

The Soul Itself in Aristotle's Science of Living Things

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In this chapter I will offer an analysis of two correlative terms that to some large extent structure Aristotle's science of perishable living things in the *De Anima*. They are the "soul itself" and the "accidents of the soul". It will turn out that the soul itself is the fundamental explanatory essence of the phenomena of perishable living things generally. It consists of the so-called "parts of the soul" nutrition, perception, and thinking. As such the soul itself in the *De Anima* is not a really existing kind. It is a scientific postulate, an artifact at the highest level of biological abstraction, more abstract than other and more familiar scientific abstractions of such a kind, as e.g., blooded or locomotive animals. However, in spite of from an ontological perspective being posterior to actually existing kinds of living things, it is definitionally and explanatorily prior to them. That is why the science of living things ought to start with the definition of the soul itself. The accidents of the soul, by contrast, turn out to be the explananda of the science of perishable living things. I close the chapter with the suggestion that the distinction between the soul itself and the accidents of the soul either is, or involves, some version of the form/matter distinction, albeit without being able to argue for this claim here.

1 Soul Itself vs. Its Accidents

Aristotle's *De Anima* is a scientific inquiry into the "nature, essence and properties" of the soul (*DA* I 1.402a7f.). In the first chapter, I 1.402a7–10, it says:

T1. Our aim is to contemplate and understand its (i.e., the soul's) nature and its essence, and then all its accidents. Some of the latter seem to be affections peculiar to the soul, whereas others belong also to animals on account of the soul.

ἐπιζητοῦμεν δὲ θεωρῆσαι καὶ γινῶναι τὴν τε φύσιν αὐτῆς καὶ τὴν οὐσίαν, εἴθ' ὅσα συμβέβηκε περὶ αὐτὴν· ὧν τὰ μὲν ἴδια πάθη τῆς ψυχῆς εἶναι δοκεῖ, τὰ δὲ δι' ἐκείνην καὶ τοῖς ζώοις ὑπάρχειν.¹

Whatever the exact meaning of “all its accidents” (ὅσα συμβέβηκε περὶ αὐτὴν) here (we will soon discuss it), his aim, as the announced inquiry into the essence of the soul puts beyond doubt, is at an inquiry about the soul *itself*. This is confirmed three lines below where the search for the essence of some *X* quite generally is identified with the search for its “what-it-is” (the *ti estin*, 402a11ff.): To inquire into the what-it-is of the soul is to inquire into the essence of the soul. And to inquire into the essence of the soul is to inquire into what the soul itself is or what the soul is *as such* (*kath' hautō*).

What is the counterpart of “the soul itself”? Outside of Aristotle's philosophy of science, the term *sumbebēkos* should make us expect either contingent, or somehow otherwise non-intrinsic attributes of the soul as counterparts. These are the attributes of some *X* whose presence or absence does not affect the being of the item in question.² But this is obviously not what happens here. For, although the text counterposes the soul itself (*kath' hautōn*), i.e., its essence, with its accidents, Aristotle hastens to subdivide the latter into affections proper to the soul on the one hand and affections belonging to living beings in virtue of the soul on the other.³ So, the counterpart of the soul itself is not only the non-essential properties of the *soul* but both the non-essential affections of the soul itself and the affections that living beings have on account of their soul. According to our passage, then, “accidents of the soul itself” can be predicated in two rather different ways: either as non-essential affections (*pathē*) of the soul itself, or as affections of living beings.⁴ To be sure, from an ordinary language point of view this latter mode of predicating seems a strange way of predicating an affection of something, as in this case the subject of predication is not the bearer of that (non-essential) affection which is predicated of it.

1 On this very sentence, see also S. Kelsey's article in chapter 1 of this book.

2 See e.g., *Metaph.* Δ 30, first meaning; *Top.* I 5.102a18–20, including *propria*. But there are exceptions in which *idion* has a wider meaning which includes essential attributes (*APo.* II 4.91a15–18 and *Top.* V 4.132b8–18).

3 The strong interception εἴθ' ὅσα in connection with the relative pronoun ὧν makes it very unlikely that what Aristotle has in mind here is an inclusive sense of “accidents” that relates to both the essence and the non-essential attributes of the soul.

4 1. A (a non-essential affection) holds of B (the soul itself) and 2. A (an affection of living beings) holds of B (the soul itself).

Rather, the bearer of the corresponding property is a living thing, not the soul, and it is predicated of the soul as one of its own, yet non-essential, affections.⁵

On reflection, though, this is exactly as it should be: As will turn out in *De Anima* II 1, the soul *is* an essence, namely the essence of living beings. Essences do not have non-essential attributes in the same way in which things that *have* an essence have these attributes: essences *just* are essences; since they lack a body or any other feature over and above the features that are specified in their account, they cannot have affections over and above what they are essentially. 'To be a circle and circle and to be a soul and soul are the same thing' is Aristotle's expression for this fact. Essences aren't possible subjects for non-essential attributes, because what it is to be *X* and the essence of *X* coincide (*Metaph.* Z 10.1036a1–2).⁶ Thus, essences cannot be ontological bearers of non-essential properties. Living beings, humans and horses and the like, by contrast, are things that *have* essences (their souls), and that makes it that they, unlike essences, are bearers of other, non-essential, properties in addition to their essential natures. Such non-essential attributes can be either their contingent properties, say, the whiteness of a human being, or other non-contingent and non-essential properties, as for instance earlobes in human beings. However, if the soul *is* an essence, and the expression "accidents of the soul" cannot refer to non-essential features of which the soul itself is a bearer, what does this expression refer to?

Let us return to the text. The above sentence not only says that the aim of the inquiry into the soul is to contemplate and understand both the soul as such and the accidents of the soul, it also subdivides the latter into two groups: the proper affections of the soul, and the affections that animals have in virtue of having souls. Altogether, then, Aristotle mentions three items at the beginning of *De Anima*. I shall go through them one by one:

- (i) The soul as such. The soul as such, as the passage says, is the essence and nature of the soul, which is to be expressed in the definition of its "what-it-is" (*ti estin*). As we have just seen, it will turn out in *De Anima* II 1 that the soul *is* an essence, namely the essence of living beings. So much, I think, is uncontroversial. And for the moment I will leave it there.⁷

5 Cp. *Metaph.* Δ 30.1025a30–34.

6 Aristotle's target here are Platonists who posit ideas, things that is that are distinct from what it is to be that thing (the idea of the soul being distinct from what it is to be a soul), see *Metaph.* Z 6 and 11.1037a21ff.

7 That Aristotle at this stage is not committing himself to any particular view about what the soul is (beyond being a sort of principle of living beings), can be seen in a passage in *DA* II 1 (announced in 402a23–25), where he discusses the question in which category the soul belongs *arguing* that it pertains to the category of substance. This suggests that the above

- (ii) Secondly, the affections proper to the soul. The expression “proper affections of the soul”, as it turns out later in the *De Anima*, points to a *problem case*. The problem is whether there are proper affections of the soul at all. Such proper affections of the soul are affections of the soul alone without the body (403a3ff.). So, at this stage of the argument, it is unclear whether there are such proper affections of the soul in the first place. It is, I think, more or less uncontroversial that the rest of the *De Anima*, after having ruled out the so-called *kinêseis tês psychês* in *DA* I 4, reserves the status of ‘proper affection of the soul’ exclusively for a particular type of non-bodily thinking. This is suggested by a number of passages throughout the *De Anima*, most prominently in *DA* III 4 and 5. So, regardless of how we might spell out Aristotle’s response to the question of whether there are affections peculiar to the soul, be it as an affection of the human intellect over and above its essential features or not, it is clear that theoretical *nous* would be the only candidate for such an affection (see also Hicks 1907 *ad locum* and Johansen 2006, 144f.).
- (iii) Thirdly, the affections (*pathê*) that animals have in virtue of their soul. I should start by saying that “animals” here, at this very early stage of the argument, need not be interpreted as excluding living things other than animals. It might very well only be a looser way of referring to living things, i.e., things that have soul, generally. At this stage in the argument of the *De Anima* Aristotle has not yet argued that “soul” for him has a wider extension than human and animal soul, so as to include also the souls of plants and growing things. So, it is plausible to take this expression here as corresponding to all things that have soul.⁸ If this is correct, then what Aristotle is interested in here, in the programmatic beginning of the investigation into the soul, is to find out about all the features of all things that have soul have *in virtue of possessing soul* (δι’ἐκείνην, 402a9–10).

