage of 'alteration.' In the broader sense of the word at issue in (6), he remains vulnerable to the same difficulties as his predecessors. Sensation cannot be classed as an alteration in the technical sense because it is not a change *away from* a thing's nature to something of a different sort (ἄλλοιός). It is rather a "progression *towards* itself and *towards* realization" (εἰς αὐτὸ γὰρ ἡ ἐπίδοσις καὶ εἰς ἐντελέχειαν, *De an.* 2.5, 417b6-7), a nuance that has significance for Aristotle's philosophy of mind, especially the metaphysics of cognition. *But it does not affect the question of error at all.* Aristotle's criticism of his predecessors has nothing to do with whether alteration is a change away from a thing's nature. It turns instead on whether an account of *content* based solely on alteration has any basis for differentiating between veridical and nonveridical states. "Progress towards one's realization" does no better in its place. So long as the content of this realization *always corresponds to its cause*, his account leaves no room for error.

Aristotle, we should note, does not shrink from the consequences either. In effect, he concedes the first horn of the dilemma *with regard to the most basic forms* of perception and thought, namely, *sensation and conception*. On his view, neither sensation nor conception is susceptible to error: both are infallible.<sup>45</sup> Whenever these abilities function, they count as a success –

<sup>44</sup> In fact, Aristotle gives a range of possible answers to the question of whether sensation is an alteration: (1) he classifies it as a "kind of" alteration (ἀλλοιώσις τις, *De motu anim.* 7, 701b16; *De insomn.* 2, 459b4); (2) he suggests that "either it is not an alteration or it is a different type of alteration" (ἢ ἕτερον γένος, *De an.* 2.5, 417b6-7, b14-15); and (3) he denies outright that it is alteration (*De an.* 3.7, 431a6). With regard to conception, he shows similar hesitation: if conception is similar to sensation, he reasons, it will either consist in the object affecting it "or something else like that" (τι τοιοῦτον ἕτερον, *De an.* 3.4, 429a13-15). *None of these differences affect the argument above.*

<sup>45</sup> For the sensation of proper perceptibles (ἴδια αἰσθητά): *De an.* 3.3, 427b12; also 2.6, 418a11; *De sens.* 4, 442b8-10; *Metaph.* 4.5, 1010b2-3. Cf. *De an.* 3.3, 428a11; 3.4,

they either work or not at all. To use Aristotle's metaphor, they are like "making contact" (θιγγάνειν, *Metaph.* 9.10, 1051b24-25). In the case of sensation, he explicitly endorses a version of (3b): the object of a given act of sensation must exist (*De an.* 2.5, 417b24-26). There *is* a sense, then, in which all appearances are true for Aristotle: *all those appearances*, namely, *that arise from sensation and conception*, the most basic operations of perception and thought.

The restriction makes all the difference. If Aristotle thought *all* cognitive functioning could be explained in terms of these two states – if, that is, he accepted (3b) as a completely general thesis, as he believes his predecessors did – he would be committed to the first horn of the dilemma in its full scope. But if (3b) holds only for certain types of mental states and not for others, he can evade the disastrous consequences of this horn. (Aristotle cannot accept the second horn for other reasons, as we have seen above: cf. p. 33.)

But Aristotle clearly does *not* think every kind of mental state can be explained on the same model as sensation and conception. Virtually all mental states and processes operate differently on his view. Imagination, association, memory, expectation, reasoning, deliberation, desire, action, the passions, and dreams all require the operation of another mental state Aristotle calls "phantasia."<sup>46</sup> And this, he goes on to argue in the bulk of *De anima* 3.3, cannot be identified with either sensation or conception, or understood on their model. Phantasia and all of the states just mentioned, in contrast, can be at variance with reality.

Nor does the simple causal model apply to most of what we would call thought. Any thought that involves predication, not to mention negation and inference, already goes beyond the most basic operation of the intellect, the conception of simple uncombined concepts. Only the latter kind of thought is infallible; the rest admits of truth and falsehood (see n. 45 above). Aris-

430b29. (Regarding his apparent hesitation at *De an.* 3.3, 428b18-19, see below p. 53.) For the conception of in-composites and indivisibles: *De an.* 3.6, 430a26-27, b27-28; *Metaph.* 9.10, 1051b15-32; 1052a1-4. Cf. *De interp.* 1, 16a9-13.

