

## BOOK II

### CHAPTER I

#### Introduction to II I

Aristotle now offers his own positive account of the soul. In view both of the richness of the hylomorphic theory it presupposes and the problems immediately attendant upon Aristotle's deployment of that theory in the arena of soul-body relations, this first chapter has generated much discussion. For the primary commitments of Aristotle's psychological hylomorphism, see the General Introduction § III.A.

*De Anima* II I highlights primarily two implications of hylomorphism, that (i) it is not necessary to ask whether the soul and the body are one (412b6–9); and (ii) the soul is not separable from the body (413a4–6). The final meaning of these implications has been disputed. To begin with, the second claim admits of non-equivalent interpretations in line with Aristotle's varying characterizations of separation (*chôriston*; see Introduction to *DA* I I for a brief orientation to these types). Moreover, the arguments immediately leading up to these claims, which might be expected to help explicate Aristotle's intended meaning in the current context, are not always perfectly perspicuous.

A second dominant source of interest in the chapter has derived from a controversy surrounding Aristotle's contention that a body which has lost its soul is only homonymously (*homônumôs*) a body. As Ackrill (1972) has noted quite forcefully, this claim evidently entails that a body is a body only when ensouled. Briefly, this consequence seems to upset the very terms of the hylomorphism within which Aristotle's entire theory is adumbrated: if the wax is the matter of a candle, and the shape its form, then the wax is only contingently the matter of a candle, precisely because the same wax could sustain a different form and so serve as the matter of something other than a candle, for instance a figurine. If, by contrast, a body is a body only when ensouled, then the body is necessarily, and not contingently, ensouled. Consequently, it appears that the body, as the matter

of the form, both is and is not necessarily enformed by the soul. This appears a straightforward contradiction at the heart of Aristotle's theory, one generated by his application of the meta-physical apparatus of hylomorphism to the special case of soul-body relations. (For a fuller statement of this problem, together with some lines of response, see the General Introduction § III.B).

**412a1–6: Making a Fresh Start:** After recounting and considering the relevant phenomena (*phainomena*) and credible opinions (*endoxa*), Aristotle occasionally announces the need for a fresh start to the inquiry at hand (cf. *Met.* 1041a6–7; *EN* 1117a13–14; *EE* 1218b31–2). When he does so, he does not mean that he will now ignore the discussions which have come before, but rather signals that he will proceed to his preferred account, having derived such value as there may be in the approaches of his predecessors (cf. 403b20–5). Nor does he mean to set aside his own preliminary reflections, as they have emerged in his presentation of the *phainomena* and *endoxa*. In this connection, it is worth revisiting the notes to 402a7–10 and 402a23–b8 in order to recall the sorts of questions about the soul Aristotle had said he would like to see answered.

When he now says that he wishes to determine what the soul is by way of specifying its most common account (412a4–6), Aristotle attends fairly closely to the problems as he posed them in 402a23–b8.

See also note to 413a11–20, where Aristotle makes a different sort of fresh start, concerning the soul as a principle of life.

**412a6–11: Answering the Categorical Question about Soul:** When setting out the dominant issues to be addressed regarding the soul, Aristotle had contended that the first order of business would be to determine the soul's appropriate ontological category (402a23–b1). Here he follows the course he recommends by offering the judgement that the soul is a substance (*ousia*). Although he only now articulates this conclusion, it seems already to have undergirded his rejection of the attunement theory in *DA* I 4 (see esp. note to 407b32–408a5). An attunement of the body seems to be a quality or attribute of the body; the soul is, by contrast, not a mere attribute of the body, but a substance in its own right. This is an especially significant result, since one might

be tempted to think of the soul as a form of the body falling into the category of quality (*poion*), just as, in Aristotle's terms, the proponents of the attunement were inclined to do.

The sentence running from 412a6–9 finds Aristotle drawing crucially on his general metaphysical hylomorphism, but is expressed in extremely compact terms: 'We say that among the things that exist one kind is substance, and that one sort is substance as matter, which is not in its own right some this; another is shape and form, in accordance with which it is already called some this; and the third is what comes from these.' This translation is necessarily a bit expansive, and reflects two unavoidable interpretive decisions. First, Aristotle does not say that matter is a 'sort' of substance, but only that matter, along with form and compound, in some sense 'belongs to substance' or 'belongs [to the category of] substance' (literally 'to this' or 'of this', *tautês* in 402a7, the antecedent of which is *ousia*, or substance in 402a6). Other possible expansions would be that matter is: 'one aspect of substance' or 'one type of substance' or even 'one part of [of the category of] substance'. The translation reflects the thought that Aristotle's hylomorphism recognizes three sorts or grades of substance. (On Aristotle's metaphysical hylomorphism, see the General Introduction § II.)

The second point of translation pertains to the phrase 'in accordance with which it is already called some this' (*kath' hên êdê legetai tode ti*, 412a8–9). A parallelism in Greek is obscured in this rendering, since Aristotle has just said that matter is not 'in its own right some this' (*kath' hautô*; 412a6), and now says that form is that 'in accordance with which' (*kath' hên*) 'it' is called some this. Nothing in the Greek corresponds to 'it'. Aristotle thus might be making the point that *matter* is called some this (*tode ti*) because of the presence of form, or rather, more generally, that form is that 'in accordance with which *something* is already called some this'. The translation may tend to favour the first of these alternatives, but is meant to be as neutral as possible, and in any event not to exclude the second possibility. Taken in this second way, Aristotle is saying that matter is not some this, and that form is that whose presence makes anything at all some this—some particular thing. The second alternative is compatible with matter's never qualifying as a particular thing.

Abstracting from those finer points slightly, Aristotle here distinguishes three ways of thinking about substance: as matter (*hulê*), which is not some this (*tode ti*); as form (*eidos* or *morphê*), in terms of which something qualifies as some this; and as the compound (*to ex toutôn*) of form and matter (412a6–9; cf. ‘of both’, *ex amphoin* at 414a16).

Given the confidence of his assertion a few lines later that ‘It is necessary, then, that the soul is a substance as the form of a natural body which has life in potentiality’ (412a19–20), Aristotle seems already at the start of the chapter completely settled about his determination of the soul’s ontological category: it is a substance (*ousia*). His categorial question in this passage thus becomes effectively a disjunctive syllogism whose conclusion will identify the preferred alternative among the three ways of thinking about substance specified: is the soul a substance (*ousia*) as matter, form, or compound? There is, to emphasize the point, no argument in this passage for the general conclusion that the soul is a substance—which is precisely what one might like to see in view of Aristotle’s rejection of the theory that the soul is an attunement (see notes to 407b32–408a5 and 408a23–8).

In posing the question effectively as a disjunctive syllogism, Aristotle accepts as settled doctrine the account of substance developed in *Metaphysics* Z–Θ. Unfortunately, since the final purport of that account is heavily disputed, it is not possible simply to recapitulate its principal findings. Nonetheless, in the present context, it appears that Aristotle approves of just these three different candidates for the title of substance—matter, form, and compound—and wishes to know which sort of substance among these the soul is. In his comprehensive treatment of substance (*ousia*) in the *Metaphysics*, Aristotle canvasses all manner of candidates, many promulgated by his predecessors but some proposed by Aristotle himself: the substratum (*hupokeimenon*), the essence (*to ti ên einai*), the four elements of earth, air, fire and water, numbers, points, inter alia (for one preliminary list of candidates, see *Met.* Z 2).

The further question of whether the soul is a potentiality (*du-namis*), as matter is, or an actuality (*entelecheia*), as form is, will weigh heavily in his final determination. For the two senses of actuality to which Aristotle alludes here, see note to 412a21–7.

**412a11–21: Soul is Substance as Form:** These lines provide the core statement of Aristotle's soul-body hylomorphism: soul and body are related as form and matter.

The passage contains two mutually supporting arguments for a preliminary conclusion, stated at 412a17, that the soul is not *a* (or perhaps is not *the*) body. Although neither argument is completely clear, because each is compressed, each makes some progress towards Aristotle's contention that the soul and body are not the same. He notes first that natural bodies top the list of candidates for substance, especially those having life. His implied contrast is not between the living and the dead, but between the living and the inanimate, not, that is, between a living body and a corpse, but rather between a living being and an element or an artefact. Cf. *Met.* 1028b8, 1042a3–31.

Despite its intimate connection to a living body, the soul is not to be identified with either an animate or an inanimate body. The first argument is direct and simple:

- (1) Every natural substance having life is a composite.
- (2) The soul is not a composite.
- (3) Hence, the soul is not a substance as a natural body having life.

Further, Aristotle immediately adds a second argument:

- (1) A body is not among those things belonging to a subject, but is rather itself a subject, as matter.
- (2) The soul, by contrast, belongs to a subject.
- (3) Hence, the soul is not a body.

Stating the arguments thus is controversial, since in the first instance, many commentators find only one argument in these lines. If read in that way, however, Aristotle's reasoning will fall short of establishing what he next concludes, that soul is substance *as form* (412a19–20). In order to reach that conclusion, he must understand himself to have eliminated two of the three candidates for substance listed at 412a6–9 (namely matter, compound, and form). The first argument eliminates the compound, and the second, the matter.

That allowed, there is, of course, a further question as to why one must accept the second premise of either of these arguments (that the soul is not a compound; that the soul belongs to a

subject). At a minimum, in the second argument, Aristotle needs to show why the soul belongs to a subject in a manner in which the body does not. Further, in at least one sense of ‘belonging’ both the soul and body belong to the compound, which is surely a subject; so, one would further need to specify the sense in which the one does and the other does not belong, and indeed to specify which subjects we have in view in making this appeal. A similar train of reasoning emerges in the next chapter at 414a13–27, with which this present passage is usefully compared.

An alternative interpretation understands Aristotle to be denying that the soul is a compound by denying that it is any sort of body at all, with the result that it has no intrinsic material properties in its own right, as the compound of form and matter does. Here one may usefully consult *Met.* 1001b29, 1029a10–27, 1088a17–21.

Whatever his route, however, Aristotle concludes that the soul is a substance (*ousia*) as the form (*eidos*) of a natural body having life in potentiality (*dunamis*) (412a19–21). What, though, does it add to Aristotle’s account that the soul be the form of a body which has life *in potentiality*? This might seem trivially the case, since the soul, as a principle of life, will not be the form of a body which cannot support life. Presumably, Aristotle’s contention is more than just that the soul is the form of a body which is *possibly* alive. Rather—if by ‘possibly’ we are meaning abstract metaphysical possibility in a broad sense—he means a good deal more. Instead, he means that not every body is appropriately arrayed to be a living body—a point which not everyone has found trivial or even true. This was after all the reason Aristotle had found wanting in the Pythagorean view of metempsychosis; that view pretends that just any old body can sustain just any old form of life, without reference to the particular physical structures required to realize particular life activities (on Aristotle’s attitude towards the shortcomings of such views, see note to 407b14–26). The presence of a soul will not turn a paper clip into a perceiver; or, looked at from the other side, no paper clip will have a soul, because paper clips lack the organs requisite for life, and so are not potentially alive, or alive in *dunamei*. This is a consequence Aristotle reaffirms at 412b15–17. Cf. *De Interp.* 23a3; *Met.* 1045a7–b23, 1075b34.

**412a21–27: Types of Actuality:** Since soul is substance (*ousia*) as form, and form is substance as actuality (*entelecheia*), the soul

is the actuality of an appropriate sort of body. Aristotle notes, however, that actuality is spoken of in two ways, or as his illustration suggests, as coming in two grades. Although humans, as rational beings, have the ability to learn set theory, only some do. Someone who has learnt and mastered elementary set theory knows the paradox generated by the Russell set, and so has actualized her capacity to know in that respect. We mark a further difference, however, when we say that the one who knows the paradox is now actually contemplating it. Even while sleeping, the student of set theory is one of the people who know the paradox, even though she is not just then actually contemplating it. Aristotle suggests, though does not state explicitly, that mere knowing is a *first actuality*, whereas actively contemplating is a *second actuality*. Cf. 417a22–9, *Phys.* 255a33, *Met.* 1050a21–3.

Having marked that distinction, Aristotle contends that the soul is a *first actuality* of a body of an appropriate sort. This may seem initially to have the odd consequence that someone could have a soul without actually living, as one can have knowledge without actually using it. Indeed, there has long been a controversy about the best way to interpret and apply Aristotle's contention here (see, e.g., Ackrill (1972–3), Whiting (1992), Hübner (1999), Burnyeat (2002)). Minimally, of course, it must be allowed that necessarily if  $x$  has a soul, then  $x$  is alive. It does not follow immediately, however, that if  $x$  is alive at time  $t$  that at  $t$   $x$  is currently actually (= second actuality) engaging in some one of life's characteristic functions, i.e. digesting, or reproducing, or perceiving, or knowing (cf. 412a14–15, 415b28). To insist that whatever is actually ensouled is actually (= second actuality) living, is simply to insist without argument that the distinction introduced here collapses or is otherwise incoherent. Aristotle is not constrained to accept either of these conclusions. (For a sustained, sophisticated treatment of these issues, see Hübner (1999).)

**412a28–412b4: The Relevant Body is Organic:** The word organic (*organikon*), formed as an adjective from the noun *organon* (organ, or tool) is used by Aristotle in a technical sense. Many commentators understand him to mean that the sort of body appropriately arrayed for life is one which is equipped with organs capable of implementing life functions. On this approach,

nothing will see, for example, unless it has the requisite organs, that is, unless it has equipment dedicated to the task of light detection. From this perspective, Aristotle's contention derives ultimately from his overarching teleology, reflecting his judgement that 'every organ is for the sake of something' (*Part. An.* 645b14), and further coheres with the observation made in *DA* I 3 that bodies and souls must be suited to one another (see note to 407b14–26).

This understanding seems correct, as far as it goes. Probably, however, Aristotle's intended meaning is more technical and still more enmeshed in his teleology. As Everson (1997: 64) observed, Aristotle probably means that the body itself, as a whole, is an organ of the soul, as a whole. Thus, something qualifies as an organic body just in case it is such as to be used by the soul for its ends. This extension of our understanding of what is involved in being *organikon* has two advantages. First, it coheres with—and helps to explain—Aristotle's straightforward contention that every natural body is the organ of a soul (412b15; cf. *Part. An.* 642a11; *Pol.* 1254a34; *EN* 1161a35–b6). Second, it also moves some way towards helping to explicate Aristotle's contention that a body which has lost, or cast off (*apobēlêkos*), its soul is not a body except homonymously, on which, see note to 412b10–413a3.

