Introduction
The Unmoved Causes of Receptivity

0.1 The Nature of Perception

What is perception? Is it 'nothing but' a physical process? Or does it involve more? And if so, how exactly should this 'more' be spelled out? Much will depend on how, precisely, one should understand the relation between perception and the perceived object. Is the very nature of perception *relational*, and is perception 'transparent' with respect to its object? Or is perceptual experience characterized, and indeed defined, by an intrinsic *quality*? And does the content of perception coincide with its *cause*, or not?

Aristotle's treatment of perception may be of more than historical interest due to the intriguing way in which it combines features of *relational*, *qualitative*, and *causal* accounts of perception. At some points, he describes perception as a way of 'being affected' by perceptual objects.[1] In other contexts, perception and perceptual object are characterized as a specific kind of *relatives* (wherein one relatum – the perceptual object – is ontologically prior to the other).[2] Elsewhere, perception appears to have an intrinsic *qualitative* nature, as suggested by Aristotle's account of perception in terms of assimilation, which results in a presence – for the duration of the perception – of a quality in the perceiver.[3] Did Aristotle succeed in integrating the relational, qualitative, and causal features into a single coherent account? That would make his treatment of perception genuinely interesting from a philosophical point of view.

[1] See e.g. *Metaph.* Γ.5, 1010b30–1011a2 (where being a mover is a sign of an ontological priority of the perceptual object over perception), and many passages in the *De Anima*, for which see references in n. 4. Cf. *Soph. Ref.* 22, 178a9–19; *Insomn.* 2, 459b4–5; *MA* 7, 701b17–18; *Phys.* 7.2, 244b10–12.

[2] See especially *Metaph.* Δ.15, 1020b30–2, 1021a33–b3; *Cat.* 7, 7b35–8a12 and 10, 11b28–31). Cf. *An.* 2.4, 415a20–3 (with 1.1, 402b14–16).

[3] This is a key topic of *An.* 2.5–12, but see also *Cat.* 8, 9a28–b9 on the so-called passive qualities, where Aristotle explains that they are called passive owing to their power to cause perceptual affections, i.e. to assimilate perceivers to themselves and so make themselves perceived.

One might be sceptical, however, and suggest that in Aristotle's work we find, at most, a plurality of perspectives on perception that were never intended to be fully integrated. Yet his account of perception in the *De Anima* – which has the makings of a general coherent theory – does, interestingly, make room for all the three features. The dominant element here seems to be the causal one: Aristotle continually asserts that perceiving – and, *mutatis mutandis*, thinking – is a way of *being affected* by its object.[4] However, even in the *De Anima* this is far from a straightforward answer to the definition-seeking *what-is-it* question. Aristotle spends a whole chapter – one of the most famous and difficult chapters in the corpus, namely *An.* 2.5 – on qualifying the sense in which perceiving actually is a way of being affected and excluding the senses in which it is not. Nor are the qualitative and relational aspects absent from the *De Anima*: the assimilation model of perception, prominent in *An.* 2.5 and beyond, suggests that perception has a qualitative nature; and the key idea that perception is a case of *discrimination* brings the account of the *De Anima* into line with the classification of perception and perceptual object as asymmetrical relatives.[5]

The fact that we find all of this in Aristotle's most systematic treatment of perception suggests that he does aim at integrating the three features and permitting them to coexist within his larger theory. Indeed, it suggests that he was well aware of the difficulties inherent in the deceptively simple question 'What is perception?' Even the simplest case of unimodal perception is, apparently, too complex to be unambiguously classified as either a kind of being affected, or a relatum, or a quality. Aristotle seems to have thought that any viable account should successfully integrate all three features.

There is, as noted above, solid evidence to suggest that in the *De Anima* Aristotle took the notion of 'being affected' (πάσχειν) to be at least the right starting point for capturing what perception is. But it is only the starting point, and the very chapter that is supposed to determine the sense in which perception is a kind of being affected, namely *An.* 2.5, also

[4] See *An.* 2.5, 416b33–4, 418a3–6; 2.7, 419a18–19; 2.10, 422b2–3; 2.11, 423b31–424a1; 2.12, 424a21–4, 424b7–8; 3.2, 426a1–6, 427a8–9; 3.4, 429a13–18; 3.7, 431a4–7; 3.12, 434b27–9, 435a5–8. Cf. e.g. *Soph. Ref.* 22, 178a4–27; *Insomn.* 2, 459b4–5; *MA* 7, 701b17–18; *GA* 5.1, 780a1–4.

[5] See especially *An.* 2.6, 418a14–15 and 2.11, 424a2–7; cf. *Metaph.* Δ.15, 1020b30–2. See also *Metaph.* I.1, 1053a2–20 for a close connection between 'discrimination' and 'measuring'. The relational nature of perception arguably becomes explicit in the account of it as receptive of forms without the matter in *An.* 2.12.

arguably offers clues for understanding why perception can accurately be described as a quality and a relatum, too. In fact, this chapter can help us understand how intimately the three aspects under consideration are intertwined. What Aristotle suggests here, or so I shall argue, is that perception is a presence of a quality of the perceptual object in the perceiver, which makes it qualitative; but the quality must remain in an important sense a quality *of* the external object that one perceives, which suggests that perception is a relatum. Moreover, both this quality and the relation only exist insofar as – and for as long as – the external object continues acting on the perceiver, which, finally, confirms the classification of perception as a kind of being affected, from which Aristotle started. This framework presented in *An.* 2.5 – simplified in the above lines – is then further elaborated in the subsequent chapters of the *De Anima*, building up to Aristotle's well-known account of perception as a reception of forms without the matter.[6]

When Aristotle later comes to discuss *thinking* and the part of the soul responsible for it in *An.* 3.4, he, strikingly, reintroduces this ontological framework and the account of receptivity developed originally for perception.[7] This move is surprising, as acts of thinking are in many respects very different from acts of perceiving. Indeed, Aristotle goes on to closely analyse the differences. Still, he appears to believe that the basic ontological framework applies, and that the phenomenon of human thinking is to be understood within it. In any case, Aristotle certainly does not ignore the question of how relational, qualitative, and causal features of perception (and, *mutatis mutandis*, of thinking) cohere: in fact, the question turns out to be central to his entire inquiry into the cognitive faculties of the soul in *An.* 2.5–3.8.[8]

[6] Caston 2002: 788–91 locates Aristotle's account *somewhere in between* accounts that tend to reduce the quality of perception to its being *about* or *of* a qualitative perceptual object and accounts that, instead, ascribe to perception a quality *of its own*. The former could be analysed as reducing the qualitative nature of perception to its relational nature, while the latter reduce its relational nature to its qualitative nature. (Cf. Caston's 2004 defence of the relevance of Aristotle's account to the contemporary debate on *qualia* against Sisko 2004.) The question is *where exactly* Aristotle's account is to be located between these two extremes. Key to that question, I submit, will be his classification of perception as a kind of being affected.

[7] *An.* 3.4, 429a13–18 (discussed in Section 1.1).