<sup>46</sup> Imagination (in the sense of visualization): *De an.* 3.3, 427b17-20. Association: *De mem. et remin.* 2, 451b10-452b7, 453a4-31. Memory (including merely seeming to remember and doubting one's memory as well as remembering): *De mem. et remin.* 1, 450a10-13, a23-25, 451a14-17; *Rhet.* 1.11, 1370a29-30. Expectation: *Rhet.* 1.11, 1370a29-30; 2.5, 1383a17-19. Reasoning: *De an.* 3.3, 427b15-16; 3.7, 431a14-17, b2; 3.8, 432a8; *De mem. et remin.* 1, 449b31. Deliberation: *De an.* 3.7, 431b6-8; 3.11, 434a7-10. Desire: *De an.* 3.10, 433b10-12, b27-29; *De motu an.* 8, 702a18f. Action: *De motu an.* 8, 702a15-21. Passions: *Rhet.* 2.5, 1382a21-22, 1383a18-19; 2.6, 1384a22; cf. *De motu an.* 8, 702a18; 10, 703b18f. Dreams: *De insomn.* 1, 459a18-21; 3, 462a16, a29-31.

tote is thus justified in *De anima* 3.3 when he distinguishes sensation from thinking in the broad sense (φρονεῖν) on account of error (427b6-14). All thought, moreover, requires the functioning of phantasia.<sup>47</sup>

Not even all perception can be explained by this simple causal model. On Aristotle's view, the ordinary recognition and categorization of physical objects as such is quite distinct from sensation in its most basic form. Although the odor or color of a flower can affect our senses *per se*, the flower cannot *as a flower* (*De an.* 2.6, 418a23-24) and so is perceived only "incidentally" (κατὰ συμβεβηκός, 418a9). Commentators rightly assume that this form of perception requires the cooperation of other cognitive functions: memory and association at the very least, and in the case of humans, also concepts, language, and inference on occasion;<sup>48</sup> and all of these processes presuppose phantasia. Our ability to estimate perceptual magnitudes – "that by which one discriminates the more and the less" (ὃ κρίνει τὸν πλείω καὶ ἐλάττω) – also goes beyond the simple mechanisms of sensation and depends crucially on phantasia (*De mem. et remin.* 1, 450a9-12; 2, 452b7 – 453a4). But this ability is an integral part of the perception of common perceptibles, something that becomes especially clear if we consider the errors to which such perception is prone, such as Aristotle's favorite example of the sun's looking a foot across. In general, to the extent that these higher forms of perception are susceptible to error (*De an.* 3.3, 428b19-25), the involvement of phantasia seems presupposed (*De insomn.* 1, 458b25-33; 2, 460b18-20; cf. *De an.* 3.3, 428b2-4).<sup>49</sup>

Aristotle thus has the means for evading the dilemma. By construing 'perceiving' and 'thinking' more narrowly than his predecessors, he leaves room for error; and by invoking a new mental state whose content *can* be false as well as true and used in other mental states, he provides a basis for

explaining error – and content – quite generally.<sup>50</sup> All of this assumes, of course, that phantasia is not like Molière's *virtus dormativa*, just a problem redescribed as a solution. Aristotle must be able to offer a positive account of what phantasia is and show that it is not subject to the same difficulties as sensation and conception.

Such an account must precede his account of thought, moreover. For while the most basic form of perception might plausibly be discussed in isolation from other mental states, no form of thought could. Even in its purest function of conception, thought depends on a wide range of cognitive states, including higher perceptual functioning, memory, and imagination; and all of these presuppose phantasia. The connection is closer still. According to Aristotle, the content of the most basic thought *depends* on the content of phantasia, even though they are not identical (see below, p. 52). He cannot discuss any form of thought, then, until he has successfully completed his account of phantasia.

## VI. Distinguishing Capacities

For this strategy to work, Aristotle must show (1) that phantasia cannot be identified with either sensation or conception, and (2) that its content is to be explained differently. The two remaining sections of *De anima* 3.3 do precisely that.

In the long middle section (427b6-428b9), Aristotle offers a battery of arguments designed to show that phantasia is distinct from sensation and thought, even when one allows for differences over what constitutes "thought." Specifically, he argues it differs from

- a) sensation (428a5-18)
- b) conception (428a17)
- c) knowledge (428a18)
- d) belief (427b16-24, 428a18-24), and
- e) a complex of belief and sensation (428a24-b9),

the last being Plato's own suggestion (*Soph.* 264AB; cf. *Tim.* 52A). If phantasia were identical with any of these, it might well be saddled with the dilemma. By demonstrating that it is not, Aristotle clears the first hurdle.

Outside of this chapter, he is willing to go even further. In *De anima* 3.9, he makes the universal claim that the capacity for phantasia "differs in being from all the other [parts of the soul]" (ὁ τῷ μὲν εἶναι πάντων

<sup>47</sup> *De an.* 3.7, 431a14-16, b2; 3.8, 432a7-14; *De mem. et remin.* 1, 449b31. Although Aristotle does not restrict the extension of these remarks, they cannot be perfectly general given his account of God's thought in *Metaphysics* 12.7 and 9. Without a body, at any rate, God could not possess phantasia (cf. *De an.* 1.1, 403a8-10).

<sup>48</sup> See references in n. 8, p. 158 of S. Cashdollar, "Aristotle's Account of Incidental Perception," *Phronesis* 18 (1973), 156-75. Against earlier commentators, Cashdollar insists that the involvement of other mental processes does not compromise incidental perception's status as perception: cf. 158-60, 165, and esp. 169. Further references can be found in Modrak, *Aristotle: The Power of Perception* (see n. 1 above), pp. 69-70, esp. n. 39, who defends a similar view.