What could these features be? One first answer is given in *De Anima* I 5:

T2. It is impossible not only that the definition of soul is such (i.e., self-moving number), but even (impossible) that it should be an accident (of the soul). The point is clear if the attempt be made to start from this as the account of soul and explain from it the affections and actions of the soul, e.g., reasonings, sensations, pleasures, pains, etc.

announcement to inquire into the essence (*ousia*) of the soul in 402a7f. is likewise uncommitted to any particular view of the soul’s essence, i.e., that it takes “essence” as corresponding to whatever answer to the what-it-is question of the soul the discussion will end up with.

⁸ As has been pointed out by commentators, e.g., Ross, and others.

οὐ γὰρ μόνον ὁρισμὸν ψυχῆς ἀδύνατον τοιοῦτον εἶναι, ἀλλὰ καὶ συμβεβηκός. δῆλον δ' εἴ τις ἐπιχειρήσειεν ἐκ τοῦ λόγου τούτου τὰ πάθη καὶ τὰ ἔργα τῆς ψυχῆς ἀποδιδόναι, οἷον λογισμούς, αἰσθήσεις, ἡδονάς, λύπας, ὅσα ἄλλα τοιαῦτα. (DA I 5.409b13–17)

This passage is directed against Xenocrates' claim that the soul is self-moving number. The argument is that self-moving number, apart from being impossible as a definition of the soul (as has been argued previously to this passage), is also of no help in doing what the soul is supposed to do in the science of living things, namely explaining actions and affections of the soul such as for instance reasonings, perceptions, and pleasures and pains. The point seems to be this. There is no explanatory connection whatsoever between phenomena like thinking and perceiving (actions and affections) on the one hand and self-moving number (a quantity) on the other. On that basis we can see the line of reasoning behind the above claim that self-moving number cannot even be an accident of the soul: if to be an accident of the soul is to be a feature that living things possess *on account of having a soul* (cp. T₁), then the soul or the definition of the soul should be able to explain this feature. However, if we try to account for features such as reasonings, sensations, pleasures and pains by reference to self-moving number, as T₂ invites us to do, then we will find that this is impossible (indeed, in 409b17f. Aristotle says that it is not even easy to *guess* what explanation this could be). However, if there is no explanatory connection between self-moving number and these actions and affections, the contrapositive should hold as well: whatever it is that explains reasonings, perceptions, pleasures and pains and so on, it will be very different from whatever it is that is explanatory of self-moving number (cp. DA I 1.402b16–403a2 quoted below). Hence, it is impossible that self-moving number will even be an accident of the soul. So much for Aristotle's argument against Xenocrates. What is important for our concern is that T₂, very much like *De Anima* I 1 (T₁), not only contrasts the definition of the soul – the account of the soul itself – with the actions and affections of the soul, but it also classifies the actions and affections of the soul as accidents of the soul and clearly implies that the account (*logos*) of the soul should *explain* these actions and affections. This takes up the other feature attributed to the soul itself in T₁, which is that the accidents of the soul belong to living things “on account of the soul” (τὰ δὲ δι' ἐκείνην καὶ τοῖς ζώοις ὑπάρχειν). Now, one might object here that some of the examples in T₂, namely reasonings and sensations, are features that belong to the soul itself and not to the things that have life on account of their soul. After all, the imagined objector might say, reason and perception are parts of

the soul itself as they are defined in the *De Anima*. But this objection misfires. Firstly, Aristotle never uses, as far as I can see, the plural expression “sensations” and “reasonings” to designate the psychic faculties (parts) of the soul, which are essences, i.e., what it is to be perceiving and what it is to be thinking; rather, he uses these expressions to designate sensations and reasonings as they empirically occur in actual perceivers and thinkers. Secondly, T2 *contrasts* sensations and reasoning with the definition of the soul. Sensations and reasonings, therefore, clearly are the activities of perceiving and reasoning as they empirically occur in living things. They therefore should be counted among the accidents of the soul. Finally, in another passage, Aristotle includes sensations, along with pleasures and pains, in a list of actions *common to body and soul*. This is in the beginning of the *De Sensu*:

T3. Having now considered the soul as such and each of its capacities in turn, we must next make an investigation of animals and all things that have life, in order to ascertain which of their actions are peculiar, and which are common to them. What has been determined in respect of the soul [sc. as such] must be assumed throughout. Let us talk of what remains by starting with first things first. It is obvious that the most important both the common and the peculiar (actions) of the animals are common to body and soul, e.g., sensation, memory, spirit and generally desire, and in addition to these pleasure and pain. For these belong to virtually all animals as well.

Ἐπεὶ δὲ περὶ ψυχῆς καθ’ αὐτὴν διώρισται πρότερον καὶ περὶ τῶν δυνάμεων ἐκάστης κατὰ μῦθον αὐτῆς, ἐχόμενόν ἐστι ποιήσασθαι τὴν ἐπίσκεψιν περὶ τῶν ζώων καὶ τῶν ζῶν ἐχόντων ἀπάντων, τίνες εἰσὶν ἴδια καὶ τίνες κοινὰ πράξεις αὐτῶν. τὰ μὲν οὖν εἰρημένα περὶ ψυχῆς ὑποκείσθω, περὶ δὲ τῶν λοιπῶν λέγωμεν, καὶ πρῶτον περὶ τῶν πρῶτων. φαίνεται δὲ τὰ μέγιστα, καὶ τὰ κοινὰ καὶ τὰ ἴδια τῶν ζώων, κοινὰ τῆς τε ψυχῆς ὄντα καὶ τοῦ σώματος, οἷον αἴσθησις καὶ μνήμη καὶ θυμὸς καὶ ἐπιθυμία καὶ ὅλως ὄρεξις, καὶ πρὸς τοῦτοις ἡδονὴ καὶ λύπη· καὶ γὰρ ταῦτα σχεδὸν ὑπάρχει πάσι τοῖς ζώοις. (*Sens.* 1.436a1–6,⁹ trans. Beare, modified)

This is the same contrast between the soul itself (ψυχὴ καθ’ αὐτὴν) “and” its faculties (I shall return to the precise meaning of the καὶ later in fn. 32) and things that have life, i.e., things that have soul (περὶ τῶν ζώων καὶ τῶν ζῶν)

9 Cp. *Sens.* 1.437a17f.; *MA* 6.700b4–6; for a full list of cross-references in the *Parva Naturalia* and *De Anima*, see King 2001, 34ff. and 152, fn. 15.

ἐχόντων ἀπάντων) as in T₁ and T₂, only that here we have a slight variation in expression, as T₃ talks about *actions* (πράξεις) of the things that have life instead of *actions and affections* as in T₂. However, the common items in both lists (sensation, pleasures and pains) strongly suggest that this is only a difference in linguistic expression.¹⁰ This is already by itself good evidence that the distinction between the definition of the soul and its accidents in *De Anima* 1 5 (T₂) implies a conception of the latter, the accidents of the soul, that includes the actions common to body and soul as they are mentioned in T₃. This is confirmed slightly later in the sequel of T₃ where Aristotle explains why the actions of things that have life are *common to body and soul*:

T₄. That all the attributes above enumerated are common to soul and body, is obvious; for they all either imply sensation as a concomitant (*meta*), or through (*dia*) sensation. Some are either affections or states of sensation, others, means of defending and safe-guarding it, while others, again, involve its destruction or privation.