[8] Besides relatum, quality, and being affected, a standard medieval quadrilemma also includes 'activity' (*actio*); see e.g. Peter Auriol, *Scriptum super primum* Sententiarum, D.35, *pars* 1, a.1 (concerned with thinking). More on the fourth aspect – that is, activity – and its compatibility with the causal perspective in Section 0.4.

0.2 Aristotle's Explanatory Project

This observation, however, must be set in the proper context of Aristotle's project in the *De Anima*.[9] His aim here is emphatically not to provide an exhaustive *classification* of all mental phenomena. He clearly is not interested in suggesting that, say, all episodes of human 'thinking', as we experience them when engaging in solving a maths problem or figuring out the next move in a game of chess, are cases of being affected. That would be an absurd claim. Moreover, even in the case of perception, Aristotle surely does not want to suggest that all the complex episodes of perceptual experience can, in all of their facets, be entirely subsumed under the notion of being affected. Even in non-rational animals, such experiences will certainly involve complex sensorimotor interactions, sensory adaptations, various associations, interpretations based on experience, evaluations of the perceived objects 'as' beneficial or detrimental, and so on and so forth. And these could hardly be classified as cases of being affected. It is thus vital to bear in mind that the aim of the *De Anima* is not to provide any exhaustive classification of mental phenomena. Aristotle's project is *explanatory*.[10]

That, however, does not mean that we should expect to find complete explanations of any mental phenomena in the *De Anima* itself. Rather, Aristotle clearly considers the inquiry that forms this treatise as being only one piece of a much larger explanatory project, with a precisely determined role within it – that of defining the first principles (i.e. the ultimate *explanantia*) of the entire range of phenomena of embodied life.[11] In the *De Anima*, the constitutive capacities or parts of the soul are to be defined exactly as such *explanantia*.[12] It will be the subject of other parts of Aristotle's science of living beings, starting with the so-called *Parva Naturalia*, to employ the theoretical principles from the *De Anima* as

[9] For an overall account of Aristotle's project in the *De Anima*, see the introduction to Corcilius, Falcon, and Roreitner 2024 and Corcilius 2025; cf. e.g. Johansen 2012b: 9–46 and Hankinson 2019.

[10] See e.g. *An.* 1.1, 402a6–7, 402b16–403a2; 1.2, 403b25–30; 2.2, 413a20–b13.

[11] There is a long tradition of reading the *De Anima* against the background of Aristotle's account of the search for scientific definitions in *Posterior Analytics* 2. Besides the references already given in n. 9, see also e.g. Bolton 1978, Kent Sprague 1996, Achard 2004, Carter 2019a: 21–46, Mingucci 2021, and Lennox 2021a, 174–99.

[12] For discussion of Aristotle's notion of the 'parts' of the soul, see Corcilius 2008: 21–55 with Corcilius and Gregoric 2010; or Johansen 2012b: 47–72 with Johansen 2014. For a historical perspective on the individuation of the parts of the soul, see Corcilius 2015.

starting points for explaining the complex phenomena of life – whether those of humans, animals, or plants.[13]

Given that the *De Anima* is engaged in such a foundational project, it seems likely that a key aim of the treatise should consist in correctly identifying the *basic* or *primary activities* of life, as well as the correlative objects of these activities. This appears to be the case because the constitutive capacities of the soul – that is, the first explanatory principles of the respective domains of life-phenomena – are to be defined as primarily responsible for such activities, which are their primary manifestations. The idea is that in each major domain there is a kind of activity on which all other phenomena explanatorily depend, but which itself can be defined independently from them; hence, when we find the capacity responsible for one of these primary activities, we have found a constitutive capacity of the soul.

So, the nutritive capacity is the first principle for a wide range of phenomena, including growth and diminution, as well as numerous changes involved in the processing of food, which – at least in animals – presupposes a complicated mechanism of balancing heat and cold. Aristotle, however, understood growth and diminution as derivative, and individual bodily changes as subservient to the activity of nourishing oneself. It is with respect to this nourishing activity that the nutritive capacity can be defined as being, primarily, that which preserves, by means of nutriment, the substance of the living body.[14] Similarly, the perceptive capacity and the thinking capacity are to be jointly responsible, as the ultimate *explanantia*, for the entire range of mental phenomena.[15] However, the key to defining these principles, according to Aristotle, is identifying the *primary* activity in each domain – that is, the primary activity of 'perceiving' (αἰσθάνεσθαι) and the primary activity of 'thinking' (νοεῖν) – in a technical sense such that each of them can be understood on their own without taking any other perceptual or intellectual acts into

[13] There are important hints as to how this should be achieved in *Sens.* 1 and *PA* 1.1. For the structure of this larger project, see Andrea Falcon's recent work (Falcon 2015, Falcon 2018, Falcon 2019, Falcon 2020, Falcon 2021, and Falcon 2024); cf. Johansen 2006, Corcilius and Falcon 2022. For the foundational role of the *De Anima*, and earlier scholarly discussion of the treatise, cf. also Lloyd 1992.

[14] See *An.* 2.4, 416a29–b20. For helpful discussions of Aristotle's account, see Johansen 2012b: 116–27, Lennox 2021b (with Coates and Lennox 2020), and Gill 2021.

[15] This is to assume that other capacities involved in accounting for these, such as *phantasia* (discussed in *An.* 3.3) or the desiring and moving capacity (discussed in *An.* 3.9–11), cannot be defined independently from the perceptual and the thinking capacity, and that these two are, according to Aristotle, definitionally separate from each other.

account, while all other acts of perception or thought can only be understood properly with reference to one (or both) of these core activities.[16]

If this observation proves fruitful, it has important consequences for our initial question. This is because Aristotle's classification of perceiving and thinking as kinds of being affected – and of qualities and relata – is arguably intended to capture precisely, and exclusively, the nature of the two primary cognitive acts. The *De Anima*, thus, cannot be offering a philosophy of mind in the modern sense, but lays – at most – the groundwork for one. Furthermore, this observation implies that many of the prima facie objections against Aristotle's classification will simply miss their target, because they will be concerned with non-primary cognitive acts, which were never intended to be classified in such a way. In noting this point, a key question comes to the foreground: namely, what 'perceiving' and 'thinking' – understood as the primary manifestations of the two capacities – exactly *are*. In both cases, the answer is neither straightforward nor uncontroversial.

Because thinking lies beyond the scope of this study, I limit myself to perceiving.[17] What is sufficiently clear, in embarking on this discussion, is that Aristotle analyses the primary perceptual acts in close connection to the so-called *exclusive objects* (i.e. the qualities that define the individual sense modalities, such as colour for visual perception). But that does not mean that perceptual acts are simply acts of perceiving these exclusive qualities on their own, such that these qualities would then need to be interpreted or somehow combined – by further, synthetic acts – in order for the perceiver to perceive the external *bearers* of the qualities. Rather, as I shall argue, it is Aristotle's view that the bearers of qualities are perceived in a no less primary way than the qualities themselves. In any case, animals most probably never engage in such limited acts of perception on their own – these are always already constituents of more complex experiences involving acts that are not passive (such as associating sweetness with a yellow object out in the world, being pleased by it, and desiring it).