<sup>49</sup> This position also seems to underlie the account given by Wedin, *Mind and Imagination* (see n. 1 above), pp. 77 f. and 101. But there is no evidence Aristotle thinks phantasia is a necessary condition of the sensation of *proper* perceptibles, as Wedin also seems to claim (pp. 56-57, 67). See n. 56 below.

<sup>50</sup> Thus, phantasia is not a faculty whose function consists merely in the falsehood of another, a view Kenny rightly criticizes at p. 196 of "The Argument from Illusion in Aristotle's *Metaphysics* (Γ, 1009-10)," *Mind* 76 (1967), 184-97.

ἔτερον), whether or not they are always coinstantiated with each other (432a31-b1). The distinction is important, since he elsewhere admits that phantasia always is coinstantiated with the capacity for sensation, even though they differ in being (τῷ εἶναι, *De insomn.* 1, 459a16-18).<sup>51</sup> There are thus two kinds of argument Aristotle can appeal to to demonstrate nonidentity: (i) he can argue that two powers are not always coinstantiated; or (ii) he can argue that they differ “in being.”

The first sort of argument turns on purely extensional criteria, i. e., on whether there are any living things that have one power, but not the other. This suffices to show, for example, that sensation is not identical with thinking, since on his view not all animals think (427b7-8, b12-14).<sup>52</sup> Similar arguments apply to phantasia. According to Aristotle, there are animals that have phantasia, but not reason (λόγος, 428a24; cf. 427b8, b13-14); the two powers must therefore be distinct. But if an animal lacks reason, then it will also lack belief, since on his view the latter does not occur without conviction (πίστις), and conviction does not occur without reason (428a19-24). Hence phantasia cannot be identical with belief either. But regarding phantasia and sensation, the case is less clear. Aristotle says that there *seem* to be animals that have sensation, but not phantasia (δοκεῖ, 428b8-11). But he never endorses this view in his own voice. On the contrary, evidence outside the chapter confirms his commitment to strict coextension: phantasia belongs to every animal, including stationary animals (see n. 9 above). To show that phantasia is distinct from sensation requires an argument of the second sort.

The second kind of argument for nonidentity is more powerful because it considers differences in nature independently of questions of extension. The most decisive characteristic is falsehood.<sup>53</sup> According to Aristotle, sensa-

tion, conception, and knowledge, are always true (427b12, 428a11-12, 428a17-18). But phantasia can be false as well (428a12, b17) and so must be distinct from all three. The only candidate capable of falsehood, in fact, is belief (428a19; cf. 427b9-11, b13).

Yet if phantasia and belief have this characteristic in common, their differences are even more significant. In the first place, phantasia has a wider extension than belief. Every animal that has belief also has phantasia, since belief is a kind of accepting or taking something to be the case (ὑπόληψις, 427b24-26), and there is no acceptance without phantasia (427b15-16). On the other hand, there are animals that have phantasia, but lack belief, as we have just seen. This broader extension has ramifications for his theory of action. Aristotle takes every action to be the effect of a pair of mental states, one cognitive and the other desiderative, whose contents are related in the appropriate way. But he does not take these to be belief and desire – that would misrepresent the psychology of animals as overly intellectual. In his opinion, phantasia and sense perception often play the role belief does in producing behavior, even in humans (*De motu an.* 6, 700b17-21, 701a4-6; cf. *De an.* 3.3, 429a4-8).

Secondly, there are constraints on belief which phantasia is not subject to. It is not possible to believe just anything, but only what we judge to be right (428a23-24, 427b20-21). Phantasia, in contrast, allows us to conjure up images freely, independent of our views about what is true (427b17-20). In some situations, how things appear is completely insulated from our convictions and cannot be altered – for example, although we know the sun to be larger than the whole inhabited world, it still appears a foot long. This last case shows, to Aristotle’s mind, that phantasia cannot be a combination of belief and sensation, as Plato thinks (428a24-b9).<sup>54</sup> But it also shows that we need not be taken in by the falsehood of phantasia, either. Error in this stronger sense of being misled (see n. 5 above) requires that we actually *accept* the content of a given phantasia as true. But nothing about phantasia itself requires that we accept or reject its content: as Aristotle puts it, “phantasia is something different from assertion and denial” (3.8, 432a10-11). Because it can function apart from acceptance, moreover, it is possible to

<sup>51</sup> In just the same way, Aristotle also maintains that the capacity for desire “is not other than” the capacity for sensation and yet is still “different in being” (*De an.* 3.7, 431a13-14). For *x* and *y* to be strictly identical, they must not only be “one and the same,” in Aristotle’s terminology, but also not differ “in being” or “substance.” Without this further condition, Aristotle rejects Leibniz’ Law: see *De soph. elen.* 24, 179a35-39; *Phys.* 3.3, 202b14-16.