ὅτι δὲ πάντα τὰ λεχθέντα κοινὰ τῆς τε ψυχῆς ἐστὶ καὶ τοῦ σώματος, οὐκ ἄδηλον. πάντα γὰρ τὰ μὲν μετ' αἰσθήσεως συμβαίνει, τὰ δὲ δι' αἰσθήσεως, ἕνια δὲ τὰ μὲν πάθη ταύτης ὄντα τυγχάνει, τὰ δ' ἕξεις, τὰ δὲ φυλακαὶ καὶ σωτηρίαι, τὰ δὲ φθοραὶ καὶ στερήσεις. (*Sens.* 1.436b1–6, trans. Beare, modified)

The actions of things that have life are common to body and soul in virtue of the fact that they all in one way or the other involve the activity of sensation. This, I take it, implies that their accounts, whatever they will turn out to be, will crucially depend on the account of sensation as one of the faculties of the soul itself such as it is given in the *De Anima*. Living things will thus possess these features (their actions common to body and soul) *on account* of possessing a (perceptual) soul. Both, the actions common to body and soul in T₃ and the actions and affections of the soul in T₂, therefore, are subspecies of accidents of the soul as they are mentioned in T₁. Note also that the fact that reasonings (λογισμούς) are not mentioned in *De Sensu*'s list of actions common to body and soul is no evidence against the inclusion of reasonings in the group of actions common to body and soul: the list in *De Sensu* makes no claim towards

10 Above I said that Aristotle at no point refers to the faculties of the soul itself by way of plural expressions. However, it is important to note that the converse does not hold: the abstract singular expression 'sensation' (*aisthêsis*) or 'pleasure and pain' may very well refer collectively to empirical occurrences of sensation or pleasure and pain (as it no doubt does above in T₃).

exhaustiveness. It merely lists the *most prominent* actions of things that have life (436a6f. τὰ μέγιστα). There is no obvious reason why the study of “reasonings” (λογισμούς) such as they empirically occur in human beings should not be part of an investigation of the actions common to body and soul, especially in view of the fact that their exercise involves *phantasmata*, which are bodily for Aristotle, as well as other bodily features.¹¹ There is excellent reason, then, for asserting that (i) actions and affections of the soul in T₂ (πάθη καὶ τὰ ἔργα τῆς ψυχῆς) are not an altogether different group of things than the actions of living things common to body and soul in T₃ (πράξεις), and that (ii) both, actions and affections common to body and soul in T₂ and in T₃, classify as accidents of the soul in the sense given in T₁, i.e., they are all features or properties living things possess *on account of possessing a soul*.

Two passages from *De Partibus Animalium* may serve to confirm and further elucidate that picture. The first passage says that accidents of the soul are the features, properties, and attributes that *living things* have on account of possessing a soul, while the second includes examples of actions common to body and soul in a list of accidents of the soul. In the first passage Aristotle points out how important it is that the natural philosopher knows about the soul: knowledge of the soul as the essence of living beings is more important than knowledge of matter, because the soul *explains why* the matter of the animal is such as it is:

T5. [...] it will be up to the natural philosopher to speak and know about the soul; and if not about all of it, about that in virtue of which the animal is such as it is. He will state both, what the soul or that very part of it is, and speak about the accidents in accordance with the sort of essence it has, especially since the nature of something is spoken of, and is, in two ways: as matter and as essence. And nature as essence is both nature as mover and nature as end. And it is the soul – either all of it or some part of it – that is such in the animal’s case. So, in this way too it will be requisite for the person studying nature to speak about the soul more than the matter, inasmuch as it is more that the matter is nature because of soul than the reverse.

11 See *Mem.* 1.449b31–450a1; *DA* I 1.403a9; III 3.427b15; III 7.431a16f., b2; III 8.432a8–10. Moreover, *De Memoria* for example, which is part of the *Parva Naturalia*, gives an account of recollection, which is an activity that involves the intellect. For a survey of bodily features involved in human thought in Aristotle, see van der Eijk 1997 and Mingucci 2015.

[...] τοῦ φυσικοῦ περὶ ψυχῆς ἂν εἶναι λέγειν καὶ εἰδέναι, καὶ εἰ μὴ πάσης, κατ' αὐτὸ τοῦτο καθ' ὃ τοιοῦτο τὸ ζῶον, καὶ τί ἐστὶν ἡ ψυχὴ, ἢ αὐτὸ τοῦτο τὸ μόριον, καὶ περὶ τῶν συμβεβηκότων κατὰ τὴν τοιαύτην αὐτῆς οὐσίαν, ἄλλως τε καὶ τῆς φύσεως διχῶς λεγομένης καὶ οὔσης τῆς μὲν ὡς ὕλης τῆς δ' ὡς οὐσίας. Τοιοῦτον δὲ τοῦ ζώου ἥτοι πᾶσα ἡ ψυχὴ ἢ μέρος τι αὐτῆς. Ὡστε καὶ οὕτως ἂν λεκτέον εἶναι τῷ περὶ φύσεως θεωρητικῷ περὶ ψυχῆς μᾶλλον ἢ περὶ τῆς ὕλης, ὅσῳ μᾶλλον ἡ ὕλη δι' ἐκείνην φύσις ἐστὶν ἢ περὶ ἀνάπαλιν. (PA I 1.641a21–31, trans. Lennox, modified)

Here, the notion of accidents of the soul is applied to the material properties of living beings. But this should not disturb us. For the point under discussion it makes no difference whether the term “accident of the soul” applies to actions common to body and soul or to the material properties (in this case the functional body-parts) of living things; what is important is the general idea that the accidents of the soul are those features, properties, or attributes of living beings that are *attributed to the soul* (τῶν συμβεβηκότων κατὰ τὴν τοιαύτην αὐτῆς οὐσίαν, sc. τῆς ψυχῆς) and that living beings possess them *on account of their soul*. T5 says that it is the task of the natural philosopher to know about the soul as the form and essence of living beings and to know about the accidents *in accordance with the essence it has* (κατὰ τὴν τοιαύτην αὐτῆς οὐσίαν). This is no doubt a way of saying that it is *on account* of their souls that animals have such features. There is, in other words, an explanatory dependency of the accidents of the soul on the account of the soul, and the natural philosopher has to be aware of the precise nature of that dependency in order to adequately account for the accidents of the soul. This dependency is exactly what we found in T1 and in T2 where Aristotle spoke about the actions and affections of the soul as *to be accounted for* by the *logos* of the soul (ἐκ τοῦ λόγου τούτου ... ἀποδιδόναι, DA I 5.409b14–16, and δι' ἐκείνην in I 1.402a8).¹² The second passage in the PA

12 Compare also PA I 5.645a1–6:

“It is necessary first to divide the accidents in relation to each kind that hold of the animals in itself and next to try to divide their causes. Now it has been said before that many common [accidents] hold of many of the animals, some without qualification (such as feet, wings, and scales and affections too in the same way) and others analogously.”

Ἀναγκαῖον δὲ πρῶτον τὰ συμβεβηκότα διελεῖν περὶ ἕκαστον γένος, ὅσα καθ' αὐτὰ πᾶσιν ὑπάρχει τοῖς ζώοις, μετὰ δὲ ταῦτα τὰς αἰτίας αὐτῶν πειράσθαι διελεῖν. Εἴρηται μὲν οὖν καὶ πρότερον ὅτι πολλὰ κοινὰ πολλοῖς ὑπάρχει τῶν ζώων, τὰ μὲν ἀπλῶς, οἷον πόδες πτερὰ λεπίδες, καὶ πάθη δὲ τὸν αὐτὸν τρόπον τούτοις, τὰ δ' ἀνάλογον. (trans. Lennox, modified). Cp. Kullmann's commentary *ad* PA I 5.645a1–14. See also HA I 6.491a7–11.

The meaning of “accidents” (*sumbebêkōta*) is the same throughout: features or attributes of living things (plants and animals) that pertain to them in virtue of possessing life (soul), and that are therefore to be accounted for by reference to the soul.

uses these very same distinctions, and additionally provides us with a list of more concrete examples:

T6. I mean, for example, should we take each essence singly and define it independently, e.g., taking up one by one the nature of mankind, lion, ox, and any other animal as well; or (should we take) the accidents common to all according to something common we have assumed? For many of the same (accidents) are present in many different kinds of animals, e.g., sleep, respiration, growth, deterioration, death, and in addition any remaining affections and dispositions such as these.