[16] I take this to be implied, among other things, by the methodological prescription formulated at *An.* 2.4, 415a14–23, which provides an answer to the question posed at *An.* 1.1, 402b10–16.

[17] I take the technical meaning of thinking (νοεῖν) governing the account of *An.* 3.4–5 to be nothing less than the grasping of the very essences of things – a very lofty achievement that humans rarely attain in its proper form. If so, the classification of thinking as a kind of being affected must not be taken to say anything directly about the processes of reasoning, inferring from premises, deliberating, and the like. This does not mean that understanding the sense in which these acts are, according to Aristotle, definitionally dependent on grasping essences is an easy task. For a discussion of this topic, I refer the reader to Roreitner 2024a.

Furthermore, in the case of rational animals, these experiences involving perception are not purely perceptual, either.

0.3 The Role of the Soul

I shall discuss further potential misgivings concerning Aristotle's classification of perceiving (and thinking) as a case of being affected in the following section. First, however, it ought to be stressed that there is another, no less important, reason why the general ontological question about perception (and thinking) from which we began needs to be set in the wider context of Aristotle's agenda in the *De Anima* and its focus on the first principles (i.e. the ultimate *explanantia*) of the phenomena of life. Thus far, I have emphasized the limited scope of Aristotle's focus in the *De Anima*. However, its wide-ranging ambition should also be noted. Aristotle cannot merely identify the primary activities of life and say *what they are* in the sense of providing a general ontological classification. This would not accomplish his aim, which is to define the *capacity* of the soul responsible for each such activity that is capable of playing the role of the ultimate *explanans* for the entire domain of the corresponding phenomena. To achieve this feat, Aristotle must say what each capacity is, which will essentially involve spelling out *how* exactly each capacity is responsible for its defining activity – that is, what *exactly* its causal role in that activity amounts to. For instance, Aristotle has to make clear, at least on the most general level, how the perceptive capacity of the soul *causes* the activity of perceiving, and his project in the *De Anima* cannot be understood as successful unless he has made clear what the perceptive capacity of the soul must be like to play the requisite causal role of a first principle in perception.

These questions touch directly on Aristotle's central goal of defining the soul. The nature of this undertaking, as well as the content, novelty, and eventual attraction of Aristotle's account have all been matters of no small controversy. For some time in the late twentieth century, it was fashionable to compare Aristotle's account of soul – and, allegedly, of mental phenomena – with contemporary functionalism.[18] More recently, Aristotelian hylomorphism has come to be treated, defended, and

[18] See e.g. Putnam 1975, Nussbaum 1978, Shields 1991, Cohen 1992, and Nussbaum and Putnam 1992 (cf. Sorabji 1974). For a criticism of this approach, no less controversial than the approach itself, see Burnyeat 1992; for other critical appraisals, see e.g. Robinson 1978, Menn 2002, and now Charles 2021: esp. 36–8, 234–9.

criticized as a contemporary position *sui generis*.[19] The present study is not aimed as a direct contribution to this debate, but it will be concerned, throughout, with several key aspects of it, which are brought into sharp relief by Aristotle's account of perception. This study will bear directly on the explanatory and causal role of the soul, and more specifically on the task of reserving causal primacy for the soul, without falling prey to illicit homuncularism.

We shall see that Aristotle sets exactly this task for himself in the *De Anima* when he accuses his predecessors, including Plato, of erroneously assimilating souls to bodies. It has been convincingly argued that, to counteract this tendency, Aristotle outlines in the *De Anima* a programme of purifying the soul of any bodily features erroneously ascribed to it by his predecessors.[20] This programme is intimately bound up with capturing the causal and explanatory role of the soul. As the set of the ultimate *explanantia* of embodied life, the soul must not be treated as if it were itself a living body (i.e. effectively another *explanandum*). Furthermore, it is not sufficient to insist that the soul is not a body, however emphatically one does so: rather, one's descriptions of the soul and its causal role must be consistent with this claim.

One of the issues that will become particularly important here is the notion of the soul's *unmoved nature* as Aristotle's key innovation – one that is strongly emphasized in the critical discussion of his predecessors. Aristotle's point is relatively straightforward in the case of animal self-motion, which is treated as one of the two basic kinds of phenomena of life besides cognition.[21] His grievance is that, in accounting for animal self-motion, his predecessors (with the half-hearted exception of Anaxagoras)[22] postulated the soul as a self-moving entity inside the animal body, because they believed that the soul could only be the primary moving cause of the body if it itself were in motion.[23] By Aristotle's lights, however, this is a fallacy that only reveals his predecessors' failure to identify properly the

[19] See especially Fine 1999, Johnston 2006, Koslicki 2006, Fine 2008, Koslicki 2008, Oderberg 2008, Jaworski 2011: 269–357, Rea 2011, Marmodoro 2013, Robinson 2014, Jaworski 2014, Jaworski 2016, Skrzypek 2017, and Shields 2019; see also the exchange between Robinson 2021 and Shields 2021, and also Charles 2021: 226–6 with Corcilius 2023.

[20] See Menn 2002.

[21] See *An.* 1.2, 403b25–7, 404b7–10, 405a23–5, 405b10–12; 1.5, 409b18–24; 2.2, 413a22–5; 3.3, 427a17–21; 3.9, 432a15–19.

[22] See *An.* 1.2, 404a25–b7 and 405a13–19 for the idea that the entirely impassive (and so unmoved) νοῦς is the primary cause of motion, although its relation to the notion of the soul as a mover remains unclear.

[23] See *An.* 1.2, 403b28–31 for Aristotle's claim that the correct view of soul as the primary mover, combined with the false assumption that only what is itself in motion can move something else, is

ultimate *explanans* of animal self-motion. According to Aristotle, what is itself in motion cannot be the *primary* cause of motion, because it begs the explanation of where its own motion has come from.[24] Accordingly, once the soul has been agreed to be the primary cause of animal self-motion (as it widely was thought to be), it follows that Aristotle's predecessors effectively failed to identify the soul. Indeed, Aristotle has a battery of arguments showing that the soul *cannot* itself be in motion;[25] and he insinuates that his predecessors, including Plato, mistakenly talked of the soul as if it were a body.[26]

According to Aristotle, the idea of a self-moving soul is not only impossible but also unnecessary. It is unnecessary because the widely shared assumption according to which only things in motion can move something else is, in his view, incorrect. It is this sort of consideration that prepares the ground for the notion of an *unmoved mover* that is key to Aristotle's account of the soul as the primary cause of animal self-motion. This notion is vital for explaining animal locomotion and, *mutatis mutandis*, the other kind of 'self-motion', namely the motion 'with respect to nourishing and growth and diminution' for which the nutritive capacity is responsible.[27] In this latter case, just as in the case of locomotion, the soul will need to be conceived as an unmoved mover to explain the relevant changes occurring in the body.

Now, the notion of the soul as an unmoved mover is surely not self-evident and admits of being understood in several different ways.[28] Yet, what is at least fairly clear is the overall classification of the soul's involvement: it acts without being itself acted upon. Moreover, Aristotle is able to

what has led his predecessors to the false conclusion that soul is itself in motion. Cf. *Phaedr.* 245c–246a and *Leg.* 895e–896b.