It should be noted that these two interpretations of '*organikon*' need not be taken as competitors, although they are sometimes presented that way. If Aristotle speaks of the whole body as '*organikon*' because it is a tool of the soul, he might reasonably also mean that organic bodies, like tools suited to performing various tasks, will have parts suited to performing those tasks. (A kitchen blender comprises tools for chopping and mixing.) In the case of living bodies, those parts will include what we ourselves, quite reasonably from an Aristotelian perspective, call 'organs'.

This compatibility explains why Aristotle is able to move directly to talking about the parts of plants as suitable organs analogous to the organs of animal bodies. Aristotle's point about plants serves to remind the reader that all living things have souls (cf. 413b5–7, 415a23–5, 416a19) and that in all ensouled beings we find parts suited to the tasks associated with life. (Aristotle elsewhere calls such parts or features 'life-supporting' or 'fit for life' (*zōtikos*), *Gen. An.* 761a27.) Where the tasks of plants are the same as they are in humans, as in the case of nutrition, we find it easy to speak of



the appropriate plant parts as analogous to the parts of animals because of sameness of the functional role played. This is the sense in which plants have ‘mouths’. Cf. *Part. An.* 655b37–656a3, 686b32–687a1.

**412b4–9: The Common Account of Soul and its First Significant Implication:** The common account of soul requested at 402a23–b8 and promised at 412a4–6 is now stated, using the terms articulated to this point in the chapter: the soul is *the first actuality of a natural organic body*. This provides a compact formula of what has so far been established, but adds nothing new.

What is new, and surprising, is Aristotle’s immediate inference from the common account of soul. He concludes directly that given such an analysis, it is not necessary to inquire into the matter of whether the soul and body are one (412b6–9). In an alternative translation, often preferred, but less well grounded in Aristotle’s Greek, the inference is turned into an admonition: ‘*it is necessary not to ask whether soul and body are one*’, as though doing so already betrayed a confusion on the part of the one asking. (Various translations are collected and compared in Shields (1999: 156 n.1).) Aristotle might, in principle, offer such an admonition if he thought it obvious on hylomorphic grounds that the soul and body are identical. Yet he has in this very chapter argued that the soul and body are not identical (see note to 412a11–21). More generally, the wax and its shape are not identical with one another, since, as Aristotle himself rightly notes in *Metaphysics Z* 17 (1041b11–25; cf. *Gen. et. Cor.* 322a4–16), a form can sustain a change in the matter, and, at least in non-organic bodies, the matter can outlast the form (see note to 412b10–413a3). So, he evidently cannot be thinking that it is necessary not to ask this question (or indeed even that it is not necessary to ask it) because its answer is so blindingly obvious, viz. that soul and body are identical.

On the translation preferred in the text (‘For this reason it is also unnecessary to ask whether the soul and body are one’; 412b6), what Aristotle actually says is less strident and more complicated than the alternative translation suggests. Given this translation, the question of the soul’s oneness with the body simply becomes less pressing than it might otherwise have been, because hylomorphism removes one motivation for wishing to pose this question in the

first place. One can begin to see why by examining the rather truncated argument offered for this conclusion.

The argument of the passage, however, drawing as it does upon features of Aristotle's metaphysics, is more complicated than sometimes assumed. This becomes clear when we reflect upon the reason Aristotle actually supplies for his contention that it is not necessary to ask whether the soul and body are one: 'For while one and being are spoken of in several ways, what is properly so spoken of is the actuality (*entelecheia*)' (412b8–9). This grounding appeals to Aristotle's apparatus of multivocity or homonymy, and in particular to his suggestion that when a concept is multiplicitous, it may have a 'most proper' (*to kuriôs*) or 'controlling' core sense or core concept. (For an introduction to multiplicity and homonymy, see Shields (2007: Ch. 3 § 6); for a fuller treatment, see Shields (1999).

As this technical machinery is deployed in the current passage, we find Aristotle explicitly stating only a single premise on behalf of his ultimate conclusion:

P-1: Actuality (*entelecheia*) is the controlling sense of unity.

C: It is not necessary to ask whether the soul and body are one.

The challenge for interpreters of the passage is thus to determine what bridge premise or premises Aristotle may be presuming. One natural thought, adopted by, among others, Guthrie (1981: 284 n.3: 'The entelechy is here the concrete object at its highest stage.') is:

P-2\*: The concrete object (viz. the form-matter compound) is an actuality (*entelecheia*); and, if so, (C).

This would yield a valid argument, but fails to come to terms with the plain fact that in the present chapter Aristotle refers to the *soul* as the actuality *four times* (412a9–11, a19–22, a27–9, b4–5). Presumably, then, the better alternative reconstruction will be:

P-2\*\*: The soul is an actuality (*entelecheia*); and, if so, (C).

On this approach, equally valid, of course, the soul is prior to the body, and indeed makes it the case that the body qualifies as a unified entity in the first instance. He is claiming, that is, that the soul unifies the body, a point he had already emphasized in *De*

*Anima* I (411b6–10; see note to 411a26–b14). If that is correct, then in the present passage, he is offering the judgement that such unity as the body has is already parasitic on the presence of its soul—in which case asking whether they are one is rendered unnecessary. The question in fact will have a false presupposition, namely that there are two independently specifiable entities about whose associations with one another we might wonder. Aristotle's point is not, then, that they are the same. He offers, rather, a much more nuanced view, namely that the identity conditions of the one, the body, are parasitic on the identity conditions of the other, the soul. See Shields (2009) for an analysis of Aristotle's inference in this passage, together with discussions of several alternative approaches.

If this is correct, then, Aristotle appears to be suggesting that one might have wanted to pose a question of soul-body unity for a specific reason: to determine, for instance, whether the soul can exist without the body, as Plato had argued at length that it could in the *Phaedo*—and as perhaps did the youthful Aristotle himself in the dialogue, *Eudemus* (*Them. Comm. in DA* 106a29–107.4, Elias, *Comm. in Cat.* 114.25–115.3). Once it is seen that hylomorphism distinguishes the soul from the body, even while requiring that the soul be realized by a body of an appropriate sort, which body is in turn parasitic for its identity conditions on that soul, then the question of oneness becomes largely idle—at least relative to its Platonic motive. Looked at this way, Aristotle's point is that on hylomorphic principles, one has no more reason to inquire into the question of whether soul and body are one than one has to inquire into the question of whether the wax and its shape are one. No one is motivated to ask the latter question, because no one supposes that hylomorphism provides any impetus to wonder whether the shape of a candle is capable of existing separately from the wax whose shape it is.

If something along these lines is correct, then the two main implications of hylomorphism drawn by Aristotle in this chapter are importantly connected. On the second implication, that the soul is not separable from the body, and its connection to this first inference, see note to 413a3–7 below.

**412b10–413a3: Soul Functions, Activities, and Homonymy:** Aristotle repeats that the soul is a substance (*ousia*), where the

sort of substance is the one ‘corresponding to the account (*kata logon*, 412b10–11)’, viz. the form. Aristotle has not used just this formulation of the sort of substance the soul has been understood to be, though his meaning is clear. Below he says more directly that the soul *is* a *logos*, translated as: ‘For the soul is not the essence and organization (*logos*) of this sort of body’ Here, as elsewhere, it is not easy to capture Aristotle’s use of the word *logos* with a single word in English. As discussed in the note to 403a3–27, sometimes it is semantic, having to do with meaning or sense, and other times, as here, it is rather ontological, and is interchangeable with *eidos*, or form. Cf. 414a9, 424a24; *Met.* 1006b1, 1030a7, 1044b12, 1058b19; *Phys.* 209a21; see also the glossary entry *logos*.

Aristotle’s reliance on artefacts in this passage to illustrate his broadly functional conception of soul is in some ways illuminating, but in other ways puzzling. The comparison is initially helpful, given the threefold schema upon which he relies. The being of an axe (*to pelekei einai*), its essence (*to ti ên einai*), is cutting—an axe, that is, is essentially a tool for cutting. Aristotle reasonably infers on this basis that if an axe lost its ability to cut, it would not be an axe at all, or, rather, would be an axe only homonymously. In introducing this point about homonymy, Aristotle means at a minimum that if an instrument *x* of kind *F* were incapable of performing the defining function of *Fs*, *x* would cease to be an *F*—except, as the illustration in 412b20–1 contends, in the sense that an eye in a painting or a statue is an eye. Since they do not see, we may reasonably say that such ‘eyes’ are not *real* eyes at all.

In relying on this sort of illustration, Aristotle takes it for granted that eyes and axes admit of functional specifications. One reason for his doing so is that he is relying on his general approach to kind individuation, which involves a *functional determination thesis*. He states directly, for example, that ‘all things are defined by their function’ (*Meteor.* 390a10–15; cf. *Gen. An.* 734b24–31; *Pol.* 1253a19–25); and strikingly, when he offers this general thesis of functional determination (on which, see Shields (1999: 31–5), Aristotle regularly draws out its implications regarding the homonymy of entities which have the outward appearance of *Fs* without being, in fact, *Fs*. This is why, without having the functional capacities of human beings, or of eyes,

something which has the outward appearance of a human being, or of an eye, is not really a human being, or an eye—except homonymously. Cf. also *Part. An.* 641a18, 645b14.

It is to be observed that Aristotle offers a stark statement of his view, which he presumably expects to be initially jarring, namely: ‘The body which has cast off its soul is not a being which is potentially such as to be alive; this is rather the one which has a soul’ (412b25–7). Given the regimented parallel advanced in this section, such a body is held to be the same as an ‘axe’ which cannot cut or an ‘eye’ which cannot see, for example, the eye in a statue made of stone (412b21–2). Aristotle is not disputing that we will call such an ‘eye’ an ‘eye’; he is claiming that whatever we may call them such ‘eyes’ are in fact not eyes—except homonymously. By parallel, if we call a human body which has lost its soul a ‘body’ or a ‘human body’, we are doing so, according to Aristotle, only by habit and only incorrectly; strictly speaking, any such is not a human body—again, except homonymously.

If this is correct, however, an initially unattractive result accrues: it seems that bodies cannot be the matter of souls in a compound, since according to the homonymy principle, a human body which has lost its soul is no longer a human body, as Aristotle affirms at 412b20–1. If that is right, then the body, unlike the matter of a bronze statue, is necessarily, and not contingently enformed. This seems to upset the very hylomorphic scheme which Aristotle is attempting to apply to soul-body relations in this chapter. For more on this problem, see the Introduction to this chapter; for a fuller discussion, along with possible solutions, see the General Introduction § III.B. Fuller discussions can also be found in Ackrill (1972), Shields (1993), and Frey (2007).

**413a3–7: Second Significant Implication of Hylomorphism:** If the soul and organic body come together to yield the compound animal in just the way a pupil together with sight make up an eye, then the soul as a whole will not be separable from the body any more than sight is separable from an appropriately configured pupil. In making this determination, Aristotle answers a question posed in 403a3–27. There he had argued, rather strongly it now seems, that if there were affections peculiar (*idion*) to the soul, they would be separable, but otherwise not (see note to 403a3–27 on questions about separation of the whole soul as distinct from

the separation of its parts). Here he concludes, in a way evidently incompatible with that earlier contention, that the soul is not separable, even though, he hastens to add, some parts of it may well yet be. He clearly has reason (*nous*) in view in adding this important rider. Eventually, in fact, he decides that reason is separable, though it is disputed in what way (see notes to 429a10–14 and 429b5; cf. also 430a17 and the parallel claims of *Gen. An.* 736b21–9).

Aristotle offers as grounds for the possible separability of some soul parts that they may not be the actualities of any bodily parts: 'For the actuality of some parts belongs to the parts [*sc.* of the body] themselves' (413a5–6). In so speaking, he implies that since other parts are the actualities of bodily parts, they are not separable. He thus makes it necessary and sufficient for a psychic part's being inseparable that it be the actuality of a part of the body, or, conversely, that a soul part *x* is separable *iff* *x* is not the actuality of any part of the body.

Where Aristotle speaks of *parts* in this connection, he presumably means *faculties*. Thus:

- (1) A psychic faculty *x* is separable from the body *iff* the actuality of *x* is not the actuality of some part of the body.
- (2) The actuality of some psychic faculties (presumably including nutrition and perception) is the actualities of parts of the body.
- (3) So, these faculties are not separable from the body (413a3–5).

Then again:

- (1) The actuality of some psychic faculties (presumably including reason) is not, or may not be, the actualities of any parts of the body.
- (2) Hence, 'nothing hinders' (*outhen kôluei*; 413a7) their being separable (413a6–7).

Since Aristotle believes that it is possible that there exist actual beings which are the actualities of no body (*Met.* 1072b26–9), he cannot (consistently) be reasoning that a necessary condition of being an actuality is being the actuality of some body or other. Rather, he is arguing that *if* the actuality of some psychic capacity is also the actuality of some body, then that capacity is not

separable from the body. By contrast, if some psychic capacity does not have as its actuality the actuality of some body, then nothing stands in the way of its being separable. On the question of why Aristotle supposes that some psychic capacity might not have the actuality of any body as its own actuality, see note to 419a25.

Finally, while it is claimed here that the soul is not separable from the body, it is *not* claimed the body *is* separable from the soul; but that suggestion, given the direction of Aristotle's contention, may nonetheless seem to lie near. Given Aristotle's contention that a body without a soul is but homonymously a body (see note to 412b10–413a3), however, no such implication can obtain—at least not where the organic body, the body which is the matter of the soul, is concerned. Accordingly, for a full appreciation of Aristotle's soul-body hylomorphism, it is important to resist the tendency to read any such purport into the present passage: the soul cannot be separated from the body, but neither can the body be separated from the soul.

**413a8–10: A Surprising Coda:** Given this mutual inseparability of soul and body, the seemingly random sentence that closes the chapter has occasioned a good deal of consternation among Aristotle's commentators, both ancient and modern. Aristotle wonders aloud whether the soul bears the relation to the body that a sailor bears to a ship, when one might have supposed that a sailor at liberty, unlike the soul, can and does leave his ship.

Among the ancient commentators, we find some unsatisfactory approaches to this problem. Themistius, for instance, suggests that the soul is both an actualization of the body *and* something separable (*Paraph. de an.* 43.27). Is it not the case, however, that Aristotle has just denied that the soul is separable from the body, and so has concluded that the relationship between soul and body is precisely *not* the relationship which a sailor bears to a ship?