Λέγω δ' οἷον πότερον δεῖ λαμβάνοντας μίαν ἐκάστην οὐσίαν περὶ ταύτης διορίζειν καθ' αὐτήν, οἷον περὶ ἀνθρώπου φύσεως ἢ λέοντος ἢ βοῶς ἢ καὶ τινος ἄλλου καθ' ἕκαστον προχειριζομένους, ἢ τὰ κοινῇ συμβεβηκότα πᾶσι κατὰ τι κοινὸν ὑποθεμένους. Πολλὰ γὰρ ὑπάρχει ταῦτ' πολλοῖς γένεσιν ἑτέροις οὖσιν ἀλλήλων, οἷον ὕπνος, ἀναπνοή, αὔξησις, φθίσις, θάνατος, καὶ πρὸς τούτοις ὅσα τοιαῦτα τῶν λειπομένων παθῶν τε καὶ διαθέσεων. (PA I 1.639a15–22, trans. Lennox modified, cp. also I 4.644a24ff. and generally *Phys.* I 7.189b31f.¹³)

Here, the question is whether the philosopher of nature should go about explaining features that are shared by many different species for each species separately, or else give them a common explanation on a “commensurately universal” level (he will opt for the latter).¹⁴ Important for our present concern

13 See also Lennox 2001 and Kullmann 2007 *ad loc.* I will comment on the translation below.

14 Generally, for Aristotle, each subject matter ought to be treated first with the most general features and then the specific features later. More specifically, every science should explain its *explananda* on a commensurately universal level (*prōton katholou*, *APo.* I 4.73b25–74a3; 5.74a32–b3), which is to say that it should provide explanations that are as general as possible and as specific as necessary to cover each phenomenon at its largest extension. Aristotle's reasons for adopting this mode of procedure are methodological economy (i.e., minimization of explanatory work and avoidance of repetition, *PA* I 1.639a15–b5; 4.644a25–b15; cp. *Phys.* I 7.189b31–32; *DA* I 1.402b8–10) on the one hand, and a proper hierarchical sequence of explanations on the other: if the explanations within a given science start with the most general features and then work their way towards the more specific explananda, then they will stand in a sequence that makes sure that (ideally) each *explanandum* is dealt with in only one place. Aristotle insists that only what is known in this commensurably universal manner is scientifically, and therefore genuinely, known. His stock example is the knowledge of the fact that triangles have a sum of angles equal two right angles (2 R). To know 2 R in a commensurably universal way is to know 2 R as a proposition about triangles *simpliciter*. If, by contrast, 2 R is contemplated as a proposition about figures it would be false, as this would include items for which 2 R is not true (e.g. squares); similarly, if 2 R is contemplated as holding of specific kinds of triangles

is that he calls these features *common accidents* (κοινῇ συμβεβηκότα), and that the examples sleep, respiration, growth, deterioration, and death all count among the actions common to body and soul as they are listed in *De Sensu* (T3) and discussed in the *Parva Naturalia*.¹⁵ As T6 explicitly addresses them by the name of accidents, the passage puts beyond doubt the above thesis that Aristotle thinks of actions common to body and soul as accidents of the soul.

All of this is very strong evidence that when Aristotle talks about all the accidents of the soul as the properties living beings have in virtue of soul in *De Anima* I 1 (T1), and about the accidents of the soul as actions and affections of the soul in *De Anima* I 5 (T2), and about the actions common to body and soul in *De Sensu* I (T3) and, finally, about the accidents according to (*kata*) the essence of animals in *Parts of Animals* I 1 (T5 and T6), he is talking about one and the same kind of thing: all these passages contrast the essence (or its expression, the definition) of the soul, not with accidental or non-substantial properties of the *soul*, but with the properties, actions and affections of *living beings*, i.e., of things that have soul. The passages also agree that living things possess these properties, features or attributes on account of having soul,¹⁶ and they all either say or imply that these properties are to be accounted for by reference to the soul. With the possible (and problematic) exception of theoretical *nous*, then, accidents of the soul are not properties that the soul possesses as an underlying subject, but properties of things that have soul and that have these properties on account of having soul. They are accidents of the soul in the sense that the soul *explains why* living things have these properties. This includes the material properties of living beings (their functional body-parts) in *PA*, the actions and affections of the soul in *DA* I 5, and the actions of living things common to body and soul in *De Sensu* (of which I argued above that they are the same). We have very good reason, therefore, to attribute to Aristotle a conception of the distinction between the soul and the accidents of

(e.g., equilateral ones) it – though true – would still be unscientific to demonstrate 2 R on the level of equilateral triangles, because it would be false to say that 2 R holds *because*, or *in virtue of* the fact that triangles are *equilateral* triangles. As a scientific proposition 2 R is true only and uniquely about triangles *simpliciter* (and only in virtue of this also of certain kinds of triangles or certain kinds of figures).

15 To which the beginning of the *De Sensu* is an introduction. They are explicitly mentioned in the immediate sequel of T3 in *Sens.* 1.436a14f: “waking and sleeping, youth and old age, inhalation and exhalation, life and death”.

16 Apart from T4, T1 says this explicitly, and T2 too – if it is agreed that the actions and affections of the soul are accidents of the soul; T3, the beginning of the *De Sensu*, implies that the actions and affections common to body and soul occur in the animals in virtue of the fact that they have souls. See also *DA* I 1.403a10f.; 3.407b17–19; 411a26–b5; II 4.415b11–28.

the soul that comprises all of these subareas, with theoretical *nous* as the only possible candidate for a proper affection of the soul without the body and thus for being an affection of the soul in a different sense.

2 The Extension of the Accidents of the Soul

According to the above, the following three classes of items may count as accidents of the soul:

- (i) the material properties of living beings *qua* being alive (understood as their functional body-parts as discussed in the *PA* for the case of animals)
- (ii) the actions (and affections) of living things common to body and soul, and
- (iii) the, at this point at least problematical, theoretical *nous*.

I now will propose that (i)–(ii) should be understood as in a way covering *all* accidents of the soul, i.e., that (i) and (ii) in a way cover *all* universal and necessary features that living things exhibit insofar as they are alive, i.e., all features that they possess on account of having a soul (as is said in *T1*) or, to put it differently, all the features by which living things differ from each other insofar as they are alive. As for (iii), I will not discuss theoretical *nous* here: given the above tripartite distinction on p.25–26, it is either a proper affection of the soul itself or an action common to body and soul. In the former case this seems to imply the oddity, and indeed impossibility for Aristotle, that an essence – the soul itself – has non-essential properties, while in the latter case (iii) would fall under (ii) (both options are adumbrated in *DA* I 1.403a11–16). A further option – the one I favour, but cannot argue for here – is that theoretical *nous* is not an accident of the soul in the first place but somehow part of the essence of the soul: *nous* seems special in this regard that it, while being a kind of essence, has an act-character that can be exercised in a certain way in separation from matter. But there is no room to go into this here. Returning to (i), for the functional body-parts (matter) of living things, the case seems clear enough. They are the material properties of living things that can be accounted for by the latter's possession of their souls. How these accounts would work, at least in the case of animals, can be seen most conspicuously in the *De Partibus Animalium* where Aristotle offers us chains of hypothetically necessary reasonings to account for the presence of bodily features in animals, if they (i.e., their souls) are to exist in the physical world. The arguments on the basis of hypothetical necessity in *De Partibus* have already received a good deal of

scholarly attention in the past few decades.¹⁷ What requires discussion is (ii), the actions common to body and soul. The question I want to ask is whether Aristotle's conception of actions common to body and soul covers *all* other accidents living things possess on account of the soul apart from their functional matter (which, as we have seen, is taken care of in the *PA* and the *IA*). However, I will only be able to say something about the extension of actions and affections common to body and soul of animals and not about their counterparts in other growing things. I have already argued for identifying actions and affections of the soul in *T2* with the actions and affections common to body and soul in *T3*. That takes care for the processes and activities as they are discussed in the *Parva Naturalia*. But does it cover *all* the explananda of Aristotle's science of living beings? According to the taxonomy of explananda in the *Historia Animalium*, there are four groups of traits that animals possess *qua* animals (leaving out the features of plants and growing things). These are their functional body-parts (*merê*), their actions (*praxeis*), their ways of life (*bioi*) and their character traits (*êthê*). If we subtract body-parts and actions, which were already explicitly mentioned as *explananda* of the soul itself in the *De Anima*, we are left with ways of life and character traits. How is the soul itself explanatory of *them*? This is a difficult question. Fortunately, however, we do not have to answer the question in full. For whatever the exact explanatory relation that holds between the soul itself and the ways of life and character traits of animals according to Aristotle (and it seems that for him they are close, even though we will probably never find out), there is good reason for thinking that character traits and ways of life are not independent from the actions (*praxeis*) of animals. For it seems that it is only *via* their actions and affections that we can identify, and also account for, the ways of life and character traces that animals exhibit. For it is *by acting* in certain ways that animals exhibit their character traits and it is also, at least to some large extent, *by acting* in certain ways that the lives of animals are constituted.