[24] Cf. *APo.* 2.4, 91a35–b2 and e.g. Corcilius 2021. For Aristotle's treatment of self-motion, see also Ferro 2022.

[25] See *An.* 1.3, 406a12–407b12 with *An.* 1.4, 408a31–b30. For a discussion of Aristotle's arguments here, see Carter 2019a: 59–78 and Ferro 2022: 47–119. I shall have more to say about them in Sections 5.1 and 5.2.

[26] Cf. Aristotle's brief discussion of Democritus' openly materialist account of the soul at *An.* 1.3, 406b15–25 and his subsequent innuendo at 406b25–8 that Plato is proceeding in much the same way in the *Timaeus*, when offering his effectively physicalist account of the soul's causal role in locomotion in terms of it being 'intertwined' with the body.

[27] See *An.* 2.2, 413a23–5. For the application of the notion of an unmoved mover in the case of nutrition, see *An.* 2.4, 416a34–b3 and 416b20–3. For differences between the nutritive kind of 'self-motion' and self-motion proper, see Coren 2019.

[28] For an overview of three existing ways of understanding exactly what it means for the soul to be an unmoved mover, see Fernandez and Mittelmann 2017; cf. Corcilius and Gregoric 2013.

draw on his conception of unmoved movers developed elsewhere, outside the *De Anima*.[29]

In both these respects, the situation is significantly more complicated when we move beyond locomotion and turn to the second major kind of life phenomena, namely cognition as that which allows animals not just to orient themselves in the world but also, in the case of rational animals, to understand it. It seems apparent that Aristotle wants to extend somehow the crucial point made about self-motion to the case of perception (and *mutatis mutandis* to thinking).[30] Yet, it is much less clear in this more elusive case what kind of account he has to offer – indeed, even the overall classification of the soul's involvement is far from obvious, and there is no robust account developed outside the *De Anima* that Aristotle could draw on for support. Prima facie at least, it seems that, according to Aristotle, the soul must not be taken as being itself moved by the objects of perception (or thought). However, it is not clear whether this implies that the soul itself somehow acts on or moves something. Even if we leave aside the question of what exactly that would mean, it is not obvious how this assumption could help to solve the puzzle Aristotle is tackling, given that perception is to be classified as a kind of *being affected by* the perceptual object. The question becomes: how can the soul remain unmoved, as seems to be demanded by Aristotle's general concerns about the soul and its explanatory role, when it is also conceived as the primary cause of perceptual (or thinking) acts, which are themselves classified as instances of reception and cases of being affected? How, that is, can the primary causes of receptivity, of taking things in, be unmoved?[31]

The idea that what accounts for perceivers' (and thinkers') ability to take things in is itself unmoved has, since antiquity, appeared all too paradoxical to most readers of the *De Anima*. Accordingly, Aristotle has often been interpreted either as not really taking the primary perceptual (and thinking) acts to be passive and receptive, or as not really taking the perceptive (and thinking) soul to be impassive and unmoved. And when the unmoved nature of the soul has been emphasized, it has usually come at the cost of the soul's explanatory role, leaving it, so to speak, causally sterile. The present study attempts to reconstruct the idea of unmoved

[29] Primarily in *Phys.* 8.4 (cf. *Metaph.* Λ.6–7). See Aristotle's reference at *An.* 1.3, 406a3–4.

[30] Aristotle repeatedly insists that not even in the case of perception can the soul truly be said to be itself in motion, see *An.* 1.3, 406a10–11 with 1.4, 408a34–b18.

[31] Aristotle, as we shall see, clearly conceives of the objects of perception (and thought) as unmoved movers. The main question is how the perceptive (and thinking) soul can be unmoved, too, as the primary cause of receiving these objects.

causes of receptivity as a central insight of the *De Anima*. I contend that the passivity and receptivity of the primary perceptual acts on the one hand and the unmoved nature of the perceptive soul responsible for these acts on the other represent two key ideas of Aristotle's *De Anima*. The hope is that approaching these in their interconnection will help us to appreciate both the notion of passivity and receptivity – developed by Aristotle to capture the essence of the primary perceptual acts – and his novel conception of the unmoved soul.[32]

0.4 Complete Passive Activities

Aristotle's classification of the primary perceptive (and thinking) acts as kinds of being affected has often been approached with scepticism. Aristotle, to be sure, repeatedly says in the *De Anima* (and beyond) that both perception and thinking are cases of being affected by their objects. But these assertions have, since antiquity, often been read as, in fact, saying something quite different. One idea has been that 'being affected' only refers to a necessary condition or material component of these acts and that the *what-is-it* question with respect to these phenomena must be answered differently. Another idea has been that, in this context, Aristotle has modified the notion of being affected so radically that it has become effectively devoid of any genuine passivity (including any reference to the perceived object as being an efficient cause) and is meant to capture simply the transition from not being active to being active.[33] In some cases, the motivation behind these interpretative moves has explicitly been connected to Aristotle's conception of the soul as being unmoved, because it is rather opaque how an unmoved soul could be the cause of acts that consist in being affected. But no less important seem to have been considerations about the notion of being affected itself, as it might seem to be utterly inadequate to capture the essence of any cognitive act. One could argue that (i) the notions of acting and being affected are primarily developed by Aristotle to analyse material processes, but perception (and even more so thinking) seems to be something over and above such processes; and that (ii) perceiving (and

[32] If this is confirmed it should, next, also be investigated whether it holds for the primary thinking acts, i.e. acts of grasping essences as analysed in *An.* 3.4–5. That task, however, is beyond the scope of the present study.

[33] For further discussion of both ideas, see Chapter 1.

thinking) is surely an *activity*, and so it would clearly be a category mistake to speak of it as something *passive*.

Let us review argument (i) first. It is, strictly speaking, a simplification to say that Aristotle's account of acting and being affected, as developed in *Phys.* 3.3 and *GC* 1.6–7, is meant to be used just for analysing material processes. In both texts Aristotle recognizes instances of agents that 'do not have the form in matter', such as the art, present in the artist's soul, which, on Aristotle's account, is an agent that cannot be itself reciprocally affected.[34] Nonetheless, in both these texts 'being affected' is conceived as a change (κίνησις) – that is, a process of progressively moving from *A* to *B* (where *A* and *B* are typically qualities of a single range, such as hot and cold). And it is obvious that perceiving itself cannot be such a process: when I am perceiving the coldness of a snowball over a period of time *t*, it may well be that my hand is becoming colder and colder throughout *t* (although this does not have to be the case), but my perceiving of the coldness surely does not consist in becoming colder and colder; rather I perceive the same coldness of the snowball throughout the whole of *t*. Indeed, as Aristotle stresses repeatedly, there is no time in which I would be, for instance, seeing without already having seen. In other words, unlike processes, perceiving is *complete*.[35] So, if the notion of 'being affected' were limited to processes (conceived as instances involving a progressive movement from *A* to *B*), it could hardly figure in the answer to the *what-is-it* question about perception.