<sup>52</sup> Note that this does *not* contradict his predecessors’ weak similarity claim, (1), required by the dilemma, but only the stronger identity claim, (1’). See p. 26 above.

<sup>53</sup> Aristotle often uses ‘false’ in a way that could only apply to propositional contents, i. e., those contents which involve predication and negation (“combination and separation”) – see esp. *De an.* 3.6, 430b1-2; *Categ.* 4, 2a8-9; *De interp.* 1, 16a9-16; *Metaph.* 6.4, 1027b18-19; cf. *De an.* 3.6, 430a26-28; 3.8, 432a11; *Metaph.* 9.10, *passim*. But he cannot have this restricted sense in mind when speaking about phantasmata, some of which do not involve predication (*De an.* 3.8, 432a10-14). Such a phantasma might be true or false *of* an object – or perhaps more vaguely, *accurately* or *inaccurately* represent

an object – without having full propositional content itself. (For a similar view, see Engmann, “Imagination and Truth in Aristotle” (n. 1 above), p. 262, and Wedin, *Mind and Imagination in Aristotle* (n. 1 above), pp. 76 f.) On this broader sense of ‘falsehood,’ see also n. 5 above.

<sup>54</sup> For a closer analysis of this argument, see Lycos, “Aristotle and Plato on ‘Appearing’” (n. 1 above).

remain emotionally unaffected by its contents (3.3, 427a23-24). Belief, in contrast, affects us immediately (427a21-22).<sup>55</sup>

Phantasia thus stands midway between these different powers. It is more basic than the intellectual powers, extending throughout the animal kingdom, while also being capable of error. In this way, it is ideally suited to explain the errors that are manifest in the behavior of even nonrational animals. Since it does not require conviction, it bears content in a more neutral way and so provide the basis for the content of a wide variety of mental states.

## VII. Phantasia and Error

All this presupposes, of course, that phantasia can be false as well as true. Aristotle turns to this question in the third and final section of *De anima* 3.3 (428b10-429a9). Once again, causal factors are used to explain the content of a mental state. But differences in aetiology suggest the content of phantasia is grounded differently than sensation, and Aristotle exploits this to account for falsehood and the consequent plasticity of animal behavior (428b10-17). He then proceeds to detail several conditions under which a given phantasia will be false or true, specifically in relation to perception (428b17-30), before reaffirming the key elements of his earlier account (428b20-429a8). The section ends on a conclusive note: “regarding what phantasia is, and why there is phantasia, let this suffice” (429a8-9).

The aetiology is roughly as follows. In sensation, an object produces an initial stimulation (αἰσθημα) in the peripheral sense organs; this change then travels to the central sense organ and acts upon it, producing a sensory experience.<sup>56</sup> But in general, Aristotle argues, a change can give rise to

further changes (428b10-11); and so this initial stimulation can have other, indirect effects as well. In this case, he claims, the “change brought about by the functioning of sensation” (κίνησιν ὑπὸ τῆς ἐνεργείας τῆς αἰσθήσεως, 428b13) will “necessarily be similar to the sensation” (ταύτην ὁμοίαν ἀνάγκη εἶναι τῇ αἰσθήσει, 428b14); and from this it follows that the second change can be false as well as true, making varied animal behavior possible (428b14-17). Later, Aristotle explicitly identifies the “change brought about by the functioning of sensation” as phantasia (428b25-26, 429a1; *De insomn.* 1, 459a17-18) and repeats that such residual effects will be similar to sensations (τὸ ἐμμένειν καὶ ὁμοίως εἶναι ταῖς αἰσθήσεσι, 429a4-5). Phantasia is thus derivative from sensation in two respects. In a given instance,

- (i) phantasia *causally* derives from a certain sensation, and
- (ii) its *character* derives from the *character* of that sensation.

It is surely for these reasons that Aristotle describes phantasia elsewhere as “a weak sort of sensation” (αἰσθησὶς τις ἀσθενής, *Rhet.* 1.11, 1370a28). Phantasia is, in effect, an *echoing* of the initial stimulation in the sense organs: a side-effect, like the original stimulation in character, but unable to compete with fresh, incoming stimulations (*De insomn.* 2, 459a23-b23; 3 *passim*).