Regarding the ways of life of animals, James Lennox has made an excellent case for the thesis that *bios* ("way of life") for Aristotle is part of the essence of *particular species* of living beings and that a way of life is not to be identified with one single activity (*praxis*), but with a certain combination of a plurality of *praxeis* of living things.¹⁸ That, if correct, confirms the point just made that

17 See, most prominently, Kullmann 1974; Lennox 2001; Kullmann 2007.

18 Lennox (2010). *Bioi* are constituted by *praxeis* but may well be (explanatorily) prior to them (since a way of life may be conveniently thought of as the unitary structure that underlies the diverse ways animals engage in activities: a *bios* determines where, when, and how an animal engages in its characteristic actions).

the ways of life are as it were properties of animals that *supervene* to some large extent on what they do, i.e., that *supervene* on their *praxeis*.¹⁹ And the fact that Aristotle, in introducing the differences by which animals differ from each other in *HA* I 1.487a14ff., treats *bioi* and *praxeis* in one go (487b33–35) by presenting the ways of life in the form of certain combinations of their actions (ways of nourishing, mating, locomotion, generation etc.),²⁰ and the places where their actions occur, further confirms the point. The same goes for the passage in *HA* VIII 1.588a17–18, where Aristotle again groups together actions and ways of life, this time adding that the ways of life differ according to the animals' characters and their food.²¹ Finally, in *HA* IX 49.631b5–7, he says that animals change their characters according to their actions.²² This suggests that the actions of animals are formative of their characters. My suggestion then is that in the *De Anima* in T2 and T3 it is natural for Aristotle not to specifically mention ways of life and character traits of animals as subgroups of the *per se* accidents to be explained by reference to the soul. This is because in the *De Anima* he is at a very earliest point of his investigation into the phenomena of living things. And at this very early stage, it is not necessary to provide us with an exhaustive list of all the types of differentiae that living things exhibit with relation to each other; indeed, to have done so would have been pedantic. This, if correct, leaves us with a fourfold distinction of accidents of the soul that pertain to living things on account of having soul: their functional body-parts, the dynamic active and passive processes they undergo and engage in, the states that result from these processes, i.e., their character traits and their ways of life, and perhaps theoretical *nous*. These four kinds of phenomena would be the four kinds of explananda of the soul as their primary formal, motive, and final cause (cp. *DA* II 4.415b7ff). What else could there be left to explain? But there is no need to ask such rhetorical questions: there is textual support for the claim that the accidents of the soul cover *all* the explananda of the soul itself:

19 This is not incompatible with the fact that Theophrastus in his *Historia Plantarum* 1 1, attributes ways of life (*bioi*) to plants but neither characters (*êthê*) nor actions (*praxeis*). On the contrary, since plants do not have actions, it will have to be their affections (*pathê*) that determine their ways of life.

20 Cp. *PA* I 5.645b33–646a1: Λέγω δὲ πάθη καὶ πράξεις γένεσιν αὐξήσιν ὀχείαν ἐγρήγορσιν ὕπνον πορείαν, καὶ ὅπόσ' ἄλλα τοιαῦτα τοῖς ζώοις ὑπάρχει.

21 αἱ δὲ πράξεις καὶ οἱ βίοι κατὰ τὰ ἦθη καὶ τὰς τροφὰς διαφέρουσιν. Strangely translated by Thompson: "Their habits and their modes of living vary according to their character and their food."

22 "Ὡς περ δὲ τὰς πράξεις κατὰ τὰ πάθη συμβαίνει ποιεῖσθαι πᾶσι τοῖς ζώοις, οὕτω πάλιν καὶ τὰ ἦθη μεταβάλλουσι κατὰ τὰς πράξεις.

T7. It seems that not only is having discerned the what-it-is is useful for contemplating the causes of the accidents of substances, as for example, in mathematics ascertaining what straight and curved are, or what line and plane are, is useful for seeing how many right angles the angles of a triangle equal, but also, conversely, that ascertaining the accidents plays a great part in knowing the what-it-is. For when we can render an account of all or most of the accidents according to their appearance, we will also then be able to speak best about the substance. For the starting point of every demonstration is the what-it-is, so that those definitions which do not lead us to discern the accidents, or at least to conjecture about them, will clearly and in every case be dialectical and vacuous.

ἔοικε δ' οὐ μόνον τὸ τί ἐστὶ γινῶναι χρήσιμον εἶναι πρὸς τὸ θεωρῆσαι τὰς αἰτίας τῶν συμβεβηκότων ταῖς οὐσίαις, ὥσπερ ἐν τοῖς μαθήμασι τί τὸ εὐθύ καὶ τὸ καμπύλον ἢ τί γραμμὴ καὶ ἐπίπεδον πρὸς τὸ κατιδεῖν πόσαις ὀρθαῖς αἱ τοῦ τριγώνου γωνίαι ἴσαι, ἀλλὰ καὶ ἀνάπαλιν τὰ συμβεβηκότα συμβάλλεται μέγα μέρος πρὸς τὸ εἰδέναι τὸ τί ἐστίν· ἐπειδὴν γὰρ ἔχωμεν ἀποδιδόναι κατὰ τὴν φαντασίαν περὶ τῶν συμβεβηκότων, ἢ πάντων ἢ τῶν πλείστων, τότε καὶ περὶ τῆς οὐσίας ἔξομεν λέγειν κάλλιστα· πάσης γὰρ ἀποδείξεως ἀρχὴ τὸ τί ἐστίν, ὥστε καθ' ὅσους τῶν ὀρισμῶν μὴ συμβαίνει τὰ συμβεβηκότα γνωρίζειν, ἀλλὰ μὴδ' εἰκάσαι περὶ αὐτῶν εὐμαρές, δῆλον ὅτι διαλεκτικῶς εἴρηνται καὶ κενῶς ἅπαντες. (DA I 1.402b16–403a2, trans. Shields, modified)

Aristotle here introduces his investigation into the nature of the soul as an instance of the more general kind of investigation into the what-it-is, i.e., the essence, of some domain of inquiry. He says that the what-it-is (essences) serves as starting points for the explanation of the accidents that belong to the substances of their respective domains. He illustrates this point with a mathematical example: knowing the what-it-is of the straight and the bent line and of the surface will allow us to determine how many right angles equal the angles of a triangle. What is important for us is that T7 clearly applies Aristotle's general scientific methodology from the *Posterior Analytics*, according to which sciences explain the non-essential, yet universal and necessary attributes that pertain to the scientific domain in question (the *genos* in Aristotle's parlance) on the basis of the definition of its essence.²³ And there, in the *Posterior Analytics* and elsewhere, he calls the non-essential, yet universal and necessary

23 "For a principle is not something we commonly believe, but what is primary in the genus relevant to our proofs; moreover, not every truth is proper [to the relevant genus]" *APo.* I 6.74b24f. "By 'principles' in each genus I mean the things whose truth cannot be proved.

attributes the *per se* accidents of that essence (*kath'hauta sumbebékota*). This, as has long been observed,²⁴ means that T7 assigns to the soul the methodological function of the essence of its corresponding scientific domain. What I would like to add here is that this domain is all living things. Accidents of the soul, despite Aristotle's variations in verbal expression, are the *per se* accidents of the science of living things. And if that is correct, the accidents of the soul should exhaust the *explananda* of the soul. Moreover, T7 speaks of the accidents as features that allow us to render accounts of the *per se* accidents "according to their appearance" (*κατὰ τὴν φαντασίαν*). This I think makes it clear that Aristotle here understands the accidents (= *per se* accidents) of a science as the *phenomena* of that science. The phenomena are the "that" of a science that scientists ought to explain with reference to the what-it-is as their "on account of which". There is excellent reason, then, for thinking that the accidents of the soul are all the *explananda* of the soul in Aristotle's science of living beings.

3 The Soul Itself

Now, with the account of the accidents of the soul in place, we can return to the initial question and ask: what is the antonym of the accidents of the soul? What is the soul itself? So far, I have said that in the *DA* the soul itself is the first explanatory principle of the science of living things, and that this principle is the first starting point for the explanation of the complete set of phenomena of living things, the so-called accidents of the soul. But how does that role of the soul as the first starting point of Aristotelian biological explanation match onto what we find in the text of the *De Anima*? How does the *De Anima* make good on the initial promise of defining the first starting point for the explanation of the phenomena of living things?

To start with, a number of features of the soul itself should follow simply from its generic explanatory role as a first principle of a science: it will have to be the indemonstrable essence of its scientific domain, it will have to be specific to this domain, and it will have to be explanatory of all of its *per se*

[....] and the truth of the principles must also be assumed; but the truth of the rest must be proved." I 10.76a31–36.