However, when discussing perception, Aristotle does not merely take over the notion of being affected that he developed elsewhere. Rather, he goes beyond anything suggested in his *Physics* or in *Generation and Corruption* by insisting that the notion of being affected 'is not simple' and claiming that different kinds of being affected should be distinguished.[36] Such a distinction is supposed to help us understand the contrast between perception and processes like being cooled. It is a notoriously difficult scholarly question to ascertain how exactly this contrast should be understood. The influential idea that the relevant notion of being affected is synonymous with the notion of transition from 'not being active' to 'being active' makes the contrast so radically different from typical cases of being affected that it becomes unclear why Aristotle would

[34] *GC* 1.7, 324b4–6 (cf. 1.10, 328a18–22). Moreover, it should be noted that the agency of an agent is only numerically identical with the process undergone by the patient, without being identical with it in being, see Anagnostopoulos 2017.

[35] See *Metaph.* Θ.6, 1048b18–35 and *EN* 10.4. Cf. *Sens.* 6, 446b2–4. [36] *An.* 2.5, 417b2–5.

call this notion a way of being affected at all. However, I shall argue that this idea is unwarranted and that the intended contrast is much less radical and more subtle. Once we understand it, we shall also be in a position to understand Aristotle's repeated assertion that perception *is* a kind of being affected. Indeed, this will provide the key to understanding how perceiving can be a case of being affected *and* a case of quality *and* a case of relatum, as well as how perceiving can be essentially complete (i.e. non-processual) *and* passive.

In pursuing this matter, I shall adhere to the following two methodological prescriptions: (a) rather than correcting Aristotle's assertions about what the primary perceptual (and thinking) acts are, we should try to understand them, as far as it is possible, at face value; and (b) in interpreting the notion of 'being affected' that is involved in these assertions, our starting point should be the full-blown notion of being affected that is developed in *Phys.* 3.3 and *GC* 1.6–7 and we should modify that notion only when and where Aristotle explicitly instructs us to do so. He never tells us, for instance, that something can be a case of 'being affected' without there being an agent that is, and remains throughout the time of its acting, distinct from the patient (a condition that is presupposed in both the *Physics* and *GC*).[37] So, the second prescription quickly rules out the idea of identifying the relevant notion of being affected with one of a mere transition that would be equally applicable to productive activities.

What about reason (ii), listed above – that is, the idea that perceiving and thinking are surely activities, and so not something passive? One obstacle in understanding Aristotle's account appears to be our modern notion of passivity, which in fact has a long medieval and ancient genealogy. It seems intuitively wrong, across various modern languages, to say that something is an activity and at the same time that it is passive; we tend to treat 'activity' and 'passivity' as mutually exclusive opposites.[38] This sharp distinction has an ancient heritage, derived from an opposition that crystallized in the Greek language of the Hellenistic period between derivatives of ἐνέργεια (activity) on the one hand and derivatives of

[37] Even the notorious case of a medical doctor healing herself will, in the final analysis, comply with this condition.

[38] For a classic modern account of this opposition, see Frankfurt 1977 (connecting the notion of activity with that of identity, i.e. with the question of what is and what is not 'part of me') and Raz and Ruben 1997 (Raz helpfully highlights ambiguous cases such as taking criticism without responding); see also Harré and Madden 1975: 82–100, 112–16, or Mayr 2011: 198–209 (who connects 'activity' with the modern notion of 'energy'); cf. further Korsgaard 2009, Katsafanas 2011, and McAninch 2017.

πάσχειν (being affected) on the other. The scholiasts and grammarians of the time, for instance, standardly distinguish between the active (ἐνεργητική) and the passive (παθητική) voice of verbs (διάθεσις).[39] This opposition is also adopted in later philosophical texts, and we can see how classical authors, like Aristotle, have later been read through such a lens.[40] This same opposition then entered modern languages via Arabic and Latin.[41] But no such contrast is to be found in the classical authors themselves. For Aristotle, who elevated the notion of ἐνέργεια to a robust philosophical concept, the relevant opposite of πάσχειν (being affected) is not ἐνεργεῖν (being active), but ποιεῖν (acting),[42] and he finds nothing

[39] Διάθεσις μέση stands for the middle voice. This is common in all sorts of ancient scholia – on Homer, Pindar, as well as the tragedians. It is commonly used by Aristonicus in *De signis Odysseae* (see e.g. 1.404.2–3, 4.47.2–3 and 7.33.2), cf. also Dionysius Thrax (?), *Ars grammatica* 1.1.46–9. Later, it is common in the work of Apollonius Dyscolus and Aelius Herodianus. Here is a good example from Dionysius of Halicarnassus, showing how the adjective ἐνεργητικόν was gradually replacing the adjective ποιητικόν in the role of the opposite of παθητικόν at the time: 'When [Thucydides] switches the passive and the *active* voice of verbs (τὰ εἴδη τῶν παθητικῶν καὶ ποιητικῶν), here is how he expresses himself: "Nothing in the treaty prevents (κωλύει) either one or the other." For the *active* verb (ῥῆμα ἐνεργητικόν) "prevents" (κωλύει) is used instead of the passive "is prevented" (ἀντὶ τοῦ κωλύεται παθητικοῦ ὄντος).' (*Second Letter to Ammaeus* 7.1–5; cf. the quotation from the *De intellectu* in the following footnote).

[40] This can be observed in Ps.-Archytas, who uses the grammatical distinction (employed e.g. at *Fragments* 22.21–5) as a key for analysing the difference between the Aristotelian categories of ποιεῖν and πάσχειν (see especially 25.16–26.7, cf. 4.30–1, 5.5–7, 5.21, 5.28–9; but see also 24.8 where πάσχειν is characterized, in a perfectly Aristotelian way, as a κίνασις κατ' ἐνέργειαν). The grammatical use of the παθητικόν–ἐνεργητικόν opposition is also common in Galen (see e.g. *Hipp. Epid.* 3, 679.2–3, 679.15–16, 682.9–11), who does not hesitate to replace ποίησις by ἐνέργεια in his recognizably Aristotelian analysis of acting and being affected (see e.g. *PHP* 6.1.5–6). The author of *De Intellectu* (*Mant.* 2), i.e. Alexander of Aphrodisias or someone from his school, builds on this opposition explicitly in his reconstruction of Aristotle's account of νοῦς and νοεῖν – in a way that leads him to *deny* unambiguously what Aristotle repeatedly *asserted*: 'It is being productive (τὸ ποιητικόν) that is proper to νοῦς, and thinking (τὸ νοεῖν) is not being affected (πάσχειν) for it but being active (ἐνεργεῖν)' (112.4–5). See further e.g. Plotinus, *Enn.* 1.1.5.1–7 or 3.6.1 and 4.6.2, who starts from the claim that sense-perceptions are not πάθη but ἐνέργειαι (we shall see in Section 5.3 that this contrast seems to have its source in Alexander's interpretation, in his own *De Anima*, of Aristotle's account of perception). See, in this context, Rashed 2020: 213–22 on Boethius as a possible precursor of 'the assimilation of acting (ποιεῖν) to activity (ἐνέργεια)', codified later by Plotinus, *Enn.* 6.1.15–22.