To Ross (1961: 214) the answer is clear: the text as we have it 'flatly contradicts' all that has preceded and so requires emendation. He proposes to add 'or' (*ê*) in 413a8, which would yield 'It is still unclear, however, whether the soul is the actuality of the body *or* [is related to the body] in the way that a sailor is of a ship.' I have not followed his emendation, translating the text as we have it: 'It is still unclear, however, whether the soul is the

actuality of the body in the way that a sailor is of a ship.’ One reason for favouring the text over Ross’s proposal is that his emendation seems merely to postpone the problem he identifies—if it really is a problem. That is, if there is a flat contradiction between saying (i) that the soul is the actuality of the body and (ii) that the soul is related to the body as a sailor is to a ship, then nothing at all is gained by saying that ‘it is still unclear’ whether (i) or (ii). For (i) has been asserted in the chapter (412a27), and if it ‘flatly contradicts’ (ii), then it is anything but unclear whether (i) *or* (ii).

In fact, although there clearly is some tension generated by some ways of understanding Aristotle’s comparison, we do not really have a flat contradiction here. A soul might be related to a body as a sailor is to a ship in several different ways, all of which are at least compatible with the dominant claims of the chapter. One fairly unlikely possibility for avoiding a contradiction would be that Aristotle has abruptly and without notice changed the topic from the separability of the soul to some other consideration, by suggesting, e.g., that it is still an open question whether the soul directs and steers the body as a sailor directs and steers a ship (cf. *Phys.* 254b30). This possibility, however remote, may be given some mild credence by a discussion below, in II 4. See note to 416b11–28.

Another, more radical possibility would have it that Aristotle had not after all meant to foreclose on the question of the separability of the soul, that he is suggesting that just as no sailor sails without sailing a ship, still, a sailor may leave the ship when not sailing. See, e.g., Bos (2003) for this more radical kind of proposal.

More modest, and more probably correct, is the suggestion of Siwek (1965) and Lefèvre (1972 and 1978) that Aristotle is thinking here in causal terms, and, having determined that the soul is the formal cause of the body, now reports that he has not yet taken a stand on the question of whether it is also its efficient cause.

It must be said, however, that though each is possible, nothing in the text actually commends any one of these suggestions. In fact, we have only the analogy itself to guide us; and despite its sounding as if Aristotle were using it to allude to an earlier or well-known trope, the analogy has no obvious precedent in Aristotle or in any other earlier author. So, although there are ways of avoiding the imputation of a contradiction to Aristotle, and thus



of obviating the move to emend, no one of them seems uniquely to be preferred over its competitors.

## CHAPTER 2

**Introduction to II 2**

Aristotle makes another fresh start in his inquiry concerning the soul by emphasizing his contention that the soul is a principle of life, the presence of which differentiates the living from the non-living. Although this has been his contention since the very beginning of the work (see 402a4–7, with note; cf. 413b11–13), only now does Aristotle begin to give some content to the claim. Importantly, he claims that *life* is ‘spoken of in several ways’ (*pleonachōs legomenon*). In so contending, he means at least that there is no single, univocal definition of *life*, no unified, non-disjunctive essence-specifying analysis capturing all the varieties of life manifested in the universe. Two points pertinent to this claim should be borne in mind: (i) although issued without argument in this chapter, the claim is evidently intended to have some anti-Platonic purport, insofar as it rejects univocity; and (ii) it does not entail that Aristotle denies that any analysis of life is possible, or that life should be understood on the model of family resemblances. It is consistent with Aristotle’s contention in this chapter that he regards life as a core-dependent homonym. On Aristotle’s treatment of life, see Matthews (1992), Shields (1999: ch. 7, and 2011), and Katayama (2008), as well as the papers collected in Mouracade (2008) and Föllinger (2010).

**413a11–20: Scientific Framework for Making a Fresh Start:** We have seen Aristotle announcing the need for a fresh start once already, at the beginning of the last chapter (see note to 412a1–6). Here he begins anew once more, now adverting, however, to the highly technical framework for scientific discovery and expression articulated in the *Posterior Analytics*. In the present context, he speaks of what is better known in conformity with reason (*kata logon*) as a kind of knowledge more secure than what is known initially, in sense experience; such knowledge conforms to the *logos* of an entity, in the sense where this means its form or essential nature (see meaning (iii) of *logos* in the glossary) (cf. *Part. An.* 653b22–30; *Pol.* 1328a20).

Although drawn along a different axis, this distinction is consonant with Aristotle's contention that in the order of discovery, we begin with what is better known to us (*gnorimôteron hêmin*) and proceed to what is better known by nature or *simpliciter* (*gnorimôteron phusei* or *haplôs*) (*APo.* 71b33–72a5; *Top.* 141b3–142a4; *Phys.* 184a16–b14, *Met.* 1029b3–12). In coming to know what is better known by nature, we uncover the essential features of things, which we discover only posterior to our knowing 'the that', which is to say that we know *that something exists*. Aristotle maintains that only when we know *that something exists* ('the *that*') can we discover the causes of its existence ('the *why*'). (For Aristotle's way of introducing this claim, see *APo.* II 1, 8–10; for an exploration of its correct understanding, see Barnes (1994) and Charles (2000: 23–57).) In the present context, he means to suggest that we have already ascertained that the soul exists; now we need to fix its extension and to discover more about its nature.

Aristotle's example overlaps with Euclid, *Elements* II 14 and esp. VI 13 (cf. *Met.* 996b14). Definitions are like conclusions because they state the *that*; the proofs arriving at those conclusions state the *why*. In the illustration employed, Aristotle has in mind the following Figures 1 and 2:

T ———

Figure 1

C ————— D

Figure 2

A square equal in area to a rectangle with sides equal to lines AB and BC will have a side equal to line BD (identifying this square is known as ‘squaring’); and it will also be the case that  $AB : BD :: BD : BC$ , so that BD will be the proportional mean—a fact explanatory of the conclusion that AB and BC will have a side equal to BD. Thus, on the sort of deductive model which Aristotle envisages, it is appropriate to seek a syllogism, or series of syllogisms, explaining the facts about the soul thus far adduced. Nowhere in *De Anima* does he in fact produce these sorts of syllogisms pertaining to the soul.

**413a20–31: The Multivocity of Life:** Aristotle claims that life is spoken of in several ways (*pleonachôs legomenon*), a locution commonly used by him when he means to assail a univocity assumption (*Top.* 129b31–130a28; *EN* 1129a23–5). He provides some reason for thinking that those who seek univocal definitions of life are misguided in the *Topics* (148a26–31), where he criticizes Dionysius for failing to appreciate that ‘life seems not to be spoken of according to one form, but belongs in one way to animals and in another way to plants.’

Aristotle does not pursue the question of life’s non-univocal definition further here (cf. 412a14, 415a22–b2), except insofar as he proceeds to list a set of individually sufficient conditions for *x*’s being alive: *x* is alive if *x* (i) thinks, or (ii) perceives, or (iii) moves (itself) in space, or (iv) moves by way of taking on nourishment, or by growing or decaying. As regards (iii) and (iv), Aristotle allows growth and decay to qualify as kinds of ‘motion’ in the broad sense, where these are distinct from spatial motion (*kinêsis kata topon*), which is motion in the most familiar sense of the term (the types of motion, discussed in note to 406a12–16 above, are four, namely ‘locomotion, alteration, decay, and growth’ (406a12–13); cf. *Phys.* 225a5–9, 226a23–b8). With the exception of (iii), this list corresponds to the hierarchy of souls discussed later in this chapter (and also at 434a22–b18; cf. *Part. An.* 687a24–690a10; *Met.* 1075a16–25). For (iii), see *Physics* 255b20–256a2, where Aristotle makes clear that it is not just anything capable of moving in space which is alive, but only those beings with an internal principle (*archê*) of motion. Though moving in space in a natural direction, rocks are not alive.

Plants are alive, however, because they plainly fulfil condition (iv). Moreover, because what is alive is coextensive with what has a soul, we may appropriately say that plants have souls (cf. 415a24–5, and note to 402a23–b8). It is noteworthy that Aristotle indicates that even the lowliest living beings, those which merely take on nutrition and neither perceive nor think, not only grow and decline, but are subject to *limited* and *patterned* growth. That is, plants do not merely grow ceaselessly without end while they live, but grow only into specifiable magnitudes and in determinate ways. Their doing so is symptomatic of their being ensouled; living things do not merely get bigger haphazardly, as forest fires do, but in structured ways, in accordance with their own internal principles, following predictable patterns subordinate to their ends, which include their own mature states and, typically, their ability to generate others of their own kind. On the patterned growth of living beings, see *Gen. et Corr.* I 5. For more on the multivocity of life, see Shields (1999: ch. 7).

**413a31–b10: The Inseparability of Lower Faculties:** Plants show that the capacity for nutrition can and does exist separately from the higher faculties of perception and reason; by contrast, among mortals, the higher faculties cannot exist without the lower. The qualification ‘among mortal beings’ (or ‘in the case of mortals’; *en tois thnêtois*, 413a33) is required, since Aristotle elsewhere commits himself to the existence of immortal living beings who think without perceiving or eating (*Met.* 991a10, 1050b16–29, 1069a30–3, 1071b3–5). This possibility by itself already shows that the form of necessity obtaining between the higher and lower orders of psychic faculties must be somehow hypothetical and not absolute. There is, thus, no contradiction in saying that a rational soul exists without a perceptual soul or a perceptual soul without a nutritive soul. Rather, Aristotle will argue on exclusively teleological grounds that the kind of necessity which obtains here will take the following general form: *if* in the sublunar realm a being *x* has a perceptual soul, *then it is necessary* that *x* also have a nutritive soul—or else *x* would not be in a position to secure its ends as the perceptual being it is, and nature would have acted in vain in so equipping it (see note to 434b9–25).

Further, just as the lower faculties of soul can exist without the higher, so within the single capacity of perception, touch alone can exist without the other sensory modalities. Aristotle often notes that some animals have only touch and no other sense (434b9–23, 435a12, 435b5–7; *De Sensu* 436b15; *Hist. An.* 489a17). For the explanation of why the nutritive soul can exist without the perceptual or intellectual souls, see 434a22–30; and on the matter of why touch can exist without the other sensory modalities within perception, see 434b9–25. In each case, again, the explanation is given in teleological terms.

**413b11–414a3: Soul Parts and their Internal Relations:** While Aristotle sometimes speaks freely of the soul as having parts (for instance just above at 413b7), his dominant tendency is to express doubt regarding whether the soul should be deemed to be the sort of thing which has parts at all (413a5; cf. 403b1, where he mentions this very question as one among those to be investigated in *De Anima*). This need not reflect any tension in his thinking, since he evidently conceives of parts differently in different contexts, much as we do. In some contexts one might fairly assert that ‘Part of her problem is her tendency towards excessive optimism,’ even while insisting in other contexts that a *tendency* is not really the sort of thing which qualifies as a part. To put it in modern terms, one might say that Aristotle sometimes thinks of parts as akin to the notion of parts employed in extensional mereology, and in other contexts uses a comparatively relaxed or loose notion. In this passage, Aristotle seems to be speaking of parts loosely, as roughly equivalent to capacities.

His usage in this connection may be usefully compared first with Plato’s similarly loose diction, and then also with his own occasionally relaxed tendency to speak of ‘parts’ (*merê*) as features which are hardly separable from the entities whose parts they are.

As for Plato, we may compare the ease in the *Republic* and *Timaeus* with which he moves between different vocabularies for both the parts of the soul and the soul as whole. The *Republic* moves indifferently between the parts (*merê*) of the soul 442b11, c5; 444b3; 577d3; kinds (*eidê*) belonging to the soul: 435b9–c1, c5, e2, 439e2), and the types or sorts (*genê*) belonging to the soul: 441c6; 443d3. The *Timaeus* speaks of the whole soul in similar terms: as a part (*meros*): 91e5; as a type or sort (*genos*):

69d5, e4, 73c4; as a kind (*eidos*): 69c7. For a review of Plato's language regarding parts more generally, with a special focus on the partition of the soul in *Republic* iv and x, see Shields (2010).

As for Aristotle's own diction, we must note his willingness to call the soul itself a part (*meros*) of a human being (e.g. *Met.* 1022a31), even though it is clearly not the case that he regards the human being as assembled from one part soul and one part body. Again, no harm accrues from his speaking in these loose ways; it is clear that 'part' (*meros*) admits of a range of meanings, and may be restricted in various technical contexts. These are distinguished by Aristotle in several passages, including especially *Phys.* 210a14–24 and *Met.* Δ 23 and 25. In these passages, Aristotle draws multiple distinctions, including a crucial one between quantitative and non-quantitative parts (on which, see note to 402a23–b8). For a rigorous attempt to take Aristotle's talk of the soul and the form more generally as part of the compound literally and strictly, see Koslicki (2006).

Once one allows that the soul may have parts in this more relaxed sense, the question arises as to whether these are parts 'in such a way as to be separate in account alone or also in place' (413b14–15). Aristotle is concerned here with whether various psychic parts or capacities are the sorts of things which can exist separately in place (*topos*) or only in account (*logos*). On the kinds of separation (*chôriston*) in general, see the introduction to I 1, as well as the entry in the glossary. His way of posing this question implies that he already agrees that perception and nutrition are separable in account (*en logô(i)*), presumably because the essence of perception is not the same as the essence of nutrition, and sameness in essence-specifying definition is necessary and sufficient for sameness in account (*APr.* 67b12; *Top.* 133b33). But are they also separable in place?

Aristotle approaches this question indirectly. As often elsewhere, he introduces the phenomenon of bisected plants and certain insects and other small animals, those capable of living after having been bisected, as illustrating various facts about the relations of psychic capacities to one another. If a plant or insect yields two living beings when divided, then, suggests Aristotle, the original entity had only one soul in actuality, but two in potentiality. Observation confirms that the entire nutritive soul is present in each of the divided plants, and that nutrition and perception travel together

in the divided insects (cf. 409a7–10, 411b19; *Met.* 1040b10–13; *Parva Nat.* 467a18, 468a25, 479a3; *Part. An.* 682a5, b30; *Gen. An.* 731a21). So, each of the new actual souls replicates the original. Indeed, we find a more fine-grained sort of connection: since each of the severed insects has perception, each also has imagination (*phantasia*) and desire (*orexis*), since anything which perceives also has a capacity for pleasure and pain. Having an awareness of pleasure and pain, however, implicates the subject of perception (*aisthêsis*) in desire (*orexis*).