24 See e.g., Hicks *ad* 402a8 (our T1), p. 177, for a clear statement of the thesis that accidents, affections, actions, actions and affections and so on are *per se* accidents of the soul in the sense of the *Posterior Analytics* (although he confusingly enough calls them "essential accidents", which makes it hard to see that they are non-essential attributes).

accidents, which in our case, as we have seen, are all the phenomena of living things, i.e., their functional body parts, their actions and affections, their character traits, and their ways of life. As T7 makes clear, Aristotle thinks that the explanatory power of such scientific starting points with regard to their *per se* accidents may serve as a kind of test for the quality of their definition. He says that “those definitions which do not lead us to discern the accidents, or at least to conjecture about them, will clearly and in every case be dialectical and vacuous”. Non-vacuous and genuine definitions, therefore, are the ones that do allow us to understand *per se* accidents.

This first and merely preliminary account of the soul itself as a first scientific principle already allows us to rule out one widespread interpretation of the soul itself. According to that interpretation, the so-called commonest account of the soul in *DA* II 1 (the *koinôtatos logos*) either is, or is part of, Aristotle's definition of the soul.²⁵ If the above is correct, this cannot be quite right, at least not on Aristotle's conception of definitions in T7.²⁶ The reason for this is that the commonest account in *DA* II 1 apparently does not explain a single of the phenomena of living things. It thus does not pass the test for acceptable definitions established in T7. So, whatever the role of the commonest account of the soul in *DA* II 1 in Aristotle's overall argument, it cannot be that of an account of the soul itself as the explanatory first principle of living things. What is the role of the commonest definition in the overall argument, then? The commonest definition states that the soul is the form (*entelekheia*) and substance (*ousia*) of the living body according to the *logos*. Given Aristotle's views about formal essences as causes of the being of the things whose essences they are, to say that *X* is the essence of *Y* is to say that *X* is the explanatory principle of *Y*'s being. With this the commonest account states *that* the soul is the essence of the living body and that it is going to be explanatory of the living body as its matter; it thereby situates the soul within the hylomorphic framework of Aristotle's natural philosophy. But it does not say *what* this essence and its explanatory features consist in. It is fair to say, therefore, that the commonest account of the soul operates on an extremely high level of abstraction. It gives a job description of the item that Aristotle is going to define in the following chapters. It characterizes the soul on a hylomorphic, yet metatheoretical level, i.e., independently from Aristotle's own positive definition of the soul as he is going to offer it in the following chapters (see *DA* II 2.413a14–16). The

25 E.g., Hicks 1907, 305; Wedin 1988, 12ff.; Polansky 2007, 145ff. The two recent commentators Shields and Miller are more careful. Bolton (1978) argues that the commonest account of the soul is a nominal definition.

26 Here I find myself in agreement with Johansen 2012, 72.

commonest account of the soul in *DA* II 1, therefore, is more of a job description of the soul within a hylomorphic science of living things than a proper definition of the soul, provided we understand “definition” as the account of the essence.²⁷ We should therefore not identify the commonest account of the soul as definition of the soul itself.

Next come the so-called parts of the soul, the basic faculties or capacities of the soul enumerated in *DA* II 2, i.e., the nutritive, perceptual, and the intellectual capacities plus, as Aristotle says in 413b13, motion (*kinêsis*), i.e., animal self-motion. Is the soul itself these parts of the soul, or a subset of them? The short answer, I think, is “yes”, the soul itself as the first explanatory principle of the science of living things is the set of the basic capacities of the soul. That the soul is not something different from, or over and above, the parts of the soul as the basic capacities of living things is clear from a number of different considerations. To start with, at *DA* II 3, 415a11–13, immediately before Aristotle is going to embark into his systematic investigation of the soul and immediately after his discussion of the capacities of the soul earlier in that same chapter, he says that the definition of each of these capacities will constitute “the most appropriate” account of the soul. Aristotle’s mode of procedure in the main bulk of the *DA* confirms that this is indeed what he thinks. It consists in separate investigations into each one of these capacities on the basis of accounts of their correlate objects as announced in the beginning of *DA* II 4 (415a14–22), each of which will culminate in a definition. There is also no investigation of the soul over and above the investigation of the capacities of the soul to be found in the *De Anima*. To this extent the *De Anima* contains a methodologically coherent, transparent, complete, and successful investigation into the nature of the soul. The only exception to this uniform mode of procedure is the inquiry into the capacity responsible for animal self-motion (locomotion, *to kinoun kata topon*). It differs from the previous investigations in many important ways,²⁸ and it also fails to culminate in a straightforward definition of a corresponding part of the soul as we find it in the other three cases.²⁹ Instead,

27 The fact that the commonest definition of the soul in *DA* II 1 makes use of Aristotle’s hylomorphic framework by saying that the soul is the form of the living body does not amount to a definition of the soul. Rather, at this point on his philosophy of natural things, Aristotle takes the hylomorphic approach to nature as given (as he already has done in *DA* I 1).

28 Listed in Corcilius 2008, 44–45.

29 From a methodological standpoint, the investigation of *phantasia* in *DA* III 3 is parallel to the investigation of animal self-motion in III 9–11. The chapters *DA* III 1–2, 6–7, and 12–13 do also not, or not obviously, comply with the standard method Aristotle applies to the investigation of the parts of the soul. It seems, though, that these chapters are immediately

DA III 10–11 offers a causal account of animal self-motion in which self-motion is explained not by way of a dedicated faculty of animal self-motion but by way of a joint effort of other faculties that have been discussed previously in the treatise, notably desire, perception, *phantasia* and *nous*. This, in my view, is reason enough not to regard the capacity of animal self-motion a part of the soul, that is as a basic and explanatorily primitive capacity of living things, despite the initial mention of “motion” (*kinêsei*) as one of the candidates for being a part of the soul (*DA* II 2.413b13), but rather as a capacity of the *living body* that is grounded in other capacities and psychic operations, namely in desire, perception (which is a part of the soul), *phantasia* and *nous*.³⁰ But be that as it may, we are not interested here in the question of which capacities of the soul should be counted as parts of the soul, but in the question of whether the parts of the soul constitute the first explanatory principle of Aristotle's science of living things (and thereby the soul itself). And in this regard, the answer is, I think, clearly positive. The parts of the soul, as they are defined as the basic capacities of the soul in the *De Anima*, structure the entire body of Aristotle's biological writings, and *PA* I and the *PN* in particular, and we can find references to them throughout his biological oeuvre. Aristotle is working with the definitions he provided in the *DA* in the etiological of his biological works and he is going to explain *per se* accidents of living things by reference to them (for instance in the *PA*, he offers countless explanations of functional body parts by way of hypothetical necessity with the perceptual part of the soul functioning as their final cause).³¹ Also, there is no other conception of the soul available in Aristotle's biological corpus apart from the parts of the soul that fulfils the function of an explanatory principle of the *per se* accidents of living things. The definition of the parts of the soul is the only candidate for an explanatorily powerful definition of the soul in Aristotle. All the same, the view that the parts of the soul are the soul itself has been cast doubt upon by authors such as Polansky (2007, 39f.), who considers the possibility that *DA* II 1 provides the general definition of the soul itself, while the definitions of the capacities of the soul in the rest of the *DA* provide the accidents of the soul as somehow derived from the general account in II 1. However, this view does not have direct textual support and it does seem to conflict with the final

continuous with the investigation of the parts of the soul (see *DA* II 4.415a14–16: Ἀναγκαῖον δὲ τὸν μέλλοντα περὶ τούτων σκέψιν ποιῆσθαι λαβεῖν ἕκαστον αὐτῶν τί ἐστίν, εἴθ' οὕτως περὶ τῶν ἐχομένων καὶ περὶ τῶν ἄλλων ἐπιζητεῖν).

30 On this see Corcilius and Gregorić 2010, 100–113; Corcilius 2008, 112; Johansen 2012; Corcilius and Primavesi 2018, CLXXVII–CLXXXI.