It may help to reflect more closely on the analogy of an echo. When I shout in a canyon, I produce an initial disturbance of air which then causes you to hear me (Diagram 1). But this disturbance also produces a second disturbance of air, reflected off the canyon wall, which in turn causes you to hear me a second time.<sup>57</sup>

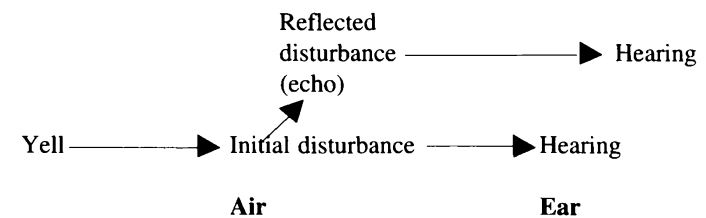


Diagram 1

<sup>55</sup> I thus disagree with Modrak, “Φαντασία Reconsidered” (see n. 1 above), pp. 61-62, when she speaks of the “belief-like character” of phantasia. Aristotle clearly thinks that some cases of phantasia occur without acceptance or rejection, unlike belief; and he does not think that the content of phantasia is propositional in every case either (cf. *De an.* 3.8, 432a11-14). The grounds Modrak adduces for the propositional character of phantasia in *Aristotle: The Power of Perception* (see n. 1 above), pp. 100-07, are largely undermined by the differences she develops between the character of “sensory representation” (which she attributes to phantasia) and symbolic representation.

<sup>56</sup> It is sometimes assumed that on Aristotle’s view any change that travels from the peripheral organs to the central organs is *eo ipso* phantasia, sensation proper being something that occurs only in the peripheral organs. But there is no textual basis for this. It is true, of course, that phantasia and other mental states will often occur *in conjunction* with sensation on Aristotle’s view – “pure” sensation surely occurs rarely, if ever. But these other states do not causally *mediate* sensation.

<sup>57</sup> As Aristotle points out, echoes probably always occur, even if not clearly: *De an.* 2.8, 419b27-33.

Phantasia works in much the same way (Diagram 2), the reproduced pattern of change being called a “phantasma” (*De an.* 3.3, 428a1-2).<sup>58</sup>

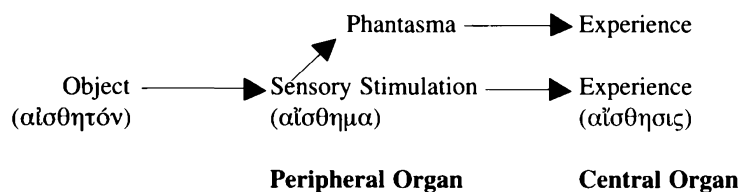


Diagram 2

Like an echo, the phantasma is only an indirect effect of the object of perception: the phantasma is directly caused by the sensory stimulation (αἴσθημα), which in turn is directly caused by the object (αἰσθητόν).<sup>59</sup> But even with regard to the sensory stimulation, the phantasma is only a side effect: the primary effect, of course, is to produce the experience of sensation by acting on the central organ. Like an echo, too, the manner in which the phantasma is produced ensures that it will be a similar sort of change and, importantly, *can have similar sorts of effects*: in particular, it can travel to the central organ and affect it in similar ways.<sup>60</sup> A phantasma will thus have similar *causal powers* to the stimulation from which it derives, including the ability to produce an experience phenomenally like a perceptual experience. Phantasia will consequently be about what a sensation is about (ὅν αἴσθησις, *De an.* 3.3, 428b12), even if the object is not in view.<sup>61</sup>

Unlike sensation, then, phantasia will *not* be about its cause, viz., the stimulation of the peripheral organs. Ordinarily, it will be about the external object that causes this stimulation – the cause of its cause. But this will not happen in every case: *a causal chain tracing back to the object is not*

<sup>58</sup> I will speak indifferently of the content of a phantasma and the content of the phantasia in which it operates – and, analogously, of the content of the initial stimulation of the peripheral sense organs (αἴσθημα) and the content of the sensation (αἴσθησις) in which it operates – since in both cases the content of the activity is the same as the content of the representation it involves. This will not be the case for mental states that involve further operations on this sort of representation – memory, for example, where the subject must “say in his soul” that he has perceived this before (*De mem. et remin.* 1, 449b22-25); or, at an abstract level, the act of denial, where the content is rejected (*De an.* 3.6, 430b20-23).

<sup>59</sup> *De insomn.* 3, 460b29, 461a18-19, 426a29; cf. *De an.* 3.8, 432a9-10.

<sup>60</sup> See esp. *De insomn.* 3, 462a8-9 and 461b11-24; but also 2, 459a23-b7; 3, 460b28-461b1.

<sup>61</sup> *De an.* 3.2, 425b24-25; 3.3, 428b27-29; *De insomn.* 2, 459a23-27. Cf. *De an.* 3.3, 429a4-5; 3.8, 432a9-10; *De insomn.* 2, 460a32-b3; 3, 460b28-31, 461b21-24; *Metaph.* 7.15, 1040a4. Cf. *Peri ideōn* 82.1-6.

*essential at all*. What determines the content of a phantasma is not its causal antecedents, but its causal powers; and sometimes this “echo” is *modified* on its way to the central organ in a way that *alters* these causal powers.<sup>62</sup> Aristotle mentions this last feature while explaining the effects of alcohol and sickness on dreams (*De insomn.* 3, 461a8-24; *Probl.* 30.14, 957a5-15, a25-35). My observations of a salamander, for example, might produce echoes which remain in my system unnoticed for many hours. But when they finally reactivate later in the evening, the effects of a half-bottle of whiskey have so altered them that I dream, not of a salamander, but an immense fire-breathing dragon. A dragon could not have been a causal ancestor of my dream, of course – dragons don’t exist. But my phantasmata have the ability to affect my central organ the way it *would* be affected *were* I to see such a dragon. The causal history of these phantasmata is thus not relevant, except *per accidens*. At most, it could explain why phantasmata have the causal powers they happen to have. Their content is rather a function of the causal powers they actually do have at a given moment, however they came by them.