Elsewhere Aristotle denies that all animals have imagination (415a6–11, 428a9–11), which seems to contradict the chain of inference here. The probable resolution turns on the two forms of imagination distinguished at 433b31–434a10, perceptual and deliberative, coupled with Aristotle's suggestion that determinateness of image may be scalar. (For the scalarity of imagination and its relevance in resolving the seeming contradiction in the present passage, see the note to 433b31–434a5).

In the present context, his main point is that separation in account does not entail separation in place. One question regarding the force of Aristotle's reasoning pertains to whether the grounds offered are simply factive, that as a matter of fact we never find creatures with perception lacking desire, or something more, some nomological connection stronger than mere contingent concomitance but weaker than metaphysical necessity of the sort required by sameness in account. Though the observations adduced here would not by themselves warrant the stronger inference, the teleological arguments of *De Anima* III 12 push for the stronger connection.

As usual, reason (*nous*) is singled out as requiring special consideration. The question regarding its status was raised early on, at 403a3–16; 408b18–29, and 413a2–7. These questions recur; and they also introduce *De Anima* III 4, the first chapter devoted to reason (429a11). Here the phrase translated as 'reason... seems to be a different genus of soul' (*psuchês genos heteron* at 413b25–6) might also be rendered, improbably, as 'reason... seems to be a different kind of thing from soul'. One might prefer the second rendering insofar as the translation offered in the text may seem to suggest that reason, a capacity of soul, is itself also a soul, with the result that Aristotle has implicated himself in some kind of category mistake by confusing a capacity belonging

to a substance with a substance proper. Since, however, he is willing to speak of the *reasoning soul* (*noêtikê psuchê*; 429a28), it is probably safe to understand him as speaking elliptically here: 'When it comes to reason, we confront a different sort of soul.' Cf. also the tentative suggestion that 'reason would seem to come about in us being a certain substance (*ousia*) and not to be destroyed' (408b1–19, with note), and also Aristotle's remark at *Met.* I 10, 1058b36–1059a10, where he claims that the perishable (*to phtharton*) and the imperishable (*to aphtharton*) cannot belong to a common genus (*genos*), which is continuous with the sort of point he is making about reason in this passage.

**414a4–19: An Ambiguity Resolved:** The soul has been broadly characterized in functional terms as 'that in virtue of which we are alive and perceive' (414a12–13), with the result that the presence of soul distinguishes the living from the non-living. Now Aristotle returns to this topic by noting that the phrase 'that in virtue of which  $x$  is  $\phi$ ' is crucially ambiguous, between: (i) the form whose presence makes  $x$   $\phi$ , and (ii) the substrate capable of realizing the form, that is, the substrate capable of becoming  $\phi$ . One may say, e.g., that Socrates is healthy in virtue of health, or in virtue of his body being such as to realize health.

The illustration regarding knowledge is a bit trickier, since the soul is potentially such as to know, and is thus, in the illustration, what plays the role of the body relative to health. To see the point of Aristotle's example, it is necessary to bear in mind that the soul can be both the actuality of some body and also itself potentially such as to be  $\phi$ . Here Aristotle is thinking of the soul as potentially such as to know. Taken together, his examples suggest that when we say that the soul is that in virtue of which one is alive, we might mean that: (i) the soul is the form whose presence makes someone alive, or (ii) the soul is a body of an appropriately disposed sort. According to (ii), but not (i), the soul is itself a composite entity, in whose own account formal and material features must be mentioned. Conversely, according to (i), but not (ii), the soul is a purely formal entity. It is consequently important to disambiguate what is meant by saying that the soul is that in virtue of which we live.

Although this section is fraught with textual difficulties, the progress of Aristotle's argument is clear enough. Indeed, we know



where we are heading ultimately, since the soul has already been distinguished from the body (the matter) and the compound of matter and form (see 412a11–21, with note). Here he adduces several additional considerations favouring this conclusion. First, the body is a capacity or potentiality (*dunamis*) and not an actualization; but the soul is what actualizes the body. Indeed, says Aristotle, the soul is that by which we live and perceive *primarily* (*prôtôs*) (414a13), where the implication is that what is capable of receiving the form is alive in a secondary or derivative sense. Aristotle often treats ‘primarily’ in this sort of context as interchangeable with ‘properly’ or ‘centrally’ (*kuriôs*), or ‘simply’ in the sense of ‘unqualifiedly’ (*haplôs*) (cf. 403b29; *Met.* 1015b11, 1016b8, 1030b5, 1031a13, 1052a18; *EN* 1157a30). The effect, then, is to treat the soul as what explains the presence of life in a primary and non-derivative way. This in turn explains Aristotle’s parenthetical suggestion that ‘the actuality of productive things seems to reside in what is affected and is disposed to receive it’ (414a11–12). He means that the body’s being actualized as a living being resides in the body, in virtue of the soul, in much the same way that learning occurs within a pupil by means of the agency of a teacher teaching (cf. *Phys.* 202a13).

Aristotle once again relies on the actuality (*entelecheia*) of the soul as form in arguing that the soul is that primarily in virtue of which we live (414a12–19). His argument runs:

- (1) If  $x$  accounts for something’s being actually  $F$ , then  $x$  is non-derivatively that in virtue of which  $x$  is  $F$ .
- (2) The soul, as form and so as something actual, rather than the body, which as matter is something potential, accounts for a body’s being actually alive.
- (3) Hence the soul is non-derivatively that in virtue of which the compound of soul and body is alive.

(3) specifies Aristotle’s reason for treating the soul as form, and so as resolving his initial ambiguity in favour of (i), that the soul is a form whose presence makes a body a living being.

**414a19–28: Summary and Conclusions:** The summary restates and reinforces conclusions established, though now from a slightly different angle. Aristotle takes the occasion of summarizing his conclusions to reach back and add a parting criticism of those

among his predecessors who had attempted to yoke random bodies and souls together without understanding the need for them to be suitably fitted to one another. Although he does not mention his targets by name, the criticism here is immediately reminiscent of the objections of *De Anima* I 3, launched principally against the Pythagoreans, though generalized to include others as well. (See note to 407b14–26.) In the current context, Aristotle regards himself as further justified in those criticisms because it has now been shown that soul and body are related as actuality to potentiality. Since  $y$  can make  $x$  actually  $\phi$  only if  $x$  is potentially  $\phi$  and suited to be made actually  $\phi$  by  $y$ , while  $y$  is actually and in a primary way such as to make  $x$  actually  $\phi$ , it follows that those who pay no attention to the commonalities required for soul-body connections have gone astray.

In saying that the soul is an ‘organization’ (*logos*; 414b27) of a suitably potential sort of body, Aristotle uses the word *logos* in its non-linguistic sense, according to which a *logos* is a structuring principle of matter, equivalent to form (*eidos*) (as earlier in this chapter at 414a9 and 414a13; cf. 403a25, with note; *Phys.* 209a21; *Met.* 1006b1, 1030a7, 1044b12, 1058b19).

## CHAPTER 3

### Introduction to II 3

Among mortal living beings, the faculties of soul are nested, so that, of necessity, what has reason also has perception, and anything with perception also has nutrition. An immediate question concerns the force of the necessity Aristotle intends when advancing this hierarchy. Plainly, in view of the qualifier regarding mortals (on which, see note to 413a31–b10), the necessity cannot be broadly logical or metaphysical: Aristotle himself thinks that there are imperishable rational beings which lack any psychic capacity beyond reason. On the form of necessity in play, see note to 414a29–b16.

A second question concerns a difficult, highly suggestive comparison Aristotle offers between psychic capacities and the series of geometric figures (414b19–415a3). This comparison grounds two important theses, both with significant consequences for the proper understanding of the soul and its capacities. The first

concerns the soul's general definability, a result which colours the various accounts of the soul advanced in the last two chapters. The second concerns how we are to conceive the intrinsic relations of the various faculties. Aristotle takes care to reject a natural, basically extensional picture, according to which the capacities of the soul are regarded as discrete components, related to one another more or less in the manner of a layer cake. On that view, each capacity is a sort of discrete, self-contained layer, and if the higher layers depend upon the lower, it is only because they rest upon them. They do not interpenetrate in any significant way. Importantly, Aristotle rejects this position by insisting that lower souls are present only in potentiality (*dunamei*; 414b28) in higher souls: 'for in the case of both figures and ensouled things, what is prior is always present potentially in what follows in a series—for example, the triangle in the square, and nutritive faculty in the perceptual faculty' (414b29–32).

Aristotle's rejection of this picture has immediate and negative consequences for those who maintain that on his account the soul is a set of capacities, where this is understood to mean *inter alia* that each capacity is a discrete element, detachable from the whole. His rejection thus has equally immediate and significant consequences for our understanding of his approach to the soul's unity.

For an introduction to Aristotle's treatment of the capacities of the soul, see the General Introduction § IV.

**414a29–b16: From Perception to Desire:** Every soul has at least one of the capacities determinative of life, and among those with more than one there is an asymmetry in terms of possession implications. The capacities enumerated here as determinative of life are: nutrition (*threptikon*), perception (*aisthêtikon*), desire (*orektikon*), motion with respect to place (*kinêtikon kata topon*), and understanding (*dianoêtikon*) (414a31–2). As Aristotle notes, he had already mentioned these matters in the last chapter, at 413a30–b10 and 413b11–13; he will return to them again late in the work at 434a22–30 and 434b9–25.

In this section of the text, Aristotle argues twice over for the first of the chapter's two main contentions, that there is a kind of implication relation between the higher and lower faculties of soul—'higher' and 'lower' at least in so far as their asymmetric dependency relations suggest. Here he argues that any creature with a

perceptual faculty also has desire. His first argument is accessible and clear, though his second is truncated and obscure. Both arguments contend that perception (*aisthêsis*) implies desire (*orexis*), the first via a connection of perception to the pleasurable and the second via the role of touch in the acquisition of nutrition.

When arguing that perception implies desire, Aristotle draws upon his not perfectly consistent terminology pertaining to the desiderative and motivational faculties of animals, rational or otherwise. For the progress of the argument, it is important to appreciate that here he treats desire (*orexis*) and the desiderative faculty (the *orektikon*) as generic terms, covering appetite (*epithumia*), spirit (*thumos*), and wish (*boulêsis*), all of which are here regarded as species of desire. In the present context, it is important to appreciate that Aristotle tends to connect the last species of desire mentioned, wish (*boulêsis*), primarily to the rational part of the soul and the first two, appetite (*epithumia*) and spirit (*thumos*), primarily to the non-rational, as at 432b5; further, he equally supposes that animals with rational desires also have non-rational desires. Hence, when he contends that perception implies appetite (*epithumia*), he likewise contends the faculty of perception present in rational animals implies desire (*orexis*). (Cf. Plato, *Republic* iv, 434d–445e), where appetite and spirit are extended to non-rational animals; and also *Rhet.* 1369a3, where Aristotle makes the good the object of wish (*boulêsis*), and *EN* 1116b23–1117a9, where he approaches the complex notion of spirit (*thumos*).

Aristotle's first argument for the thesis that the perceptual faculty of the soul implies desire exploits this connection between non-rational desire and pleasure:

- (1) If  $x$  has perception, then  $x$  has perception of the pleasurable and the painful.
- (2) If  $x$  has perception of the pleasurable, then  $x$  has appetite (*epithumia*).
- (3) Appetite (*epithumia*) is a kind of desire (*orexis*), namely desire for the pleasurable.
- (4) Hence if  $x$  has perception, then  $x$  has desire.

Evidently, as Aristotle conceives it, if (2) is to be given a true reading, then (1) requires not just that  $x$  perceive what is in fact pleasurable, but that  $x$  perceive the pleasurable *as pleasurable*. This probably explains some of Aristotle's language in stating this

argument, which is at first a bit cumbersome: 'that to which perception belongs, to this belongs also both pleasure and pain, as well as both the pleasurable and the painful' (414b4–5). His point, when unpacked, is so far perfectly reasonable, even pedestrian: all animals in fact experience pleasure and pain, and they track the pleasurable and the painful—i.e. track objects in the environment capable of providing pleasure or pain. If, though, animals track the pleasurable as pleasurable, then they attend to what *appears* pleasurable to them. If an animal seeks the pleasurable insofar as it appears pleasurable, then its doing so is a function of its having appetite, which is a species of desire.

The argument does not, then, posit a conceptual necessity between perceiving and desiring, but nor does it therefore trade on a mere accidental concomitance. Presumably, Aristotle will appeal to teleological considerations to defend (1) (see notes to 413a30–b10 and 434b9–25); otherwise, if a stronger connection is to be asserted, his claim will fail, since it is plainly metaphysically possible for an animal to have perception without therefore having perception of the pleasurable. He will need at least this much in favour of (1), however, since otherwise it might just be an accidental concomitance that (1) is true, which in turn would result in its being the case that it might also then be an accidental concomitance that beings with perception (*aisthêsis*) also have a faculty of desire (*orexis*). Presumably Aristotle is after a stronger conclusion than just that.

The argument is open to other queries as well. We might allow (3) as somehow analytic, or as harmlessly stipulated: appetite is a desire for the pleasurable; so, in line with the final conclusion (4), whatever has appetite, has desire. Yet such a stipulation would not show, in any but the most trivial of senses, that whatever has appetites has a *faculty* (*dunamis*) of desire—unless this just collapses into the claim that whatever desires anything is able to desire things. In that case, however, Aristotle's argument would be otiose: Alicibiades has the ability to love and be loved, as well as the ability to act with vanity, but Aristotle nowhere suggests that he therefore has a love faculty, an *erôtikon*, or a vanity faculty, a *kenodoxikon*. If this is all that were at stake, there would for every ability to  $\phi$  be a trivial transformation to the existence of a  $\phi$ -*tikon*, a  $\phi$ -capacity, and no argument of the sort being offered would be necessary. Aristotle is thus presupposing a

stronger notion of capacity (*dunamis*), but he does not characterize it in any general or abstract way here.

The second argument tying perception to desire, which runs from 414b6–16, is less clear and a good deal more complex. It trades on the fact that in Aristotle's view any creature with perception has at least the sense of touch (cf. 434a30–b8). Only the outline of the argument is reasonably clear:

- (1) If  $x$  has a faculty of perception, then  $x$  has at least the sense of touch.
- (2) Touch is employed in the identification of food (in part because taste turns out to be a kind of touch; cf. 422a8, 423a17–20).
- (3) If  $x$  identifies food, then  $x$  identifies an object of appetite.
- (4) Hence, if  $x$  has perception,  $x$  has appetite.