[41] In both Arabic and Latin, words of the same root are standardly used to translate Greek words deriving from both ἐνεργεῖν and ποιεῖν, namely words of the root *f ʿ l* on the one hand (*bi-l-fiʿl* for ἐνεργείᾳ, *faʿʿāl* for ποιητικός) and words derived from *agō* on the other (*in actu* for ἐνεργείᾳ, *activus* for ποιητικός – but also for ἐνεργητικός). The two groups of meanings seem to be inextricably intertwined in the modern opposition between 'active' and 'passive'.

[42] See *Soph. Ref.* 22, 178a4–27, which suggests that this was the standard way of identifying the opposite of πάσχειν in Aristotle's time. For the Platonic background see e.g. *Phaed.* 97c8–d1, *Gorg.* 476d5–6, *Resp.* 344c2–3.

strange in treating both πάσχειν and ποιεῖν as two kinds or aspects of ἐνέργεια (i.e. activity).[43]

From what has been said, one might think that this observation is somewhat trivial or purely of linguistic interest. Yet, what comes next shows that this is not the case. Aristotle does not merely subsume the notion of being affected under the notion of activity conceived very broadly, in a way that includes all kinds of changes or processes (κινήσεις). Rather, his conceptual map contains a well-delimited space for cases of being affected that fall under the notion of activity *but not* under the notion of change (κίνησις).[44] Indeed, I shall argue that these coordinates on his conceptual map are not only not empty, but that a major achievement of *An.* 2.5–3.8 consists exactly in locating the primary perceptive (and thinking) acts there, and explaining how this is possible. These acts are to be classified as *complete passive activities*, and we must divest ourselves of the ancient heritage of opposing 'activity' and 'passivity', if we are to appreciate this key notion.[45]

The completeness of perceiving (and even more so thinking) as a kind of being affected stretches the notion of passivity beyond what we standardly understand by it. Furthermore, the tension here is not just linguistic. It is first and foremost philosophical in the sense that it does not primarily concern Aristotle's use of the Greek verb πάσχειν, but, rather, his understanding of passivity itself. This understanding has hardly any parallel in modern philosophy, which has strongly emphasized spontaneity as a defining feature of human cognition.[46] In this respect, the present inquiry, albeit limited to perception, can also be understood as a case study of the original Aristotelian notion of passivity.

0.5 Outline and Argument

The work is organized into seven chapters. Chapters 1–3 provide a reconstruction of Aristotle's concept of complete passive activities, which he developed to capture, on the most general level, the receptive nature of the

[43] See e.g. *Phys.* 3.3, 202a36–b23 or *An.* 3.2, 425b25–426a27. Cf. now Wolt 2023 who uses this premise to argue for the later authorship of the *Magna Moralia*.

[44] Contrast James 1997: 30–7, for example, who takes Aristotle's notion of passivity to be essentially bound to both (a) capacity and (b) change.

[45] Johansen 2002 helpfully distinguishes several senses in which, on Aristotle's understanding, perception can be described as not just 'passive' but also 'active'. Yet, in all these cases 'activity' is considered as something over and above 'passivity'.

[46] The modern opposition between spontaneity and passivity (as revealed e.g. in Pippin's 1987 analysis of Kant's thought) does not seem applicable to Aristotle.

primary perceptual (and thinking) acts. Chapters 4–7 explore how the idea of perception as a complete passive activity can be accommodated by Aristotle's hylomorphism.

In Chapter 1, I argue that Aristotle's novel notion of passivity ('preservative πάσχειν'), developed in *An.* 2.5, is key to his entire inquiry in the treatise, including his later analysis of the soul–body relationship and his concept of receptivity. That notion is yet to be properly understood. Most often it has been interpreted as either capturing just the material side of perception (*Material Interpretation*), or as being depleted of any genuine passivity (*Deflationary Interpretation*). The only existing alternatives in the literature consist either in taking the notion as defining specifically the passivity of the soul (*Psychic Interpretation*) or in denying that any such notion is introduced by Aristotle at all (*Aporetic Interpretation*). I argue that Aristotle's first general account of perception in *An.* 2.5 is systematically *pre-causal* in the sense that it is impossible to infer directly from it anything specific about the respective roles of the body and the soul (against both *Material Interpretation* and *Psychic Interpretation*). Furthermore, I contend that Aristotle develops a robust conception of passivity here that successfully encapsulates, on the most general level, what perception consists in (against *Deflationary Interpretation* and *Aporetic Interpretation*).

More specifically, I bring out the underestimated role that the *completeness* of perception, manifested most perspicuously in its ability to pass the so-called tense test (*Metaph.* Θ.6, *EN* 10.4), plays in Aristotle's account. In opposition to the view, which has been influentially advocated by Myles Burnyeat, that completeness has no place in Aristotle's scientific account of perception, I argue that it plays a pivotal role. The task is precisely to understand how perception can be both passive and complete, and how completeness is manifested in the specific kind of passivity characteristic of perception. I argue that Aristotle's interest in this question is centrally motivated by the need to explain how his assimilation model of perception can account for the difference between continued perceiving and merely having an after-image, or, more generally, between perceiving and appearing. Moreover, I suggest that Aristotle's novel notion of preservative πάσχειν is intended as a way out of the overarching puzzle in which, by Aristotle's lights, all of his predecessors were caught.

This last point is then fully developed in Chapter 2. I argue that an important lesson about the aim of Aristotle's first general account of perception is learnt by attending closely to the manner in which he sets his agenda within the context of a dialogue with earlier views, as analysed

by Aristotle in *De Anima* 1, as well as in Theophrastus '*De Sensibus*. I focus primarily on Aristotle's engagement with the idea that, in perception, like is affected by like (*LAL*), as well as on his interest, throughout *An.* 2.5, in investigating what is true about this idea. Scholars have almost unanimously identified the truth of this view with the 'Democritean' notion of *generic likeness* as a universal condition of any acting and being affected (*GC* 1.7). Yet, there are several reasons why this cannot be what Aristotle has in mind. I argue that what he most likely has in mind is the commitment of a great majority of predecessors (as Aristotle sees them) to the idea that the perceiver is (in a full-fledged sense) *like* the perceived object by which she is *being affected* in perception. The two elements of this commitment seem jointly inconsistent with another widely shared assumption that only *unlike* things can act upon each other. Aristotle's point, I argue, is that while none of his predecessors was able to make these three tenets mutually consistent, an adequate account of what exactly perception is must be able to alleviate the tension among them.

This is because the key feature of perceptual affection consists exactly in its completeness – that is, the fact that the perceiver is being affected by a perceptual object while *already* having been affected by it and so assimilated to it. In perception, like is affected by like. I argue that this is the aspect of truth in the traditional view that like is known by like (*LKL*) that Aristotle wants to save from it (*Acquaintance/Contact Requirement*). However, he also thinks that there is something true about the competing view (associated with Anaxagoras) according to which what knows must be *impassive* (*Unbiasedness/Externality Requirement*). I propose that we can read Aristotle's first general account of perception in *An.* 2.5 as showing, in the most general terms, how the truths of the two competing camps can be incorporated into a consistent account. The key to successfully performing this task is nothing other than the notion of preservative πάσχειν. This larger context also shows why Aristotle thinks that the passivity of perception, if understood correctly, implies an impassivity on the part of the perceiver.