To say, then, that the character of phantasia *derives* from the character of the sensation that produces it is *not* to require them to retain an identical character over time. A phantasma can change and so deviate from the original stimulation.<sup>63</sup> Nevertheless, at any given moment the content of a phantasma will always be identical to the content of *some* sensory stimulation. *A phantasma has the same content as a sensory stimulation with the same causal powers.*<sup>64</sup> It does not matter whether this stimulation is the one the phantasma derives from, or indeed whether such a stimulation even exists. All that matters is *which* powers a phantasma has in comparison with possible sensory stimulations.

We can put this more formally. Aristotle is committed to something like the following account of content for phantasmata:

(P) For any phantasma  $\varphi$  and time  $t$ , the total effect  $\varphi$  can produce at  $t$  on the

<sup>62</sup> Phantasmata therefore cannot be individuated by their content or causal powers, which can change, but presumably by their spatiotemporal or causal histories.

<sup>63</sup> Aristotle does not address whether the sensory stimulus can be altered in the same way as the phantasma. In general, he seems to presuppose that the operations of sensation work without interference. (The strength of sensory stimulations, one might conjecture, are so strong as to reach the central organ unharmed.) This is important, because if these presuppositions are put into question, Aristotle’s account of sensation is subject to serious sceptical difficulties.

<sup>64</sup> This formulation in effect divides sensory stimulations and phantasmata into equivalence classes with respect to causal powers and content: that is, *any* sensory stimulation or phantasma with the same causal powers must have the same content.

central sense organ<sup>65</sup> is the same as the total effect some sensory stimulation *s* could produce on the central sense organ, were *s* to occur; and at *t*,  $\varphi$  is about what ever *s* would be about.

The sensory stimulation *s* will normally be the original stimulation from which  $\varphi$  causally derives, in which case  $\varphi$  will be about the object that initially causes *s* and so one of  $\varphi$ 's own causal ancestors. But this need not be the case.  $\varphi$ 's causal powers may no longer be like those of the original stimulation, or like those of any actual stimulation, past, present, or future, but only some merely possible one.  $\varphi$  will then be about whatever *s* would be about, were it to occur; and that, quite obviously, might be different from the way things actually are. The content of phantasia can thus diverge completely from its causal ancestry and from what is actually the case more widely. Phantasia can be false.

This account is explicitly confirmed by Aristotle's remarks outside of *De anima* 3.3. In *De insomniis* 2, 460b18-27 perceptual error is explained in almost exactly the same way, in terms of similarity in causal powers:

The explanans for being in error is that anything whatsoever that appears [does so] not only when an object of perception is effecting change, but also when the sense is undergoing change itself – whenever, that is, it should happen to be changed in just the same way as [it would be] by an object of perception.<sup>66</sup> (460b23-25; cf. 459a1-5)

The comparison here is between phantasia and the object, rather than the intervening stimulation of the sense organs. But Aristotle's point is much the same. If phantasia can have the same effect as an object *could have had* by stimulating the sense organs in the normal way, then phantasia will be

<sup>65</sup> The phrase “the total effect that  $\varphi$  can produce at *t* on the central sense organ” must be understood with the background condition: “were  $\varphi$  positioned appropriately to affect the central sense organ.” Otherwise, a phantasma that had not reached the central organ would have *no* content according to (P), since from such a position it could not have any effect. (P) is meant to capture the potentialities a phantasma has or lacks in virtue of its constitution at a given moment, and not as a result of purely extrinsic circumstances, like location.

<sup>66</sup> Aristotle's form of expression is condensed here. ἀδῆποτε introduces a relative clause where the main verb φαίνεται is understood again. Otherwise, ἀδῆποτε would have to be understood as belonging to the main clause itself (as Beare, Hett, and Gallop take it), viz., “anything whatsoever appears not only when an object of perception is effecting change . . .” But Aristotle does not think that “anything whatsoever” appears in genuine sensation, only the actual object of sensation. W. D. Ross paraphrases the clause in his commentary more vaguely: “appearances occur not only when the sensible object affects us . . .” Aristotle, *De anima* (Oxford 1961) *ad loc.* But this version will not do either: it does not say an appearance will have the *same* content as another and so be an occasion for error, which is the point of the whole sentence.

about such an object in virtue of its causal powers. The object need never have been actually perceived, nor indeed ever exist.