If this is the argument's main thrust, then it adds little to the first argument; it is, rather, a specification of something already given: food is an object of appetite.

That said, there are some obscurities in the details of the argument worth mentioning, because of their being likely to cause confusion. As translated, the point about touch having other objects co-incidentally is not strictly relevant to the argument, though it is not altogether irrelevant either: 'Touch is perception of other sensibles co-incidentally' (414b9–10). Presumably, Aristotle is anticipating an objection to the effect that touch is not restricted to food, since we can also touch objects with colours, sounds, and scents. His response is that we do not touch colours, sounds, or scents as exclusive (*idia*) objects of touch. Even so, we do touch flavours, since taste will prove to be a kind of touch (cf. 422a8, 423a17–20). Aristotle will return to the issue of exclusive versus co-incidental objects of perception in II 6.

**414b16–19 Motion, Imagination, and Understanding:** Aristotle opened the chapter by listing not only the faculties he has dwelt upon thus far, perception, desire, and the nutritive faculty, but also motion with respect to place and understanding (414a31–2). He now mentions the two previously ignored capacities and observes that imagination (*phantasia*) has an unclear status. Presumably its unclarity derives first from the question of whether it is a fully fledged capacity, on par with the others listed and having

its own distinctive individuating objects; but it is equally problematic because of its complicated relations to the other faculties of soul. For Aristotle's treatment of imagination, see III 3. On the relation of imagination to reason (*nous*), see 403a8; on its relation to perception (*aisthêsis*), see 433b31–434a2. There Aristotle will quite reasonably puzzle over whether animals which have only the sense of touch should be supposed to have imagination, that is, whether perception as such, in its most rudimentary form, implies imagination.

In the current passage, Aristotle seems oddly tentative about the existence of rational creatures distinct from and superior to humans. He affirms their existence quite clearly at *Met.* 1073a23–34 and again at *EN* 1141a34–b1. Perhaps he means to suggest in the present context only that such beings are not in the purview of the current discussion regarding the implication relations between psychic faculties. This is, in any event, a point he makes clear towards the end of the chapter, at 415a9 (cf. 413a32).

**414b19–415a11: Souls and Figures: Consequences for Unity and Definition:** In his agenda-setting I 1, Aristotle had set down as a central question for investigation whether there is but one definition of the soul, or rather several, each corresponding to a distinct class of beings, one for dogs, another for humans, and still another for god (402b5–9). He now addresses this question by comparing the hierarchy of souls to the succession of figures, contending that the nutritive faculty of soul is present *in potentiality* in the perceptual soul, and the perceptual in the rational, in the way that a triangle is present in a square (414b30–1). He maintains further that there will be a general account of the soul taken as a whole in much the same way that there is a general account of figure spanning triangles, squares and on up in a series—an account which is not also an account of any given kind of figure. From this comparison Aristotle has often been understood to deny that a general account of soul as such is possible (Rodier (1900), Siwek (1965), Ward (1996)). Bolton (1978) offers a more nuanced assessment.

Such an understanding of the comparison of souls and figures overstates the case. To begin, any such contention would be jarring immediately after Aristotle has just himself provided not one but several general accounts of the soul (412a27–b1), if at

times with a tinge of reluctance, as at 412b4–6. Further, so strong a reading in any case misrepresents what is asserted here. Aristotle does not in fact conclude that it is impossible to forge a general account of soul; on the contrary, he maintains that a common account *is* possible for souls, as for figures, but insists that it would be ludicrous (*geloion*; 414b25) to seek such an account ‘while neglecting what is of this sort’ (*aphentas ton toiouton*; 414b27–8)—namely what is distinctive of the diverse kinds of souls corresponding to the variegated living beings we encounter, beings whose distinction from one another turns precisely upon the level of and kind of psychic capacity they manifest.

In addition to the language of this passage, an instructive parallel may be found in the *Politics*, where Aristotle draws an analogous inference about citizens and governments (1275a33–b1), which he holds in a similar way to be arranged in a series (cf. *EN* 1096a19–35; *EE* 1218a1–8; *Met.* 999a6–10 for analogous claims in other arenas, usually advanced with an anti-Platonic purport). One can offer a general definition of ‘government’ or ‘citizen’, but the common account is thin, and scarcely (*glischrôs*; 1275a38) captures anything about, say, democracy or tyranny or monarchy. There is a sense in which a feudal serf of tsarist Russia and a capitalist entrepreneur living in Tokyo in the twenty-first century are both citizens—but we will not learn much about the political life of either without going on to provide content to the sort of citizen each is. So too with the soul: without specifying what kind of soul we are considering, implies Aristotle, our common account, however correct, will not yield much information about the life of a given ensouled being.

For these sorts of reasons, Aristotle focuses attention in his psychology on the capacity-driven approach he prefers. An account of the perceptual soul is more informative, because more contentful, than an account of the soul in the abstract, something common to all levels of soul but not a complete account of a nutritive or a perceptual or a rational soul. In comparing souls to figures, Aristotle shows himself to have a primary interest in questions pertaining to the nature of the soul’s faculties, but then also, in a less pronounced way, to the relation of the faculties to one another.

Here, on the question of the relation of the faculties to one another, Aristotle contends only briefly that among perishable



beings souls form a kind of hierarchy, given in terms of asymmetries of implication of existence. He offers a fuller justification for this contention, given in teleological terms, in III 12–13 (see the chapter Introduction to III 12, along with note to 434a22–434b8).

The comparison of souls and figures also has important consequences pertaining to the unity of the soul. It has been tempting for some among Aristotle's interpreters to regard the hierarchy of souls extensionally, so that a rational soul is conceived as a set of capacities stacked one upon the other in the manner of a layer cake (see the General Introduction § IV, n.9). He insists, however, that just as a square is not an actual triangle with a spare leg, or, going up the hierarchy of figures, that any given  $n$ -sided figure has an actual  $n-1$  figure inscribed within it, a perceptual soul is not merely a nutritive soul with a perceptual faculty stacked on top. Rather, the lower-soul capacities are present in the higher souls only in potentiality (414b28–32). The exact purport of this claim, and of the comparison with figures in general, turns, of course, on the sense in which prior figures are in posterior figures in potentiality.

Two interpretations have seemed attractive: (i) a square has two triangles discernible in it, sharing the diagonal as a side, a pentagon a square inscribable within it, and so on; and (ii) an  $n-1$ -sided figure is prior in an  $n$ -sided figure in that an  $n-1$ -sided figure requires fewer angles for its construction, namely  $n-1$  rather than  $n$  (triangles have three angles, squares four, and so on up the series). In this respect, the priority is akin to the series of numbers discussed at *Met.* 999a1–16, where numbers are explicitly compared to figures in terms of priority and posteriority.

Of these interpretations, (ii) seems preferable. The point thus understood suggests that souls of any number of capacities are unities, with any lower-order souls discernible in higher-order souls only potentially in the sense that a removal of a higher capacity will generate a lower-order soul which is itself an actuality and a complete psychic unity. By contrast, a higher-order soul is not discernible in a lower-order soul. Looked at another way, Aristotle's point is simply that higher-order souls actually manifest lower-order capacities, whereas lower-order souls trivially do not manifest higher-order capacities. Yet he claims, crucially, that these lower capacities are present only in potentiality (*dunamei*; 414b29) in the higher. He thus wants to insist on an asymmetry

between higher- and lower-order souls, but to do so without endorsing an extensional or aggregative account of souls; such approaches are inconsistent with the sort of unity he envisages for souls as forms. This feature of Aristotle's conception of the soul generated a good deal of discussion in later, medieval Aristotelianism, where it was often assessed with a particular emphasis on the question of unity. Of course, the question of unity will be conditioned in the first instance by the conception of 'parts' (*merê*) we may have in view when posing the question. For Aristotle's distinction between quantitative and non-quantitative parts, see note to 402a23–b8. For a treatment of how soul capacities came to be treated as present only in potentiality, or only 'virtually', see Shields (2014); for an instructive discussion of souls and soul faculties in general, see Perler (2015).

Perhaps if we connect the two main consequences of the chapter we can better appreciate why one faculty, the faculty of desire (*orektikon*), will manifest itself differently in rational and non-rational animals: a rational soul will, as rational, have a richly articulated conceptualization of the objects of its pursuit unavailable to a non-rational animal. This is, then, another important way in which the hierarchy of souls is not merely extensional: higher-order faculties bleed into lower-order faculties, with the result that lower-order faculties will be altered by their subordination to the higher. A near implication seems to be that John Stuart Mill and his pig will have, or will have available to them, distinct perceptual experiences when sharing a bottle of St. Emilion. Later in *De Anima*, Aristotle will also distinguish two ways in which the imagination (*phantasia*) is present in rational and non-rational animals (see note to 433b19–30), and then will even proceed to offer more fine-grained accounts of the way in which imagination is to be understood in connection with the deliberative faculty, on which, see note to 434a5–10.

**415a12–13: Final Conclusion:** The last sentence of the chapter looks forward to the accounts of the capacities of the soul which begin in earnest in the next chapter, starting with the nutritive soul. Importantly, the final purport of the chapter ties the investigations of the sundry capacities of the soul to the study of the soul itself: to learn what is substantive about the soul is to learn about the nutritive soul, or the perceptual soul, or the rational

soul; and to learn about these souls is to learn about the faculties which dominate and define them.

## CHAPTER 4

**Introduction to II 4**

Aristotle embraces the procedure articulated at the end of the last chapter by conducting his substantive inquiry into the soul by focusing first on its most fundamental and common capacity: the nutritive and generative capacity. Despite its having these two distinct functions, Aristotle speaks of it as a single capacity of soul. This is the capacity which, among mortals, denotes the presence of life; it thus serves to differentiate the living from the non-living.

In this chapter, Aristotle settles a question of method raised in the agenda-setting I 1, concerning how best to approach the faculties of soul, there called 'parts' (*moria*): are we to consider first the part, its activity, or its object (402b10–14; cf. notes to 402a23–b8, 402b9–16, 418a11–17, and 429b10–21)? He now answers that we consider the objects first, then the activity, and finally the part or capacity. This order of inquiry derives from the individuation conditions assumed by Aristotle for psychic capacities (on which, see Everson (1995)). What makes hearing one sensory modality and seeing another is their having exclusive objects which are necessarily discrete: no colour is in its nature a sound. Extrapolating from the sensory modalities, the same principle of individuation will pertain to the distinct capacities of soul: what makes perception distinct from thought is that perception detects perceptible objects and reason detects intelligible objects. This method then raises a question as to the appropriate objects of the nutritive soul: in this chapter, Aristotle contends that it is food, or nutriment (*trophê*—a word, like 'nourishment' in English, which can be used to denote either food or the process of being nourished). Interestingly, for something to be counted as food, it must already be characterized in terms of its ability to provide nourishment, that is, with reference to its use relative to a living system outside itself (see note to 416b9–11). To some extent both Greek and English diction reflect this fact: for carnivores, the flesh of other animals is *meat*; and plants cultivated for food are *crops* (cf. *Phys.* II 218b17–32).

**415a14–22: Some Methodological Precepts:** This section answers some of the questions posed in I 1, at 402b10–14, regarding how best to approach an analysis of the capacities of the soul. Aristotle contends that we begin first by identifying the objects correlative to a capacity, turn next to the activity determinative of the capacity, and then finally advance an account of the capacity itself. This order of explication is not recommended as a matter of convenience. Rather, a capacity is essentially a functionally defined entity individuated by its correlative objects (see the Introduction to this chapter).

This understanding assumes that the ‘priority’ mentioned in 415a18–22 of activities to capacities and of correlative objects to activities is definitional and not merely epistemic, that is, that Aristotle is here relying on a general functional determination thesis rather than on a priority in the order of our understanding alone. This understanding is reflected in the translation of the phrase *kata ton logon* at 415a19–20, as priority ‘in account’. An alternative, acceptable translation, favoured by many of Aristotle’s commentators treats *kata ton logon* as priority ‘in thought’. This may (but perhaps need not) be because there is a more narrowly epistemic understanding of his procedure for individuating capacities, to the effect that we tend, when thinking about the soul’s faculties, to begin by thinking of its objects first. While this approach is possible linguistically, it obscures Aristotle’s motivation for grounding activities in the priority of their objects, which is given here in terms of the priority of actuality to potentiality, on which, see *Met.* 1049b10–17 and 1071b12–1072a18.

It is difficult to avoid circularities, whether vicious or not, in Aristotle’s procedure of faculty individuation, if, that is, the objects in terms of which they are individuated are to be understood as both necessary and sufficient for that task but then are also characterized in terms of those very tasks. If we accept, e.g., colour as the object of sight, and so as individuating sight from smell and hearing, we run into difficulty if we then proceed to define or even characterize colour in terms of its being the sort of quality detected by sight. For an instance of this threatening circularity in the case of the nutritive soul, see note to 416b9–11.

A second sort of worry concerns Aristotle’s willingness to treat the nutritive and generative soul as effectively rooted in the same capacity. If discrete objects are sufficient for distinct activities,

which are in turn sufficient for distinct faculties, then we should expect the nutritive and generative faculties to be distinct. Yet Aristotle does not conceive of them as distinct. On this worry, see the following note, to 415a22–b7.

**415a22–b7: The Functions of the Nutritive Soul:** The nutritive soul, the most natural and common soul whose defining capacity is shared by all living things, has a dual function: it not only processes food but generates others like itself. (Elsewhere Aristotle goes so far as to say that the nutritive soul *is* also the generative soul, at *Gen. An.* 740b29–741a2; he also explores this same theme in more detail below at 416b11–28.) This may be thought to violate a reasonable definitional stricture laid down elsewhere to the effect that each functional kind has but one essential function (*Pol.* 1252b1–5), and indeed, it seems to run foul of the suggestion that faculties of the soul are individuated by their objects—if, that is, discreteness of object is thought to be necessary and sufficient for distinctness of faculty. Here, however, Aristotle seems to be thinking of nutrition and generation as twin aspects of the same overarching function, one serving the drive for self-preservation.