31 On Aristotle's conception of parts of the soul see Corcilius 2008, 21–5; Corcilius and Gregorić 2010.

statement in *DA II 3* just mentioned according to which the most appropriate account of the soul consists in nothing other than in the account of the capacities of the soul, i.e., the nutritive, the perceptual, and the intellectual part of the soul.³² There is, then, no good reason to abandon the view that the soul itself is nothing but the set of basic soul capacities that Aristotle calls the parts of the soul.³³

This view of the soul itself as the parts of the soul, i.e., as the first explanatory starting points for the explanation of the phenomena of living things, however, raises questions about the unity of the parts. How do the parts of the soul make up a unitary first scientific principle if this principle is nothing but the set of the basic capacities of living things? And how do the parts of the soul in complex individual souls, in souls with more than one part that is, make up a unitary principle of life? A brief discussion of these two questions will help clarify the conception of the soul itself. The latter question is addressed in *DA II 3* with a famous geometrical simile regarding both the ontology, and the relation among, the parts of the soul. The ontological side of the analogy is this: in the same way in which there exists no abstract geometrical entity of the name “figure” apart from actually existing specific geometrical figures “triangle”, “square” and so on, there is also no abstract entity “soul” or “soul itself” existing over and above the different particular kinds of souls that are to be found in the individual species of living things (*kath’ hekaston*, 414b32ff.). Regarding the relation among the parts, the geometrical analogy says that the different parts of the soul (vegetation, perception, and thought) form an ordered series in the same way in which the different kinds of geometrical figures form an ordered series of increasing complexity. Thus, each individual kind of soul specific for a given species of living thing with more than one part of the soul will not be a mere aggregate of soul-parts because complex souls are unitary wholes similar to the way in which for instance squares are unified geometrical wholes, even though they may be analysed into triangles, or in

32 Buchheim (2017) interprets Aristotle in such a way as to make the soul the bearer (“Träger”) of its capacities (p. 12). This requires the commonest account of the soul to be a definition of the soul itself (see his discussion of the relation between the soul and its parts on pp. 28–34).

33 Since the soul itself as the first explanatory principle of the science of living things is nothing but the parts of the soul, we should read the statement above quoted in T3: “Having now considered the soul as such and each of its capacities [...]” (Ἐπεὶ δὲ περὶ ψυχῆς καθ’ αὐτὴν διώρισται πρότερον καὶ περὶ τῶν δυνάμεων ἐκάστης κατὰ μόριον αὐτῆς [...]) in such a way as to take the “and (καὶ)” as limitative, thus rendering the following sense: “Having now considered the soul as such, i.e. each of its capacities [...]”. Similarly, Johansen 2012, 258f.

the way in which each item in the series of natural numbers “contains” the previous ones in the series. For the lower and more basic parts of the soul are present in the “higher” and more complex parts only as potential parts and not as actual parts (*potential inclusion*).³⁴ Aristotle further suggests that the lower parts do not only precede the higher parts in the series but they also exist for their sake, i.e., for the sake of the higher parts in the series (*teleological subordination*, see *GA* II 3, 736a37–b1). Thus, the basic vegetative soul-capacity of nutritive and sexual self-preservation in living things that possess more than one part of the soul is not only potentially contained in their perceptual faculty, but it also exists for the sake of the perceptual part preserving a living body that is capable of perceiving. Hence, to some important extent what it is to be nutritive self-preservation will differ in essence according to whether the object of self-preservation happens to be a perceptual or just a nutritive living thing.³⁵ These three structural features of complex souls (serial order, potential containment and teleological subordination) should give us an idea of how Aristotle thought about the unity of the parts of the soul in complex souls. However, he does not think that the analysis of the specific kinds of souls in terms of combinations of parts of the soul is *sufficient* for an understanding of what these individual kinds of souls are. There may very well be additional features that enter the definition of specific souls that are not contained in the definitions of the nutritive, the perceptual, and the intellectual parts of the soul. It is also important to note that the reduction of complex souls into their components in the way suggested by the geometrical analogy in *DA* II 3 does not amount to an *ontological reduction* of specific (complex) souls to the parts of the soul. Aristotle surely does not want to suggest that specific souls are ontologically *reducible* to combinations of parts of the soul. Specific souls are the essences of the living things whose souls they are, and as such, they, as all essences, should be ontologically irreducible. There is no way for Aristotle in which ontological simples such like the essences of living things can be derived from ontologically more fundamental entities. Although it remains true for Aristotle that their definitional accounts, which are universal, can have parts, but they are “parts” only insofar and inasmuch as they jointly constitute the definition of one and the same soul, while their respective definitional accounts do not make reference to each other (are separable in account). Hence, to be part of the soul of a given species of living thing is to be a definitionally separable part of the definition of that specific soul.³⁶ Such parts

34 On this see Corcilius 2015, 42–45.

35 See previous fn.

36 See Corcilius and Gregorić 2010, 109ff.

of the soul, due to their definitional separability, then, will *be prior in account* with relation to the definition of the whole and complex souls whose parts they are, yet at the same time they will be posterior to them in *being* (*ousia*). Now this, as far as the first question in regard of the unity of the soul itself as the first explanatory starting point of the scientific explanation of the phenomena of living things is concerned, suggests the following picture: to be a part of the soul itself is to be part of the generic essence of the highest genus of living things generally, and to be such a part is to be a definitionally separable component of the account of that most universal generic explanatory principle of living things. There are three such parts: vegetative self-preservation, perception, and the thinking part. These parts, to be sure, are not ontologically prior to the specific souls of individual animate kinds. But they enjoy explanatory and definitional priority over them³⁷ – because their definitions refer neither to the definition of any other part of the soul itself nor to the definition of any particular animate species, while the definitions of these particular animal species will contain either one or a plurality of these parts.

What does this brief discussion tell us about the ontological status of the soul itself? In the first chapter of the *De Anima* Aristotle raises the question of whether there is one common definition (*logos*) of the soul or only particular accounts for the particular species of souls each of which ought to be defined separately:

T8. And we must be careful not to neglect to consider whether there is one account of the soul, as of animal, or whether there is a distinct account of each (for example, of horse, dog, human, god) – animal, the universal, being either nothing or posterior. And similarly, if there is any other common thing predicated.

εὐλαβητέον δ' ὅπως μὴ λανθάνῃ πρότερον εἰς ὃ λόγος αὐτῆς ἐστὶ, καθάπερ ζώου, ἢ καθ' ἕκαστον ἕτερος, οἷον ἵππου, κυνός, ἀνθρώπου, θεοῦ, τὸ δὲ ζῶον τὸ καθόλου ἥτοι οὐθέν ἐστιν ἢ ὕστερον, ὁμοίως δὲ καὶ εἴ τι κοινὸν ἄλλο κατηγοροῖτο. (DA I 1.402b5–8, trans. Reeve)

The question here is whether the scientist of living things ought to render a universal definitional account of each of the different animal species separately or not and give a common account instead that holds for all of their common features; the latter alternative, though more economical from a methodological perspective, comes at a price. The subject of these common features, their

37 Johansen 2012, 70–72, points out as well that the parts of the soul are definitionally prior with relation to the whole souls of living things.

common subject "animal", will lack in ontological status: there is no species "animal" that exists over and above the particular species of animals (very much in the same way in which there is not geometrical figure that is just a figure and not any particular figure). Hence "animal" will either be nothing at all or it will be posterior to the individual species of animals (*hysteron*). Regarding his science of animals and of living things generally, Aristotle will go with the latter alternative. The different species of animate beings do indeed have different accounts because their essences differ from each other. However, whenever there are commonalities in their accounts, then these commonalities ought to be attributed to a common subject at the highest possible level of generality, even if this should require a degree of theoretical abstraction that goes beyond any of the actually existing species and genera that we find in nature. There is, for instance, no actually existing genus "animal" that is just that and not also a specific kind of animal. However, what counts for Aristotle is that there are many things that are true of all sorts of specific kinds of animals in virtue of the fact that they are animals, not any particular kind of animal, but just animals. It makes good methodological sense, therefore, to isolate a common subject for all of the features that hold of animals *qua* animals and to demonstrate its *per se* accidents on a commensurate universal level, i.e., on a level as general as possible and as specific as necessary to provide explanations for each phenomenon at its widest possible extension.³⁸ Very similar things can be said about a good many other such like fictitious genera, for example, "blooded animals", "cloven footed animals" and so on. Ontologically, each of these scientific artifacts will be posterior to any of the actually existing species and genera of living things: they do, after all, not occur as such in nature. From an ontological point of view, they are merely "something common" (*ti koinon*) that we as scientists postulate (*hupothitetai*) at the appropriate level of universality as the generic subjects of the *per se* accidents that extend farther than any of the species that actually exist in nature. Due to their generality and definitional independence from any particular species, they are definitionally separable from, while ontologically dependent upon, them. Indeed, Aristotle says more than once that the generic features that enter the definition of a given thing change their very being in accordance with the specific essences whose generic features they are. Thus, what it is to be, for example, an animal, "animality" itself, will be different in particular kinds of animals such as dogs, horses, and humans.³⁹ Hence, the very being of such generic artifacts of science will turn out different in