The same analysis underlies Aristotle's remarks in the *De motu animalium*. Phantasia and thought are said to have “the power of objects” (τὴν τῶν πραγμάτων δύναμιν) and to be “just the same sort of thing each of the objects also is” (τοιούτων τυγχάνει ὃν οἶόν περ καὶ τῶν πραγμάτων ἕκαστον) insofar as they are able to affect the animal in the same way the object would, even in the object's absence (*De motu an.* 7, 701b17-22). And it is *because* they have this ability, Aristotle reasons, that they represent such objects (*De motu an.* 11, 703b18-20).

We also find Aristotle appealing more generally to the divergence of cause and content to explain falsehood. In *Metaphysics* 5.29, for example, he says that a scene-painting or a dream are both “something, but not what they produce a phantasia of” (τι ἄλλ' οὐχ ὧν ἐμποιεῖ τὴν φαντασίαν, 1024b23-24), and for this reason can be called false. Scene-paintings and dreams produce mental states that are not about themselves, but about something quite different, thus splitting content and cause. Accordingly, the resulting states will often be false; and their causes can be called false by synecdoche.

This new theory of content raises serious questions that cannot be gone into here.<sup>67</sup> Still, there are several consequences of this analysis that have broader significance and should be mentioned at least briefly.

First, Aristotle strongly ties the content of phantasia to the content of sensation. Initially, the content of phantasia is exactly similar to the content of the sensation that spawned it and serves as the basis for future modifications. But later changes are relevant only in comparison with the causal powers of possible sensations. This close linkage ensures that the content of phantasia remains *quasi-perceptual* – similar, that is, in the *type* of information it can convey. It is in this sense only that phantasia can be correctly described as ‘imagistic’ or ‘pictorial’: it is capable of producing experiences which are phenomenally like perceptual experiences. But it is absolutely critical here to distinguish between phantasia and the experience it can produce. Phantasmas are not themselves viewed, nor are they tiny pictures that *look like* objects in the world. They are changes in the perceptual system that represent in virtue of their causal powers. But a phantasma will have those powers *whether or not* it actually exercises them (*De insomn.* 3, 461b11-19; *De mem. et remin.* 1, 450a27-b11; 2, 451b7-10). *The*

<sup>67</sup> I examine these issues in greater depth in “Aristotle and the Problem of Intentionality” (in progress) and more generally in *The Problem of Intentionality in Ancient Greek Philosophy* (forthcoming with Cambridge University Press).



experience a phantasma is capable of producing, therefore, *need not occur for the phantasma to have the content it does*. Phantasia can thus bear its content in a wide range of mental states *without* concurrent imagistic experiences. Producing such experiences is unnecessary for them to perform their role as bearers of intentional content.

The quasi-perceptual character of phantasia also has important consequences for Aristotle's account of intentionality. The type of falsehood at issue here is significantly different from the type of falsehood Aristotle finds in language and in discursive thought. There falsehood is due to a *combination* of concepts that differs from how things are combined in the world (*Metaph.* 9.10, 1051b1-6; cf. *Metaph.* 6.4, 1027b20-22; *De an.* 3.6, 430b1-2; *De interp.* 1, 16a12). But combination is *not* an issue here. Nor indeed are concepts (*De an.* 3.8, 432a10-14). This is significant, since it allows for an account of intentionality that does not presuppose the conceptual structure which makes language and thought possible, and so can account for intentional states that fall below this threshold. It thus becomes a plausible account not only for the mental economy and behavior of lower animals (*De an.* 3.3, 428b16-17, 429a5-6), but for much that occurs in humans as well (429a7-8).

Deliberation and higher cognition require the employment of concepts and inference, of course. But even here Aristotle insists that these functions build upon the basis of phantasia. The content of even the simplest thought is not identical with the content of any phantasma (3.8, 432a12-14). But the former nevertheless depends on the latter. In Aristotle's words, the forms which are thought are "in" phantasmata (3.7, 431b2; cf. 3.8, 432a4-6, a12-14; 3.7, 431a14-16). By making phantasia the common currency among mental states rather than belief, Aristotle emphasizes a form of intentionality which is more basic than the conceptual, and firmly rooted in the general character of perceptual experience.

### VIII. Phantasia and Reliability

Aristotle turns now to consider specific conditions under which phantasia is true and false (428b17-30). He is concerned in particular with its reliability in perceptual contexts and argues that this will differ depending on which sort of perception is involved (428b17-27): in particular, whether it is the sensation of proper perceptibles, such as colors or flavors; the perception of common perceptibles, such as shapes or changes; or the perception of ordinary objects as such (the so-called "incidental perceptibles"). The latter two are already subject to error, as we have seen (p. 42 above), due to the involvement of other fallible mental states, including phantasia itself. But

concerning the sensation of proper perceptibles, Aristotle makes a surprising and unparalleled remark. He begins by repeating the position he maintains elsewhere (including earlier in the chapter: 427b12, 428a11), namely, that sensation is always true. But he adds the qualification: "or it has falsehood to the least possible extent" (ἢ ὅτι ὀλίγιστον ἔχουσα τὸ ψεῦδος, 428b19). Provided that we have a pure case of sensation, unadulterated by other mental processes, this qualification is inexplicable on Aristotle's account: sensation always corresponds to its cause. The question is whether he does have a pure case in mind. In his essay on dreams, Aristotle describes such an error – viz., that if you stare long enough at something white or green, everything you direct your gaze at will appear that color – precisely to show that phantasia *is* involved (*De insomn.* 2, 459b7-13). But if phantasia is implicated in such cases, the error can be explained without requiring any change in his core account of sensation.<sup>68</sup>