This would explain why he moves immediately to suggest that living beings seek immortality by their participation in the eternal species via generation, a point akin to one given voice by Plato (*Symp.* 207a–d, *Laws* 721b–c) and repeated by Aristotle at *Gen. An.* 731b24–732a1. The generic function of self-preservation manifests itself in the individual qua individual by its eating, and in the individual qua member of an everlasting species by its reproductive activities. This propensity towards self-propagation or preservation is common to all living beings.

Still, Aristotle notes, there are mutants of various kinds and immature members of every species whose drive towards reproduction is inoperative. He also at the same time seeks to set aside beings which are ‘spontaneously generated’ (415a27–8), which reflects his false but empirically motivated belief that various animals, including insects, generated out of putrefying matter (*Hist. An.* 539a22–5, 569a13–19, 25–6, 570a2–10; *Gen. An.* 763a24–b5). These sorts of cases seem to show that beings who take on nutrition are not extensionally equivalent with beings capable of engaging in

generation. So, these capacities cannot be even extensionally equivalent, let alone identical.

Aristotle's response to this worry is not completely clear. In the case of monstrosities and the maimed, he tends to blame deficient matter; immature members of the species are not yet completely actual, and need to become so before engaging in reproduction (cf. *Gen. An.* iv 4). Perhaps, then, he takes himself to be treating only the faculties of fully normal or fully functioning members of a species. That there is a normative dimension to his approach seems confirmed by Aristotle's elsewhere characterizing the deformed as 'contrary to nature' (*para phusin*) (*Gen. An.* 770b9). Here, Aristotle uses correlative language when introducing the everlasting and divine as what 'everything desires, and for the sake of that everything does whatever it does in accordance with nature (*kata phusin*)' (415b1-2).

The parenthetical remark about two senses of 'that for the sake of which' (*hou heneka*; 415b2) is repeated just below at 415b20-1; it may be an interpolation in one or both of the passages; in neither is it required for good sense, though it is perfectly relevant to both. In any event, the point is that we might specify one of two different states of affairs when citing a final cause: the subject who benefits or the benefit which is being sought. (He who writes music 'only for the sake of entertainment' might, but need not, find his own music entertaining.) This distinction took on an important life of its own in later Aristotelianism, and this passage was routinely cited as its first expression (see, e.g., Suárez, *Disp. Met.* XXIII 2.1); it was commonplace in medieval philosophy to distinguish an end considered as *finis cuius*, the end sought, e.g. health, and *finis cui*, the beneficiary for whom the end is sought, e.g. a patient whose health is to be restored.

Aristotle would reasonably be prompted in the current context to apprise his readers of the distinction, since it makes sense of his suggestion that each living thing seeks to 'partake of the everlasting and the divine', but only 'insofar as it is able' (415a30-b1). The activity of reproduction leads to a state whose attainment is sought (= *finis cuius*), though it is not a state from which the actor is a personal beneficiary (in this case the actor is not the *finis cui*).

**415b8–27: Soul as Cause and Substance:** This section digresses from the main thread of the chapter, though as a self-contained excursus it is especially rich in its characterizations of the causal character of the soul. The soul is a cause (*aitia*) and principle or source (*archê*) of the living body. Importantly, the soul is in these respects prior to the body, a consequence sometimes underappreciated by those interpretations of Aristotle's hylomorphic approach to soul-body relations which assimilate the soul to a quality or feature of the body, as the form of a bronze statue might be thought of as a quality or feature of some quantity of bronze. (On the priority of the soul to the body, see Shields (2009).).

The treatment of the soul as a cause and source is in keeping with Aristotle's general hylomorphism; the soul has the features which Aristotle imputes to all substantial forms. Here, Aristotle makes clear that the soul is a cause of the living body in three of the four ways in which things can be causes: it is the formal, final, and efficient cause. That it is not the material cause is plain enough, since it is rather the body itself which is the material cause of a compound. Aristotle groups the formal, final, and efficient causes together in distinguishing them from the material cause, elsewhere suggesting, as here, that one and the same entity can be the formal, final, and efficient cause of another (*Phys.* 194b16–35, 198a14; *Met.* 983a26, 1013a24–b3).

The current passage is usefully read in conjunction with *Generation and Corruption* I 5, where Aristotle makes clear that form as essence is identified with the final cause (*Gen. et Corr.* 335b5–7), just as the soul is in this passage. More generally, the account of growth in that chapter is continuous with the present discussion, and shows in greater depth why substantial forms cannot be identified with qualities. A growing organism has numerically one and the same form even while its qualities alter (*Gen. et Cor.* 321b28–34). (For more on Aristotle's general soul-body hylomorphism, see the General Introduction § III.A.)

Aristotle introduces the soul as the formal, final, and efficient causes as follows:

*Soul as Formal Cause* (415b12–15): Aristotle does not in fact assert in this passage that the soul is the form of the living body, but says rather that it is its substance (*ousia*). Even so, he regularly

identifies form as the substance of that whose being it provides (*Met.* 1041a27–b10) and has already in any case identified the soul as the substance *as form* at 412a20. He also refers to it as organization (*logos*) of the body, a locution sometimes used interchangeably with *form* (*eidōs*; cf. 403a25, 403b2; *Phys.* 209a21; *Met.* 1044b22, 1058b19).

The argument in this section provides much more content than was given in the bald assertion of 412a20. Aristotle argues:

- (1) The substance (*ousia*) of *x* is the cause of *x*'s being (or essence, *aition tou einai*; 415b12–13).
- (2) In a living system, being (or essence) is the same as being alive (415b13).
- (3) Hence, the *ousia* of a living system is the cause of its being alive.
- (4) The soul is the cause of being alive (cf. 414a12).
- (5) Hence, the soul is the *ousia* of a living system (415b13).

While each of the premises invites scrutiny, only (2) is a novel and substantive claim, one which helps ground the assertion made at 412a20 regarding the soul as form. Aristotle says, with an arresting concision that 'and living is being for living things' (*to de zēn tois zōsi to einai esti*; 415b13). One immediate consequence is that every living being is essentially alive: its being or essence (*to einai*) is its being alive.

Otherwise, it should be appreciated regarding (1), the claim that the substance (*ousia*) of *x* is the cause of *x*'s being is to be taken predicatively, so that what is being said, more fully, is that the substance (*ousia*) of *x* is the cause of *x*'s being  $\phi$ , where  $\phi$  is any substantial predicate. So, to expand, the substance of a human is the cause of that human's being human. This cause is the formal cause. In arguing this way, Aristotle draws directly on the conclusion he offers regarding substance as form in *Metaphysics* Z 17, especially 1041b27–8: 'this is the substance of each thing, for this is the primary cause of its being  $\langle \phi \rangle$ ' (cf. also *Met.* 1017b14–16).

*Soul as Final Cause* (415b15–21): Aristotle's language here is confident and striking. He treats the soul as an end in a very strong sense: the body is an *organ* of the soul, that is, an instrument used to bring the soul's activities to fruition. Further, the view here is once again continuous with the difficult discussion of



*Metaphysics* Z 17, and seems to draw upon it (especially 1041a27–32, where the formal cause being sought is said also to be the final cause of the substantial being whose form it is).

The fuller discussion in *Metaphysics* Z 17 makes clear that the presence of an individual soul explains what makes so much matter a synchronic and diachronic unity. In and around a living body there are countless discrete material interactions and causal processes. What selects the relevant subset of those interactions and processes as *bodily* processes is, Aristotle contends, their subordination to the singular end provided by the soul. It is for this reason and in this sense that he maintains that the body is an organ of the soul. The body is posterior to the soul in that its identity conditions are parasitic upon it. For similar remarks about the soul's relation to the body, see 407b25 and *Part. An.* 642a9–11, with 645b14. For an account of the posteriority of the body to the soul, see Shields (2009) and for the broader background of the relation between *Metaphysics* Z 17 and the substantiality of the soul, see Shields (2008).

*Soul as Efficient Cause* (415b21–6): The presence of the soul equally accounts for a full range of motions and alterations, ranging from locomotion, growth, decay, and even perception (*aisthêsis*), which is introduced here as a sort of alteration: 'perception seems to be a sort of alteration' (*aisthêsis alloiôsis tis einai dokei*; 415b24). Perhaps Aristotle means only that perception is an alteration—sort of; his Greek is ambiguous on this point, since the word '*tis*' here translated as 'a sort' might also be rendered as 'sort of'—the so-called *alienans tis*. In any event, Aristotle eventually will deny that perception is properly thought of as a kind of alteration (416b33–4, 431a5, with note to 416b32–417a2; see also the General Introduction § IV.B).

Whatever type of alteration perception may be, 'nothing perceives which does not partake of the soul' (*aisthanetai d' outhen ho mê metechei psuchês*; 415b24–5). As above at 415b29, Aristotle uses a verb with Platonic resonances in this passage: 'to participate in' (*metechein*). He elsewhere criticizes Plato for using this word as a way of describing the connection between sensibles and Forms (*Met.* 990b31, 1037b19), though he finds it useful himself in other contexts, as when speaking of the logical relations between definitions (*Top.* 121a12). Here the word seems to be used in a fairly non-technical sense (cf. 406a12, 22, 410b23,

412a5, 416b9, 433b30). One might also render it as ‘has a share in’, but that has been reserved for the similar verb *koinônein* (‘to have a share of’ or ‘to have in common with’) used just below at 415b27.

However that may be, Aristotle here introduces little argument for his claim that the soul is an efficient cause, mainly relying instead on the observation that all and only living things engage in a full range of activities. Since soul is coextensive with life, it is plausible to regard the soul as the relevant causally sufficient factor. Earlier, in I 3 he had introduced as a datum that the soul moves the body by means of decision (*proairesis*) and reasoning (*noêsis*) (406b24–5; with note to 406a16–b25).

#### **415b28–416a18: Against Empedocles; Against Heraclitus (?)**

Aristotle’s criticism of Empedocles has several related well-springs. First, and foremost, an account of the body’s unity given only in terms of the elements is insufficient. If, as Aristotle supposes, the various elements have natural directionalities (fire up and earth down), then something in addition to the mere presence of the elements is required to explain unity. If left to their own devices, earth and fire would head off in their naturally opposite directions. What principle holds them together? According to Aristotle, this principle is the soul (416a8). What is more, he maintains, any attempt to explain perceived directionality in terms of the basic tendencies of the elements is unduly anthropomorphic: the top of a plant is not its head, nor its blossom its mouth. Organs are functionally individuated, with the result that the roots of a plant, through which nutrition enters the plant, are analogous to the mouth (cf. 412b3; cf. *Part. An.* 686b18).

Another sort of elemental account challenges Aristotle’s preferred efficient cause of nutrition and growth, which is, again, the soul. Aristotle does not name the proponent of this account, but likely has Heraclitus in mind as his target (cf. *Met.* 984a7–8). Perhaps, because alone among the elements, fire is seen to spread and thus is said to ‘grow’ and also to ‘consume’ what it finds in its path, one should identify fire as the cause of nutrition and growth in living beings. Aristotle will himself implicitly deny that this way of speaking of fire can be both literal and correct at 416b9. Here, though, he is more concerned to resist any suggestion that fire could be a sufficient explanation of nutrition and growth,

because fire spreads in an unpatterned and unconstrained way, flowing towards the combustible without end, whereas living systems nourish themselves in patterned, limited ways, reaching maturity and then ceasing to grow. Instead, fire is at best a kind of co-cause (*sunaition*), a term Aristotle elsewhere identifies as a necessary condition, a mere *sine qua non* (e.g. *Met.* 1015a20).

His rejoinder is, then, partly conciliatory: perhaps fire, or heat, is required for processing food in nutrition; but the presence of fire cannot alone suffice to explain the life process of nutrition. Aristotle himself allows near the end of the chapter that the soul, as final cause, employs heat in the digestion of food (416b27–8). Typically, then, Aristotle's complaint is not that the Heracleitean-style account is positively wrong-headed, but only that it is woefully incomplete. This sort of sentiment is equally the purport of the final sentences of his criticism: Aristotle closes by making clear that he understands the suggestion being rejected to be a species of simple materialism, and therefore as incomplete in view of its failure to specify the formal cause (416a15–18).

**416a19–b9: A Return to Topic: A Difficulty about Food:** Though differently related to the chapter's main topic, the nutritive soul, both the criticisms of materialism (415b28–416a18) and the excursus concerning the soul's status as a cause of the living body (415b8–27) have been somewhat digressive. Aristotle now returns solidly to the topic of the nutritive faculty by raising a difficulty about nutrition. Though obscure in some particulars, the dominant thrust of this section is clear enough.

Since the same capacity of the soul is responsible for nutrition and generation (see notes to 415a22–b7 and 416b11–28), it is necessary to be clear in the first instance about nutrition, because it is in virtue of this feature in particular that the function in question is distinguished from other capacities of the soul (perhaps, because, as we have seen at 415a27–8, not everything living is in fact capable of reproducing). Aristotle notes that some (including, presumably, Empedocles; frs. 62 and 90) think that nutrition, like growth, occurs by like affecting like, while others think the opposite, that nutrition is a case of what is unlike affecting what is unlike (cf. *Phys.* 260a26–b4). Aristotle adjudicates this dispute in a somewhat prosaic way, by pointing out that both sides have a point: food at the beginning of its journey is

unlike flesh, though once it has been digested to the point where it can be affixed to flesh, what was food has become like flesh. Cf. *Gen. et Cor.* 322a3.

#### 416b9–11: Eaters and the Eaten: A Methodological Circularity?

This passage presents a potential problem of circularity for Aristotle, and it is one which affects his general methodological principle of individuating capacities by their activities and activities by their objects. The methodological precept endorsed in 415a14–22 (see the note as well as the Introduction to this chapter) as applied here has it that the nutritive capacity of the soul is individuated by its activity, namely the nourishing of the ensouled body, which activity is in its turn to be individuated by its object, namely food (*trophê*). Now it turns out that food can be characterized only with reference to (or relative to, *pros*; 416b11) an ensouled body—that is, a body with at least a nutritive soul. The problem cannot be immediately set aside by saying that food is only co-incidentally related to the nutritive soul, in the way that a man is only co-incidentally a slave (see *Cat.* 8a13–28); for Aristotle insists that food is not only co-incidentally related to the nutritive soul: food is itself a functional kind and is essentially such as to provide nourishment to living beings.