Chapters 1 and 2 are structured in such a way as to give the reader a full picture of the content and the relevance of Aristotle's concept of complete passive activities, without involving too many of the notoriously difficult details of *An.* 2.5. Chapter 3 completes the task by delving into these difficulties and offering a comprehensive interpretation of the key passages of *An.* 2.5. Furthermore, this chapter also sets the concept of complete passive activities within the larger context of Aristotle's account of change (κίνησις) in *Physics* 3 and activity (ἐνέργεια) in *Metaphysics* Θ. The reader

who is not interested in either of these endeavours can feel free to jump from Chapter 2 directly to the final section of Chapter 3.

In Chapter 3, I show how the central passage of *An.* 2.5 (417a21–b16) establishes both the completeness of perception as well as the compatibility of this completeness with perception's passivity. Aristotle's core claim here is that there is a kind of capacity that is already a fulfilment of its subject and that the perceptive capacity is one of these, despite being a *passive* capacity. In this way, Aristotle identifies the ground of the two major differences between perception and passive processes – namely, the inexhaustibility of the perceptive capacity and the object-directedness of perception. I argue that, by developing the notion of complete passive activities, Aristotle fills a theoretical gap left open elsewhere in his corpus, most strikingly in *Metaph.* Θ.6, which contains the ideas both of perception being passive and of it being complete but without making any attempt to secure the consistency of the two perspectives. The concept of complete passive activities is far from obvious from Aristotle's perspective, but in *An.* 2.5 it is shown to be a consistent notion that is crucial for understanding the perceptive (and the thinking) capacity of the soul. I conclude that Aristotle's first general account of perception provides a *programmatic definition* (comparable with the 'most general account' of the soul offered in *An.* 2.1). It captures what perception must be like and what conditions a successful account of it needs to fulfil, but it does not identify the *explanantia* of perception and, thus, does not succeed yet in ensuring that the highly demanding picture of perception sketched here is not a mere chimera.

The question of explanation, and particularly of the perceptive soul as the primary cause of perception, becomes central in Chapters 4–7. In Chapter 4, I first spell out how demanding Aristotle's notion of perception really is. I contend that he is committed to a specific version of *direct realism*, according to which perceivers have an unmediated access to external objects whose qualities they receive, and he holds that the perceivers cognize these objects, in principle, as the objects are on their own. This involves making two contentious claims: (1) according to Aristotle, perceiving the bearers of perceptual qualities involves no *synthetic* acts but, instead, falls squarely under the notion of complete passive activity; and (2) Aristotle endorses an *uncompromised realism* according to which perceptual qualities are fully real even when they are not perceived. Moreover, there is a third, closely connected, claim: (3) Aristotle cannot embrace representationalism of the kind standardly ascribed to him, for his account excludes the existence of any standing material representations on the part of the perceiver.

Furthermore, in Chapter 4, I analyse Aristotle's conception of mediation, as one of the two key factors (together with the 'discriminative mean') introduced in *An.* 2.7–11. I argue that the media are, by Aristotle's lights, *qualitative conductors*, meaning that their functioning consists in passing the affection they receive immediately over to something else. This involves a *dynamic* conception of change, akin to the notion of complete passive activities, but without really falling under it. Chapter 4 produces two key results:

(a) I make a case for reconsidering the notorious question of what, according to Aristotle, happens in the body of a perceiver when they perceive. The existing discussion in the literature is governed by the following disjunction: either at the time of perceiving *F* the organ is literally or 'analogically' like *F* (materialism), or no material processes whatsoever are essentially involved in perception (spiritualism). I argue, first, that neither of these options satisfies the demands encapsulated in the concept of complete passive activities. Neither of them, that is, succeeds in accounting for the difference between continued perceiving and a mere after-image. Second, I argue that *tertium datur* and that this alternative is exactly what Aristotle is developing in the *De Anima*. The perceptive organs undergo *material processes*, exactly like those undergone by the media even in the absence of any perceiver (against spiritualism). Yet, these processes must not result in any persisting material likeness to the perceived object (against materialism), for that would make it impossible for the perceiver to be further affected by the object, and so to continue perceiving it. This also tells against the plausibility of existing representationalist interpretations. What the material processes result in is rather a *phenomenal likeness*: the presence of a quality in the perceiver, which, however, remains a quality *of* the external perceptual object, as its proximate matter remains outside the perceiver.

(b) I draw out two key questions for Aristotle's explanatory account of perception. (1) What exactly is the difference between perceiving, on the one hand, and the kind of affection caused by perceptual objects in non-perceptive entities (such as the media), on the other? (2) How is the soul expected to account for this difference? Discrimination (κρίνειν) turns out to be the key notion for spelling out the difference. But there are three basic options for answering the first question: either perceiving is something over and above being affected (*Isolation*); or perceiving is composed of being affected plus something else (*Composition*); or again, perceiving is a different kind of being affected (*Specification*). I defend *Specification*, which implies that discrimination does not refer to another event or an

additional component, but that it, instead, describes perceptual πάσχειν exactly under the aspect distinguishing it from all non-complete passive activities. I also argue that the weight of the second question has rarely been appreciated, particularly by existing non-reductive materialist interpretations.

This second question is then fully developed in Chapter 5. I there identify the core puzzle concerning Aristotle's account of the perceptive soul and analyse three possible ways of resolving it. The puzzle consists in Aristotle's apparent commitment to a triad of tenets that seem mutually inconsistent – namely: (1) the perceptive soul is the primary cause of perception; (2) perception is passive; and (3) the perceptive soul is impassive. These claims appear to be mutually inconsistent in virtue of the assumption that the soul can be the primary cause of φ-ing only if it is the proper subject of ψ-ing and φ-ing consists in ψ-ing (*Cause/Subject*). The three possible ways of resolving the puzzle, accordingly, require either inferring that perception cannot really be passive, or inferring that the perceptive soul must, after all, be passive, or rejecting *Cause/Subject*. The first two solutions dominate the history of the reception of Aristotle's work and can be traced back to Alexander of Aphrodisias and Themistius, respectively. A brief historical excursus is helpful here in bringing out the limitations of each approach.

Each of these two views has difficulties beyond the fact that they explicitly deny one of the three tenets that Aristotle seems emphatically to affirm. Alexander's approach suffers from making the involvement of the perceptive soul in perception rather mysterious. Themistius' approach, on the other hand, undermines the very point of Aristotle's criticism of Plato on the soul's self-motion. In the final section, I sketch out a third approach that can be loosely connected with the Latin Averroist notion of the so-called *sensus agens*. The central idea is that we are free to reject *Cause/Subject* once we appreciate Aristotle's claim that the soul is an efficient cause of perception (*An.* 2.4, *PA* 1.1) – that is, once we realize that Aristotle, apparently, intends to extend the model of unmoved movers even to perception. I make a case for taking this third approach seriously, despite the marginal role it has hitherto played in the reception of Aristotle and the unsatisfactory nature of the existing versions of the view.