Because of their differing levels of reliability, phantasia produced from these different kinds of perceptual activity will differ in reliability too. Generally phantasia will be most reliable when it is both generated from and concurrent with the sensation of proper perceptibles (428b27-28). Being concurrent with perception is no longer a guarantee of truth, though, when phantasia is generated from the other forms of perception (428b28-29). The worst case of all occurs when objects are very distant (428b29-30), since perception of size and magnitude is the most error prone to begin with (428b24-25). How these remarks are to be explained precisely is somewhat less than perspicuous.<sup>69</sup> But they depend upon contingent assumptions Aristotle makes about how perception and phantasia typically function in real-world situations. They are not part of his account of *how* phantasia is

<sup>68</sup> Ps.-Philoponus *In De an.* 513.19-20 and Sophonias *In De an.* 120.38-121.3 both speculate that the error in question has to do with failing to see tiny speckles because of their size and taking a surface to be all of one color instead. The problem, though, is not to find examples where we actually make mistakes about colors, etc., but to discover exactly which mistakes Aristotle had in mind in this passage.

<sup>69</sup> The passage is more puzzling than generally noted. It is often understood as if it correlated the truth value of phantasia with the *truth value* of the different types of perception from which it can originate. (Themistius *In De an.* 93.6-8 is a classic example.) But in fact Aristotle does not mention the truth value of the perception at all, but only whether a particular kind of perception is *concurrent* with the resulting phantasia or not. This leads to bizarre consequences: (i) a phantasia originating from a *false* sensation of a proper perceptible will be *true* so long they are concurrent; (ii) a phantasia originating from a *true* perception of a common or incidental object will be *false* even if it is concurrent. It is difficult to see the rationale behind such a position. Unfortunately no simple emendation suggests itself that would remove the difficulty.

capable of error in the first place, but only a discussion of *specific conditions under which* a given phantasia will be true or false. It is fitting, then, that Aristotle ends the chapter by returning to his key point and stressing that phantasia is a lingering echo of sensation. It is this, he reiterates, that enables animals to act in ways that go beyond the immediate promptings of their environment (429a4-8).

### IX. Conclusion

The beginning of *De anima* 3.3 thus tells us – not too surprisingly – what the chapter is about. Aristotle’s predecessors are unable to account for error because they rely on an overly simplistic account of content, one that binds content too closely to cause. But Aristotle’s own account of sensation and conception is prey to the same problem; and although he does not advertise this candidly, he immediately sets about doing what needs to be done to solve the problem. There is nothing wrong with *some* mental capacities being infallible, even foundational capacities such as sensation and conception, so long as the content of other mental states is not accounted for in the same way. Aristotle solves this difficulty by introducing a new capacity, which is not identical with either sensation or conception; and though it depends upon sensation, both causally and with regard to content, the analysis that results successfully evades the dilemma. By using a more complicated aetiology, Aristotle can naturally appeal to causal powers rather than causal ancestors, giving him an account that does not require the existence of the object – it is framed subjunctively in terms of the type of effects an object *would* have on the central sensory organ if it *were* sensed. This is sufficient to account for basic kinds of error and so to provide a basis for the content of most intentional states without appealing to concepts or predication.

Phantasia is not, then, a locus of “non-paradigmatic sensory experience.”<sup>70</sup> Aristotle’s point is precisely that error is *so* commonplace, so normal, in animal life, that psychology must account for it. And this cannot be done on the causal account Aristotle offers for sensation and conception. To account for ordinary, paradigmatic animal behavior, a higher degree of intentionality is required, one which makes error possible; and this requires its content to be explained in a different way. Aristotle recognizes this problem in *De anima* 3.3 and attempts to solve it with his account of phantasia. The crucial question that remains is whether this account forms

the basis for a fully adequate theory of content. But that is a topic which must await another occasion.<sup>71</sup>

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<sup>70</sup> The phrase is from M. Schofield, “Aristotle on the Imagination,” pp. 101 ff.

<sup>71</sup> In forthcoming works listed above (n. 67). I would like to take this opportunity to thank several individuals for their extremely helpful comments and criticisms: Sarah Broadie, Myles Burnyeat, David Charles, Julius Moravcsik, and Malcolm Schofield. They cannot, of course, be held responsible for the views expressed here. I am also grateful to the NEH for their generous support during the writing of this paper and to Clare Hall, Cambridge for providing a truly ideal setting for research.