Aristotle could either embrace or attempt to elude the circularity. Eluding it would involve noting that capacities of the soul are *individuated* by their objects and not therefore *defined* in terms of them. Perhaps there is no circularity in claiming that the *xs* are individuated by the *ys*, even though the *ys* are essentially defined in terms of the *xs*. Embracing the circularity would be to allow that capacities and objects are after all interdefinable, but then to aver that such circularities are benign: possibility is defined only in terms of necessity and vice versa, as are the positive and negative charges of particles. Indeed, given the commitment to the irreducibility of life reflected in Aristotle's rejection of Empedocleanism, it is to be expected that for him psychic capacities cannot be defined in terms of predicates not drawn from life's own domain.

That leaves a question, however, of how the objects could yet be *prior* to the activities and faculties, as they must be if they are to individuate them. Aristotle does not face this problem in *De Anima*, though he does address it squarely in *Categories* 7, his chapter on relatives (*pros ti*). There he appeals to two related

considerations in arguing for the priority of objects of perception (*aisthêta*) over perception (*aisthêsis*): (i) destruction of the objects of perception leads to destruction of perception; and (ii) possibly, objects of perception could exist without perception (*Cat.* 7b35–8a12). Thus, he concludes: ‘hence, the object of perception (*aisthêton*) would seem to be prior (*proteron*) to perception (*aisthêsis*)’ (*Cat.* 8a10–12). This suggests an attempt to elude the circularity which exploits the fact that ‘object of perception’ (*aisthêton*) might be taken factively (= something perceived) or modally (= something perceptible). To apply this sort of response to the current problem would involve Aristotle in allowing that *food* (*trophê*) might exist even though no living systems capable of existing in fact exist.

**416b11–28: The Nutritive Soul as Active and as Generative:** An ensouled body is both an essentially living being and a quantity. Insofar as it is a quantity, it can be augmented in bulk; but its bare augmentation is not growth, since growth differs from getting bigger in being patterned and structured (cf. the criticisms of Empedocles at 415b28–416a18). Growth, unlike mere getting bigger, involves the active appropriation and subordination of nourishment for the preservation of a living substance. A pile of rocks alongside a garden gets bigger with the addition of each new rock, but is not fed in the process. In this passage, Aristotle relies heavily on his metaphysics of growth, a topic more fully explored in *Generation and Corruption I* 5, 322a16–33.

According to that broader account, nutrition is a phenomenon of life, belonging to all and only (mortal) living systems. Living systems are, crucially, *active* in the procurement of their own nourishment. Aristotle ascribes the activity of nourishment primarily to the nutritive soul. This sort of ascription helps explain the difficult metaphor intended to distinguish two senses of ‘that by which it is nourished’ (*hō(i) trephetai*; 416b25–6). Aristotle contends that three factors must be present in a process of nourishing: (i) that which effects the nourishing (*to trephon*), that is, the primary or nutritive soul (*hê prôtê psuchê*); (ii) that which is nourished (*to trephomenon*), that is, the body which has the soul (*to echon tauten sôma*); and (iii) that by which it is nourished (*hō(i) trephatai*), the food (*hê trophê*). He then notes that (iii) might rather be understood still more broadly: the expression ‘that by

which it is nourished' (*hō(i) trephetai*) might also mean the instrument employed in procuring nourishment. What is it by which the helmsman steers? Aristotle suggests that one might with equal correctness point to either of two different candidates: the helmsman's own hand or the ship's rudder. Similarly, he now suggests, in subordinating food to its own ends, the nutritive soul employs heat for the purposes of digestion. So, 'that by which it is nourished' (*hō(i) trephetai*) might be the food, or it might be the heat used in effecting digestion of the food.

In offering this sort of analogy, Aristotle understands himself to be justified in relying on two theses advanced earlier in the chapter, that the soul is the efficient and final cause of the ensouled body (see note to 415b8–27). It is just barely possible that Aristotle's analogy here also sheds some light on the otherwise perplexing question which closes II 1. Looked at through the lens of this passage, his question there concerned the issue of whether the soul was an actuality of the body in the sense of being its efficient cause. His answer here, if it is any sort of answer to that question, is that it is.

In any event, Aristotle points out that nutrition finds its ultimate end not just in the organized growth of the organism, but ultimately in generating another like itself. Because it is appropriate to name things after their functions (it is appropriate to call a tin opener a 'tin opener'), the nutritive soul is also appropriately called the generative soul (416b25). In calling the nutritive/generative soul 'primary' (*prôtê*; 416b25), Aristotle evidently means to call attention to his contention that the nutritive soul is the most basic kind of soul in two senses: it is shared by every living mortal (415a24–5) and it is presupposed by the higher capacities of soul (413a30–b10, 413b11–13, 414a29–b16, 434a22–30, and 434b9–25).

**416b28–31: The Appropriate Treatise:** Aristotle closes the chapter by promising a fuller treatment of the sketch of nourishment advanced here. No treatise on that topic survives, though Aristotle elsewhere refers to the existence of one even more definitely than he does here (*De Somno* 456b6; *Meteor.* 381b13, with more tentative references also found in *Part. An.* 650b10, 653b14, 674a20, 678a19; *Gen. An.* 784b2).

That said, as regards the metaphysics of growth (as opposed to the physiology one might expect in the *Parva Naturalia*), it is clear that this entire chapter draws heavily on *Generation and Corruption*

I 5; and as for the metaphysics of substantial unity, this chapter is importantly continuous with the conclusions reached in *Metaphysics Z* 17. Both of these chapters are usefully consulted as background for the current chapter.

## CHAPTER 5

### Introduction to II 5

Following his treatment of the most fundamental kind of soul, the nutritive soul, Aristotle turns to a full and rich explication of perception (*aisthêsis*) and the perceptual soul (*aisthêtikê psuchê*). Considered in terms of the total number of chapters devoted to the topic in *De Anima*, perception dominates the work: the present chapter introduces the entire faculty; the next is given over to the nature of perceptible objects; the following five discuss the canonical five senses; and the second book closes with a return to a consideration of the entire faculty. Thereafter, Aristotle devotes another two further chapters, III 1 and 2, to issues pertaining to perception before turning to imagination (*phantasia*) for a single chapter, and thence to reason (*nous*) for three.

Aristotle's discussion of perception in *De Anima* is rich and nuanced, conducted for the most part in a less materially enmeshed way than the many comparable discussions found in the *Parva Naturalia* and his biological writings. We find Aristotle referring the reader to those more detailed discussions several times in the course of his treatments of the individual faculties here, more regularly to passages in *De Sensu* 3–5, which should be read in tandem with *De Anima* II 7–11. In general, in *De Anima* Aristotle is concerned to characterize the faculty of perception relatively abstractly, endeavouring to capture its essence and nature, together with the features crucial to the activity of perceiving, though he occasionally dips into the mechanics of the matter in order to make a given claim crisp and concrete.

In approaching perception at this level of generality, Aristotle relies upon his hylomorphic explanatory framework, even while extending its analysis of change in order to take into account features of perception which do not fit comfortably or readily into that framework. (For a general characterization of Aristotle's

extension of hylomorphic change to perceptual activity, see the General Introduction § IV.B).

The current chapter begins by introducing perception as a species of being moved and affected, indeed, as a kind of alteration (*alloiōsis*) and so as ripe for hylomorphic treatment given in terms of form reception (416b32–417a2). He does not, however, apply such a treatment immediately, preferring instead to raise some puzzles about perception which need immediate attention. First among these puzzles is why the senses do not perceive themselves in the absence of external objects (417a2). In approaching this puzzle, Aristotle finds it opportune to distinguish between kinds of potentialities and actualities, which distinction in turn provides an impetus for reflecting upon the ways in which we can and cannot treat perception as a straightforward instance of alteration liable to treatment in unadapted hylomorphic terms.

Aristotle will ultimately avail himself of an extension of the base case of hylomorphic change understood as form reception: in the basic kind of change, the reception of a form displaces its contrary, as when a non-musical man becomes musical by studying the piano; in the extended kind, a change involves not a destruction of a contrary by a contrary, but of a perfection or actualization of something already present, as when a schooled pianist moves from potentially playing to actually playing.

**416b32–417a2: Perception and Alteration:** Aristotle begins his account of perception by appealing to some general features of his hylomorphic approach to change. If a fence is made white by the application of white paint to it, then, contends Aristotle, the fence was suited to the reception of colour (because it has a surface), and the process of its becoming white was a process of form acquisition. As he himself notes, Aristotle had already contended that perception is a kind of alteration at 415b24—or an alternation, *kind of* (see note to 415b8–27). (This latter relies on the so-called *alienans tis*, the use of the Greek indefinite championed in this chapter by Burnyeat (2002: 74): ‘a perception is an *alloiōsis tis* in the *alienans* sense, “alteration of a sort”: an alteration from which you cannot expect everything you would normally expect from alteration’). Thus, one way of taking Aristotle’s language in that earlier passage, as here, is to treat it as qualified or tentative, roughly akin to the distinction in colloquial English



between 'Unitarianism is a sort of religion' and 'Unitarianism is a religion—sort of.' Aristotle may be tempted by the looser, more tentative understanding, because he also insists, later in this same chapter, that the sort of transition involved in perceiving and reasoning is either not a species of alteration or else a different kind of alteration, one which must be carefully distinguished for the kind of alteration countenanced in the base case of hylomorphism. See note to 417b2–16 for a discussion of his motivation.

The question of whether in perception like is affected by like is also discussed in *Generation and Corruption* I 7. It is worth recalling in this connection Aristotle's view that a commitment to the like-like theory created difficulties for those of his predecessors, discussed in I 1 and especially in I 5. Aristotle's own approach to this matter, as is typical for him, divides the question, deciding that 'it is affected while being unlike what affects it, but when it has been affected, it has been made like it and is such as what affected it is' (418a5–6). When he does so, however, he raises a serious question regarding the manner in which what is affected is made like what affects it. See note to 418b3–5 (cf. 417a18–20 and note to 431a4–6).

**417a2–14: A Puzzle about Perception:** Aristotle's first puzzle about perception (*aisthêsis*) is, like some others among his puzzles, puzzling in its own right. Initially, the puzzle seems clear: given that a sufficient condition for perception is the presence of a sensible object to a properly functioning sensory faculty, why is it there is 'no perception of the senses themselves' (*tôn aisthêseôn autôn ou ginetai aisthêsis*; 417a3)? The eyes are, after all, themselves coloured, the nose has odour, and so forth. (It is sometimes remarked in this connection that one *can* in fact taste one's tongue.) As formulated, the puzzle speaks only of 'perception' (*aisthêsis*), which sometimes refers to the faculty, sometimes the activity, and sometimes to the sense organs (more regularly called the *aisthêtêria*). In this case, it is clear that Aristotle is speaking of the activity of perception and not of the faculty or organs. His puzzle is thus why, given that the sense organs themselves have perceptible features, their presence is not immediately sufficient for their being perceived. Yet, unless we are looking in a mirror, we do not see our eyes. We might put his question in English by wondering why the senses do not sense the senses.

The puzzle about this puzzle arises not in its statement, which seems reasonably clear, at least initially, but in its proffered resolution, which seems not to address the puzzle introduced in any direct or obvious way, leaving the impression that the puzzle set by Aristotle was understood by him in some way other than has just been suggested. In his response to his puzzle, Aristotle adverts to a view he is on the brink of articulating, namely that the sensory faculty is in potentiality, and that just as the combustible requires an actual spark to ignite into fire, so perception requires an actual external object as its object.

Again, this is puzzling insofar as it seems not to address the puzzle just articulated. For, according to that articulation, the sensory faculties are already assumed to be in potentiality: an eye is potentially seeing when no object of sight (*horaton*) is present to it; it is actually perceiving when, in suitable conditions, such an object is present to it. The organs themselves have features in virtue of which they are such objects; because made ultimately of the material elements, they should have the properties whose presence is sufficient for perception (417a5–6), and yet they are not perceived. If, by contrast, stress is to be laid on the fact that *external* objects (*tôn exô*; 417a4) are required, then the appeal to potentiality and actuality seems idle. For then the answer is simply that the senses do not perceive themselves because they are not external to themselves. Looked at from this perspective, the puzzle is either not as it seemed, or its answer seems to miss its point.

Aristotle's language in setting the puzzle suggests that it is one he himself finds at least initially puzzling ('There is a puzzle as to why . . . ; *echei d' aporian dia ti* . . . ; 417a2). This suggests, then, that the initial puzzle is more than it seemed. One possibility is that the assumption made in the original explication of the puzzle is false, namely that the question pertains to why the senses do not perceive the 'sense organs themselves'. This assumption is reflected in the rendering of the phrase *tôn aisthêsôn autôn* preferred in the text; (417a3; cf. *De Sensu* 440a19). Aristotle might in principle also mean the sensory faculty (*aisthêtikon*) or the activity of perception (as *aisthêsis* most often means), but then it would be odd for him to proceed by characterizing the potential objects of perception by saying that 'present in them are fire, earth, and the other elements of which there is perception either

in themselves or in respect of their co-incidental properties (417a4–6). This sounds very much as if he has the sensory organs in mind. That assumption then seems reasonable, and it is perhaps confirmatory that it is made in common with most (though not all) of Aristotle's ancient commentators (Them. *in DA* 54. 23; Phil. *in DA* 291.3; Alex. *Aporiai kai Luseis* 82. 35; cf. ps.-Simplicius *in de An.* 118.3).

**417a14–20: Types of Potentiality and Actuality; Acting and Being Affected:** However Aristotle's solution to his puzzle about perception is to be understood, its appeal to a potentiality/actuality distinction occasions a discussion of that topic which, with some interruptions and asides, extends through the rest of the chapter.

Aristotle has already introduced a distinction into grades of actuality and potentiality in *De Anima* in II 1 pertaining to the soul and illustrated by knowledge (see note to 412a21–2; cf. *Phys.* 255a33, *Met.* 1050a21–3). Here he applies this same distinction to perception, and, though the text is uncertain, evidently to the object of perception as well (*aisthêton*; 417a13). Aristotle's point about grades of potentiality pertaining to perception is just that we can speak of someone as 'having perception,' i.e. as having a faculty of perception, or as 'having a perception,' i.e. as exercising that faculty, that is, as perceiving something right now. Even a sleeping person has an actual faculty of perception, but is at that moment—and for that reason—merely in potentiality with respect to perception. The distinction finds an English analogue when we speak of a blind person as someone who does not see, where we mean that she lacks the faculty of sight; a sighted person who does not see, by contrast, can see, but is not exercising the faculty at present.