38 See above fn. 14.

39 See *Metaph.* I 8.1057b38–1058a4: "For I give the name of difference in the genus to an otherness which makes the genus itself other (λέγω γὰρ γένους διαφορὰν ἑτερότητα ἢ ἕτερον ποιεῖ τοῦτο αὐτό)." Cp. *Metaph.* Z 12.1038a25–30.

accordance with the particular existing species of living things in which they actually occur. I now would like to suggest that this same kind of status, on an even higher level of abstraction, holds also of the soul itself: I claim that the soul itself is the common subject of the most general essential features of living things in general. In this sense it is the subject of the most common *per se* accidents of living things on the most general level of biological abstraction. It is ontologically posterior to any of the actually existing essences of the different species of living things, as there is no actually existing kind “living thing”, while it, due to the definitional separability of its parts, has definitional and explanatorily priority over any of the particular kinds of living things. From the standpoint of the organization of the science of living things, it is not only economical but also good scientific practice to account for all features that are common to any plurality of species on the highest possible level of generality. And this, I suggest, also holds for the most general features that are shared by all living things across all of their actually existing kinds and genera. They should thus be accounted for in one common account on the highest possible level of generality, wherever this is possible. This mode of procedure is what the methodological precept of commensurate universal definitions requires.⁴⁰ For the science of animals Aristotle recommends it explicitly:

T9. I mean, for example, should we take each essence singly and define it independently, e.g., taking up one by one the nature of mankind, lion, ox, and any other animal as well; or (should we take) *the accidents common to all according to something common we will have assumed?* For many of the same (accidents) are present in many different kinds of animals, e.g., sleep, respiration, growth, deterioration, death, and in addition any remaining affections and dispositions such as these.

Λέγω δ' οἷον πότερον δεῖ λαμβάνοντας μίαν ἐκάστην οὐσίαν περὶ ταύτης διορίζειν καθ' αὐτήν, οἷον περὶ ἀνθρώπου φύσεως ἢ λέοντος ἢ βοῶς ἢ καὶ τινος ἄλλου καθ' ἕκαστον προχειριζομένους, ἢ τὰ κοινῇ συμβεβηκότα πᾶσι κατὰ τι κοινὸν ὑποθεμένους. Πολλὰ γὰρ ὑπάρχει ταῦτά πολλοῖς γένεσιν ἑτέροις οὖσιν ἀλλήλων, οἷον ὕπνος, ἀναπνοή, αὔξεις, φθίσις, θάνατος, καὶ πρὸς τούτοις ὅσα τοιαῦτα τῶν λειπομένων παθῶν τε καὶ διαθέσεων. (PA I 1.639a15–22, trans. Lennox, modified, emphasis mine)

⁴⁰ See fn. 14 above.

Aristotle here asks whether in cases where there are common attributes (τὰ κοινῇ συμβεβηκότα πᾶσι) which are shared across different genera of living things while there is no common underlying essence (ἑτέροις οὖσιν ἀλλήλων), we should posit a common subject for these attributes or not (κατά τι κοινὸν ὑποθεμένους). Now, even though in the immediate context of the *PA* he doesn't answer that question directly, the series of examples (breath, growth etc. all of which are discussed in the *PN* by way of a common account) leaves no doubt as to what he thinks the correct answer is. 'Yes, if there are common features that hold of animal kinds across species, then we as scientist ought to give them a common explanation on the appropriate and commensurate level of universality'. And the way Aristotle's science works this requires postulating an abstract subject as the bearer of these common attributes (τι κοινὸν ὑποθεμένους). Other, even though less general, examples of abstract subjects of common *per se* features that transcend the actually existing animal kinds are, for example, the postulated genus of locomotors, which is the generic subject of the functional account of locomotive body parts in the *IA* and of the causal account of animal self-motion in the *MA*.⁴¹ These 'genera' are theoretical fictions that comprise such heterogeneous animal species and even genera such as humans, land-animals, birds, fishes, and insects. It is safe to say, therefore, that Aristotle applies his general precept of postulating such common underlying subjects (*koinon ti* in *T9* and *ti koinon* in *T8*) also in cases where there is no actually existing living species or genus that corresponds to it.⁴² Exactly this, I suggest, holds also in the case of the soul itself, albeit on the highest possible level of universality within the domain of living things. The soul itself is a mere *koinon ti*, namely the postulated subject of the set of the most universal essential features of living things generally. While being ontologically posterior to any of the actually existing living things, its definition is definitionally and explanatorily prior to them, rendering an account of the most common essential features of all living things.⁴³ The further details of the relation between the souls of actually existing species of living things and the soul itself are unclear, apart from the fact that the soul itself is definitionally

41 See also the discussion in *PA* I 1.639a25–b5, and the discussion in Corcilius and Primavesi 2018, 67–70.

42 See *APo.* I 4.74a17–25 (*katholou hupothitetai huparkhein*). See also *APo.* II 14.98a13–23 (with *APr.* I 35); cp. furthermore *Metaph.* M 3.1077b17 sqq. for a discussion of the claim that abstract scientific postulates of such kind do not imply ontological commitments (see also Angioni 2007, 20. fn. 19).

43 It would be wrong, therefore, to look for a corresponding body of the soul itself. The definition of the soul itself as the first principle of the science of living things is an abstract generic definition; it does not have a body. See following fn.

and explanatorily prior and ontologically posterior to them. Aristotle has not given us examples of definitions of actually existing species of living things.

4 Conclusion and Epilogue

The soul itself is the postulated abstract common subject of the most universal features of the essential forms of living things generally. It is the proper object of the inquiry of the *De Anima*, the treatise devoted to the definition of the soul as the highest generic essence of living things that is going to be foundational for the corresponding science of living things. As such the soul itself is the common subject for features the existence of which we have to assume if we want to render scientific explanations of the phenomena of living things. It consists of the parts of the soul, the nutritive, the perceptual, and the thinking part. The antonym of the soul itself is the *per se* accidents of the soul. These *per se* accidents are the universal and necessary features that hold of living things insofar as they are alive, i.e., insofar as they have a soul. They are the phenomena of living things insofar as they are explicable by reference to the soul itself.⁴⁴

On this conception, the distinction between the soul itself and the actions and affections common to body and soul that structures the division of labour between the *De Anima* and the *Parva Naturalia* should fall under that same general distinction between the soul itself and its *per se* accidents, i.e., the attributes living things have in virtue of having soul (the *per se* accidents of the soul). However, given Aristotle's general hylomorphic view according to which the soul is the form of the living body and the living body is the matter of the soul, that distinction must – at the bottom – either straightforwardly be, or at least crucially involve, a distinction between matter and form. Thus, by implication, both the distinction between the soul itself and its *per se* accidents on the one hand and the distinction between the soul itself and actions and affections common to body and soul on the other should either be instances of, or crucially involve, the form/matter distinction. Now as far as the material attributes of living bodies are concerned, this seems unproblematic. It is trivial that the parts of the animal body are the matter of the soul. But this is not immediately clear with respect to the actions and affections common to body and soul (see T4 which contains the methodological introduction to the

44 *APo.* II 14.98a20–23 says that such scientific abstractions may well constitute analogical unities that cut cross genera. The same goes for *PA* I (see chapter 1.639a29–b5, and 5.645b2ff.).

Parva Naturalia in the beginning of the *De Sensu*). This is all the more so since the traditional view (going back at least to Alexander, *Comm. in Sens.* 4), that the distinction at work in the relation between the *De Anima* and the *Parva Naturalia* basically is, or at least crucially involves, a distinction between form and matter, has come under fire in the recent literature.⁴⁵ I think the traditional view is basically correct. However, I shall leave the discussion of that question to another occasion.⁴⁶

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45 For different accounts see, e.g., Block 1961; Kahn 1966; Jaeger 1913; van der Eijk 1994; King 2001; Burnyeat 2004; Johannsen 2006, 2012; Morel 2006.

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