Chapters 6 and 7 are, to a large extent, aimed at developing a viable version of the third approach. However, they also provide, less speculatively, novel comprehensive interpretations of (a) Aristotle's conception of perceptual discrimination and (b) his second general account of perception as a reception of forms without the matter in *An.* 2.12. In Chapter 6,

I provide reasons for rejecting the widely held view according to which Aristotle believed that discrimination (κρίνειν) is a three-place predicate and that the most basic perceptual acts consist in noticing *differences* between two or more perceived qualities. There is much that speaks against this interpretation, which builds on the idea (critiqued in Chapter 4) that we perceive modal-specific qualities independently of their bearers. I argue that perceptual κρίνειν is for Aristotle more like sifting, winnowing on a sieve: it consists in identifying the quality of an external object as distinct from any other quality of the given range that the object could have. Moreover, there is a semantic layer of κρίνειν (directly connected to what is conventionally called *sensus iudicialis*) whose significance for Aristotle's account has not hitherto been appreciated. Classifying perception as a case of κρίνειν means claiming that the senses possess the ultimate epistemic authority to tell (or reveal) what things in the world are really like. The account of perception in the *De Anima* can, then, be understood as a way of showing, first, how conflicting intuitions about the kind of authority involved here can be reconciled and, second, how this remarkable cognitive feat can be achieved, throughout the animal kingdom, independently from reason.

The notion of a discriminative mean (μεσότης) introduced in *An.* 2.11 is pivotal for answering the second question and merits its own discussion. Accordingly, I first draw out how Aristotle embeds discrimination within the assimilation model from *An.* 2.5. Here, the dynamic nature of perception, which has gone under-appreciated by both sides of the materialism–spiritualism debate, becomes important again. This is the case because the capacity for being assimilated to perceptual objects that is characteristic of perceptive organs cannot be a spiritual capacity, nor can perception involve the material fulfilment of that capacity. Rather, despite being materially affected, the organs remain materially unlike the perceptual objects. The only likeness established in the organ is a result of discrimination. The notion of discriminative mean provides the most general model of how this likeness is achieved. I argue that Aristotle adapts his concept of a homeostatic mechanism, which he developed primarily for nutrition and metabolic processes in general, in order to explain just how perception occurs. The perceptive soul functions as the controlling factor of the countervailing reactions that constantly neutralize the agencies of perceptual objects exercised, via the media, on perceptive organs. In this way, perceptual objects are constantly *measured* in the perceptive organs as on a kind of qualitative balance scale. This is exactly how phenomenal likeness is generated – it is the quality of the perceptual object being measured in

the perceptual organ, and in such a way being present in it. This explanatory model of discrimination provides a promising framework for capturing the role of the perceptive soul as the primary cause of a complete passive activity without compromising its impassivity. While the model is certainly not free from difficulties, I show in the final chapter that the main worries, at least, can be addressed.

Independently from this more speculative proposal, Chapter 6 provides a comprehensive interpretation of Aristotle's account of perceptual discrimination. One upshot is that while discrimination is grounded in the assimilation model, it extends beyond this model, since perception is a *holistic assessment* of external bearers of qualities. Accordingly, it is not the case that *all* their aspects must be causally efficacious in order for them to be discriminated. That is primarily true of privative aspects (such as darkness or silence) and of aspects within the perceiver's blind spots (such as temperatures equal to the perceiver's own bodily temperature). Even these, on Aristotle's understanding, fall under the ultimate, perfectly objective authority of heathy perceptive organs.

In Chapter 7, I tie up the loose ends of the proposed homeostatic model of the soul's causality, and I close the study with an analysis of two famous passages: Aristotle's second general account of perception in *An.* 2.12 and his final summary, which pertains to both perception and thought, in *An.* 3.8. I start by explaining how Aristotle can hold that perceptual objects are unmoved causes despite the fact that, in many cases at least, they are obviously affected and changed by perceivers and media. My contention is that, even when the perceiver affects the perceived object, she is perceiving it as it is on its own and not just as it is 'for her'. She succeeds in doing so because the changing quality that is constantly present in her perceptual organ is a quality *of* the external object itself. One difficulty for the homeostatic model of perceptual discrimination is how Aristotle can extend the model from touch, where it seems most intuitive and apparently works best, to non-tangible modalities (this difficulty being symmetrical with the worry regarding how Aristotle can extend the notion of mediation to the contact senses). The physiological details are admittedly murky, but this will be the case for any interpretation and there is no principled reason that speaks against making such an extension.

The more serious worry pertains to the kind of agency ascribed to the perceptive soul in the homeostatic model. What does it really mean for the perceptive soul to be the controlling factor? And, more specifically, how can it play this role without already having cognitive access to how the organs are affected? Given that what Aristotle proposes is an account of the

most rudimentary cognitive acts, the latter option would be a deplorable *petitio principii*. I propose, instead, to see the role of the perceptive soul as an extension of the homeostatic model developed primarily for nutrition (in *An.* 2.4 and beyond), which, in turn, is an application of Aristotle's art analogy from *Physics* 2 (and elsewhere). The role of the soul is modelled on the role of an art, which determines not just the end, but also the means leading up to that end in any given situation. In the case of nutrition, the relevant end determined by the nutritive soul is the preservation of the body in its natural state. This involves a control exercised over the current state of the body in each situation, which is clearly neither deliberative, nor cognitive. In line with Aristotle's famous claim that 'art does not deliberate' (*Phys.* 2.8), it seems that we should see deliberation and cognition in general as shortcomings, which are set aside in the case of a living body where there is nothing like the gap between the artisan and her instrument. The point of the homeostatic model is that the basic cognitive acts are underlaid by a more basic *non-cognitive* operation of the living body, which seems to be an entirely plausible assumption. The essential difference from nutrition consists in the fact that homeostasis becomes only a means for achieving something quite different – namely, discrimination, which is a complete passive activity where a quality of the external agent is received while still being possessed by that agent.

The scholarly debate regarding Aristotle's second account of perception in terms of receiving forms without the matter in *An.* 2.12 has been, as is the case with so many other interpretative issues, governed by the divide between materialist and spiritualist approaches. The account has accordingly been interpreted as saying that no material particles are received in perception (literalism), that the same ratio is received in a different pair of contraries (the analogical interpretation), or that no material processes are involved (spiritualism). I argue that none of these approaches can successfully explain the details of the text and that all of them miss the main point. That is because they all silently assume precisely what Aristotle is denying here – namely, that the form in question is received as a form *belonging to the perceiver herself*. Aristotle's point, in contrast, is that perceiving consists exactly in receiving forms whose proximate matter remains outside. They remain forms *of the external objects* acting on the perceivers, and this is exactly what perceiving such objects amounts to. Aristotle's account of receptivity is thus firmly set within the framework of his novel notion of passivity.