Aristotle's probable contention that the object of perception no less than perception itself admits of degrees of potentiality naturally gives rise to the suggestion which follows, that there is a sense in which what is moved, what is affected, and what is actualizing are the same. An actual capacity to perceive is yet in potentiality until it is moved by an object of perception, in which case its being moved and affected is the same process as something's actualizing it. A surface which is potentially white is, while being painted, being altered just when what alters it is actual, namely the actual process of a painter painting (cf. 416b33, with note). For a useful

discussion of the framework provided by Aristotle's account of change and its application in this chapter, see Kosman (1969).

Although the matter is complicated by some discussions elsewhere (especially *Met.* 1048b18–35, where a critical distinction between actuality (*energeia*) and motion (*kinêsis*) is introduced), Aristotle's stated reason in the present context for arriving at this conclusion helps show why he believes that *being moved*, *being affected*, and *actualizing* are the same. A motion or a change, when moving towards its resolution, is at that time potential because perform incomplete (else it would no longer be changing or moving), but at the same time an actualization (else it would not be changing or moving in the first place). The exact textual reference intended at 417a17 is unclear. Some likely candidates are: *Phys.* 201a10–b31; *Met.* 1048b28; *EN* 1174a19.

On the way in which like is and is not affected by like in the process of perception, see note to 418b3–5.

#### **417a21–b2: Further Concerning Potentiality and Actuality:**

Although it at first appears that Aristotle is merely reiterating the distinction between grades of actuality made above at 417a10–14, in fact the discussion in this passage incorporates the earlier distinction and adds further content. In the earlier passage we learned that someone might be in potentiality with respect to knowledge in one of two ways, by being ignorant or by being enlightened while not actually making use of that enlightenment at the moment, only the first of which potentialities is destroyed as it is left behind in the process of actualization. Now Aristotle adds the further content: someone is in potentiality of the sort which is destroyed by its opposite when learning occurs merely by being a member of a genus with the right sort of matter, while someone who already knows but is not contemplating at present can do so at will. The first person cannot contemplate at will, since he lacks the conceptual wherewithal; he needs to be taught before he is in potentiality in the higher degree which permits contemplation at will. The second person can, by contrast, contemplate at will, because she already has, in actuality, all of the wherewithal she needs to do so. Significantly, in the next section (417b2–16), Aristotle will contend that as regards degrees of potentiality, perception and reasoning are not perfectly parallel.

It is striking that in the present passage Aristotle evidently allows, as he does in *Metaphysics* M 10, at 1087a19–20, that contemplation (*theôrein*) may be understood as having an individual object. The translation seeks to leave this open by rendering ‘*tode to A*’ as ‘this A’, though it might also be more strongly translated as ‘this particular A’. Although it has a clear parallel in the passage from *Metaphysics* M 10, this passage does not comport with Aristotle’s more standard contention that perception is of the particular, while thought is of the universal (see note to 417b16–27; cf. *APo.* 87b28–88a2, 100a6–b1; *Met.* 1039b28–1040a7, 1087a19–20). In *Metaphysics* M, unlike the current passage, Aristotle suggests that contemplation of the particular requires: (i) an appeal, whose precise contours are disputed, to an actuality-potentiality distinction; (ii) a background knowledge of the universal; and (iii) some sense in which the particular co-incides with the universal (*Met.* 1087a19); see the glossary entry on co-occurrence (*kata sumbebêkos*). If we accept the stronger translation (viz. ‘this particular A’), then we have, on the basis of this parallel, some conception of how contemplation can after all be of an individual. In this respect, see Heinaman (1981), who also renders precise some of the larger themes associated with Aristotle’s contention that contemplation can be of the particular.

#### **417b2–16: Complexities Concerning Being Affected and Alteration:**

The text of this passage is a bit uncertain, with the result that Aristotle’s intended meaning is difficult and disputed. There are two contrasts at play: (i) one between two ways of something’s being affected: ‘Nor is being affected unqualified’ (417b2); and (ii) another between two ways of regarding alteration as it occurs in various psychological processes, where, in some cases, one: ‘either should not be said to be affected or there are two types of alteration’ (417b6–7). It is only the second contrast which creates difficulties, and then only in some instances.

In the simplest case, (i) and (ii) cohere easily. Aristotle has already maintained that only the standard kind of hylomorphic alteration involves the destruction of a contrary by a contrary, whereas something which is already  $\phi$  (e.g. someone who already knows the Pythagorean theorem), but is now not making its  $\phi$ -ness fully actual (someone who is not attending to the Pythagorean theorem), preserves the  $\phi$ -ness in the transition to its full actualization (see notes to

412a21–7 and, in this chapter, to 417a14–20). Now Aristotle points out that the latter sort of transition is either not an instance of alteration at all or is of a discrete sort, which needs to be distinguished from destructive alteration.

The second main claim (ii) is more difficult, especially in its application to teaching and learning. It is initially confusing to find Aristotle denying (or seeming to deny) at 417b10–11 that teaching occurs when someone leads someone from potentially knowing to actually knowing. Is this not precisely teaching? What is more, Aristotle goes on to contend that when actual teaching does occur, either the student is not affected or there are two types of alteration (417b12–14). Again, though, one will want to know how a student fails to be affected or altered in the process of learning.

Some have thought to remove the oddness of Aristotle's first remark about the impropriety of calling a leader a teacher by regarding the one leading someone from potentiality to actuality as not teaching her, e.g. the Pythagorean theorem, but rather as inducing her move from the second stage of potentiality (i.e. from knowing but not attending) to the complete state of actuality (i.e. to knowing and attending). A day-care provider on an outing to the beach with her charges might divide the children into the swimmers and non-swimmers and then instruct the swimmers to swim and lead them into the lake; but she is not then their swimming teacher.

If that is so, however, why does genuine teaching not involve the destruction of a contrary by a contrary? Teaching, when successful, evidently involves the destruction of ignorance by the learning which supplants it; and this seems a straightforward form of alteration, one not easily assimilated to the kind of non-destructive development we have seen in the case of one moving from one degree of actuality to another, higher degree. Moreover, this seems to be Aristotle's own contention just above at 417a30–1, where he speaks of one 'being altered through learning, with frequent changes from an opposite state'.

This need not be a contradiction, if Aristotle now intends to suggest that there are two ways states might be contrary to one another: (a) broadly, so that the change from ignorance to knowledge is the destruction of a contrary by a contrary; or (b) narrowly, so that only two positive states stand in contrariety to one another, where the acquisition of a positive state (*hexis*) inherent

to a kind of thing is rather a development into that thing's own nature. The broad notion fails to distinguish the kind of change which occurs in development and maturation from change in general. When a grey wall is painted white, the greyness is destroyed by the encroaching whiteness. It is not so easy to specify in any non-artificial way what positive attribute is destroyed when a child learns to walk. (Cf. *Phys.* 255a30–b5; *Met.* 1019b6–9, 1022b22, 1069b10–12; *EN* 1174a13–b13.)

If that is correct, then, Aristotle offers in this passage two distinct ways in which psychic changes are not alterations: (i) when something already actually  $\phi$  transitions into its fullest state of actuality with respect to  $\phi$ -ness; and (ii) when something not already actually  $\phi$  becomes actually  $\phi$  by developing into a positive state (*hexis*) natural and characteristic to its kind of thing. This would implicitly divide the second half of Aristotle's general contrast into two. He says: 'either should not be said to be affected or there are two types of alteration, (i) one a change towards conditions of privation and (ii) the other towards positive states and a thing's nature' (417b14–16). Looked at this way, the second half of the contrast would then itself be twofold: (ii. a) a change into a positive state consonant with a thing's nature (*epi tas hexeis*), and (ii. b) a change into that thing's nature (*tên phusin*). One might say in case (ii. a) that a teacher does not alter a pupil, because she does not make her other than she already is essentially, namely the kind of being capable of knowing, that is, a being with a rational soul. To teach is to develop a pupil into a positive state consonant with her nature.

**417b16–27: The Potentiality of the Perceptual Faculty; Some Consequences:** In learning, the acquisition of settled knowledge is equally the acquisition of a positive state (*hexis*). Aristotle has just suggested that the acquisition of knowledge is natural for beings capable of knowing. Learning is then the 'first change' (*prôtê metabolê*; 417b17) in the direction of actual knowing, whereas in the case of perception, the first change is complete at birth, having been effected by the parents. This is to say, then, that animals have their matter already enformed so as to be born with an ability to perceive which does not have to be developed further: infants can see, though they must learn in order to know.

This, at any rate, is Aristotle's probable meaning. The text here is compressed and perhaps corrupt. The sentence translated as 'In what is capable of perceiving, the first change is brought about by the parent; what is born is also already able to perceive, just as we have knowledge' (417b16–18) reflects both an editorial decision and an interpretive expansion. As for the expansion, one might possibly render the last section as 'when it is born it has perceiving too just as it has knowledge' (*echei êdê hôsper epistêmên kai to aisthanesthai*; 417b18). This is, however, unlikely to be his meaning, since Aristotle has just said that acquiring knowledge and the ability to contemplate at will requires in the learner a change from one contrary to another, presumably, then, from ignorance to knowledge (*epistêmê*). The translation offered agrees with the one offered by Alexander (*Ap. kai Lu. III 3. 85*), though it must be said that the linguistic parallels used to justify it by, e.g., Hicks (1907: 358) are rather strained.

This interpretation is perhaps strengthened by the thought that Aristotle has allowed above that someone capable of perceiving may yet not be perceiving, as when sleeping (417a10–12). (If it is doubted that sleepers fail to perceive, it will yet be possible to think of humans in sensory deprivation tanks.) So, someone fully equipped to perceive may not, in the absence of an external object, which is made by Aristotle a necessary condition of perceiving (417b28), actually perceive. The consequences, assuming this interpretation, are (i) that animals do not need training or habituation to perceive, because they arrive fully equipped for the task (cf. *Met. 1047b31–1048a1*); and (ii) they are at a level of actuality akin to someone on the cognitive side who has already learnt; and (iii) that actual perceiving is akin to active contemplation and not mere knowing. Aristotle embraces the second consequence plainly at *De Sensu 441b22*.

Given that one who knows but is not contemplating can do so at will (417a27), one might expect the same ability for someone equipped with sense perception, since by (ii) they are at the same level of actuality. As we have seen, however, Aristotle denies this consequence, since a necessary condition of actual perceiving is the presence of an external object of perception, the presence of which is not immediately subject to will. By contrast, someone who has actual knowledge has, in some sense, the universals already present in the soul. The precise sense in which the



wherewithal to contemplate is in the soul of one who knows is a matter for investigation (cf. 429a22–31, 431b26–432a3), though the contrast upon which Aristotle depends is so far unproblematic. The woman in the sensory deprivation tank cannot will herself to see its surfaces, though she can think that those surfaces, like all surfaces, are limits of a three-dimensional body.

Aristotle explains the need for external objects in perception by appealing to his dominant practice of understanding perception to range over particulars and thought over universals (*APo.* 81b6, 87b28–37, 87b39–88a7; cf. note to 417a21–b2; *Met.* 1039b28–1040a7, 1087a15–20). The basic idea is simply that perception is activated by the presence of a particular perceptible to a functioning faculty of perception, while thought requires greater activity on the part of the thinker. That Aristotle deviates from this doctrine in its simple form, even in the present chapter, does not impugn his ability to appeal to it in explaining why conditions differ for the transitions from grades of actuality in the cases of perception and knowledge. At any rate, if the (slightly) fuller picture of *Metaphysics* M 10 (see note to 417a21–b2) requires prior association with a universal before ‘contemplating’ a particular falling under it, in the sense of co-inciding with it, then he may continue to insist that perception requires activation by the presence of a particular object of perception (*aisthêton*) in a way in which reasoning (*noêsis*) or contemplation (*theôrein*) does not.

**417b27–418a3: Summary; the Inadequacy of Ordinary Language:** Tracking the distinctions drawn in this chapter between various degrees of potentiality and actuality and their sundry relations to Aristotle’s hylomorphic analysis of change and alteration is a delicate matter. The general illustration he now employs by way of summary is coarse, though serviceable: we say that a boy is potentially a general and that a grown man is potentially a general, though we do not ascribe the same states of readiness to them; nor do we think their transitions into generalship traverse the same paths, since one is a proper part of the other. Aristotle notes, fairly, that we do not have words to mark the distinctions we have observed between the ways our psychic faculties need to be affected and altered in order for actual perception and contemplation to occur. So, he suggests, we shall have to make do with our ordinary language, while being alert to the fine-grained distinctions such

language obscures. (There are similar remarks made at 426a12–14; cf. *EN* 1107a34–b2, 1115b31–3).

It would not be fair, however, for Aristotle to fault the inadequacies of ordinary language alone. Rather, he has seen the need to deviate from his own standard model of hylomorphic change in order to account for the variety of transitions he has himself thought necessary to identify in his general account of perception.

**418a3–6: Assimilation and Being Made Like:** These final sentences are given as summary, though they do not serve to recapitulate the main claims in the chapter. A crucially important claim, that the perceptual faculty (*aisthêtikon*) is in potentiality such as its objects are in actuality, is introduced as having already been made. This claim has not, however, been made in these terms in this chapter or earlier—though what Aristotle now concludes can be gleaned from 417a12–20 in a general sense; and 418a4–5 does seem to be a clear echo of 417a18–20. What is *not* settled by the language of this summary is how the sense faculty is in potentiality *such as* (*hoion*; 418a4) its objects are already in actuality; nor does the account thus far decide precisely how the perceptual faculty is *made like* (*hômioîtai*; 418a5) its objects once it has been affected. For some competing approaches to the proper understanding of these matters, see the General Introduction § IV.B.

Interestingly, the final resolution of the like-like controversy in one respect directly parallels the resolution Aristotle had offered in the case of nutrition (on which, see note to 416a19–b9). There Aristotle had equally settled the matter by splitting the difference: before it is altered by the digestive process, food—the object of the nutritive soul—was unlike what it eventually nourished; once captured and altered by the nutritive soul, it was like the ensouled body. So too, evidently, with the objects of perception: at the beginning of the process, perceptual faculty and perceptual object are not, in the relevant sense, alike; but the complex alterations in perception bring faculty and object into likeness with one another. The causal directionalities seem opposite, however: food is made like the ensouled body, whereas the perceptual faculty is made like its objects. It is in any case important to understand this general conclusion in connection with 424a1–5, where it is significantly qualified, and 424a17–24, where it is appreciably augmented. Cf. also *Generation and Corruption* 324b13–31.