

## *Perception as a Discriminative Activity*

### 6.1 The Logic of Discrimination

We have seen (in Section 4.7) that Aristotle's notion of perceptual discrimination (κρίνειν) conveniently encapsulates the difference between how (i.e. with what result) perceivers and non-perceptive entities, respectively, are affected by perceptual objects – that is, exactly the difference for which the perceptive soul is supposed to account. But we have also seen that different views are available regarding how exactly discrimination is intended to fit within the assimilation model of perception as it is worked out primarily in *An.* 2.5. Furthermore, we have seen that these differences go hand in glove with differences in understanding how the perceptive soul fits in – that is, *in what way* it is supposed to be the sought-after first principle of perception. It is now time to dig deeper into the notion of perceptual discrimination (Sections 6.1, 6.2, and 6.3) and the account of it offered in *An.* 2.11 (Sections 6.4 and 6.5). The proposed interpretation of the latter will then lead us directly (in Sections 7.2 and 7.3) to a more concrete elaboration of the third potential approach to the role of the perceptive soul outlined in Section 5.5.

Let us begin from the question of *meaning* ascribed in the *De Anima* to κρίνειν. Theodor Ebert showed decisively how misleading it is to translate the verb as 'to judge'. By 'judging' we primarily understand 'passing judgment on' something, or 'contending' – 'asserting' something in a way that can turn out to be either right or wrong. However, κρίνειν never means that – at least not in the *De Anima*.<sup>1</sup> Even in what Ebert (following Bonitz)<sup>2</sup> calls the 'judicial sense' (*sensus iudicialis*) of κρίνειν, it is better rendered as, for instance, 'deciding' a case.<sup>3</sup> Furthermore, according to Ebert, this is just a special use of κρίνειν; its 'primary sense'

<sup>1</sup> But see Section 4.7, n. 89.

<sup>2</sup> Bonitz 1870: 409.

<sup>3</sup> Ebert 1983: 185–7.

has even less to do with ‘judging’: what it means is rather ‘to discriminate’ or ‘to discern’.<sup>4</sup>

In addition to these general observations, Ebert also made two claims that relate more specifically to Aristotle’s account of perception, suggesting that: (a) meanings dependent on the *sensus iudicialis* in Aristotle’s ‘psychological writings’ are exceptional and insignificant for the question of ‘what is done in perceiving’;<sup>5</sup> (b) in its primary ‘discriminative’ meaning, κρίνειν is a ‘three-place predicate . . . “S discriminates x from y” . . . symmetrical as to the second and the third place’.<sup>6</sup> Scholars have largely accepted both of these claims,<sup>7</sup> but each of them can be called into question.

The second claim implies that ‘what is done in perceiving’ is primarily discriminating two qualities *from each other*. One criticism of this implication runs as follows: it would seem that this meaning of discrimination cannot be ‘cognitively basic’, because it does not account for how we cognize each of the two qualities in the first place.<sup>8</sup> One could come to Ebert’s aid by biting the bullet and insisting that there is simply no more primary sense of cognizing *x* than discriminating it from some *y* and vice versa. But that idea is objectionable.

Let us consider the kind of scenario on which the phenomenon of ‘change blindness’ has been explored.<sup>9</sup> Assume that someone replaces the colour *y* from which, on Ebert’s view, I am discriminating the colour *x* with another colour *z*. One can argue that, irrespective of whether I notice the change, on Aristotle’s view, it will make no difference for the content and the meaning of my discrimination of *x*. If this is correct, there is something wrong with accepting *y rather than z* into the formula of discrimination (before the change). It is wrong, I contend, not because *x* was not discriminated from *y*, but rather because it was equally well discriminated from *z*, even though *z* was not actively perceived. One upshot is that, if discrimination is to be analysed as a three-place formula, then this formula *cannot* be ‘symmetrical as to the second and the third

<sup>4</sup> Ebert 1983: 187–9.

<sup>5</sup> Ebert 1983, 189–90. Ebert goes far beyond Bonitz’s distinction in contrasting the ‘primary sense’ of κρίνειν and the meanings that are dependent on the judicial sense.

<sup>6</sup> Ebert 1983, 190–5 (see p. 193 for the quotation).

<sup>7</sup> For explicit discussions, see de Haas 2005: 326–8 and Perälä 2018; cf. e.g. Bernard 1988: 268, Sorabji 1993: 35–6, or Polansky 2007: 255–6.

<sup>8</sup> See Corcilius 2014: 39–40. For a much milder reservation, see Caston forthcoming: n. 72, who expresses doubts about the idea that perceptual discrimination is always a discrimination of two things from each other. Cf. also Perälä 2018: 261, who accepts the triadic structure of discrimination, but suspends judgement on whether all cases of αἰσθάνεσθαι are discriminations.

<sup>9</sup> For an overview, see McConkie and Loschky 2003 or O’Regan 2003. For the philosophical relevance of this phenomenon, see O’Regan and Noë 2001.

place'. This observation accords with the etymology of κρίνειν. The original meaning (IE *\*krei-*) seems to be sifting or winnowing on a sieve.<sup>10</sup> This suggests that *y* need not be noticed, and that there need be no determinate *y* at all. If κρίνειν originally means something like 'to select the valuable part (the grain) from an indiscriminate mass',<sup>11</sup> then it is natural to expect that *y* involves *all* colours, while none of them is necessarily being perceived.

There are reasons to think that Ebert would reject this thought experiment. He insists that there is a 'specific type of propositions involved in the propositional attitudes resulting from perception of special sensibles'.<sup>12</sup> The information contained in the basic acts of perceptual discrimination is non-copulative in the sense of involving exclusively items of the same 'ontological group', namely the modal-specific *qualities* themselves. Ebert argues that this information is entirely free from our everyday 'belief that [for instance] colours somehow "stick" to their objects'.<sup>13</sup> In other words, he emphatically endorses the idea that, according to Aristotle, we primarily perceive the modal-specific qualities alone, and that these are only attached to their putative bearers somehow additionally – namely, by our 'beliefs'. This allows Ebert to insist that a change in one part of the perceptual field necessarily involves changes in other parts. If, in contrast, we accept the idea (defended in Section 4.2) that, according to Aristotle, we also perceive, at least equally primarily, the bearers of perceptual qualities, then it becomes natural to believe that the change from *y* to *z* will have no consequences for our discrimination of *x*.

We shall later consider further reasons for rejecting Ebert's formula. However, before inquiring deeper into the logic of perceptual discrimination, we must first discuss the other claim flagged above – that is, Ebert's marginalization of the judicial sense of κρίνειν, which has not hitherto been questioned by scholars.

## 6.2 The Judicial Sense of Perceptual κρίνειν

According to Ebert, there is one single passage in the *De Anima* in which the meaning of perceptual κρίνειν is determined by the judicial context. This is the passage from *An.* 2.6, already quoted in Section 4.2, where

<sup>10</sup> See e.g. Beekes 2009: 780–1; cf. Kahn 2003: 381–3.

<sup>11</sup> Kahn 2003: 383.

<sup>12</sup> Ebert 1983: 195–8 (for the quotation, see p. 196).

<sup>13</sup> Ebert 1983: 197.

Aristotle contrasts for the first time the infallibility of modal-specific perception with the fallibility of other kinds of perceiving:

each of them [i.e. the senses] κρίνει about (περί) these [i.e. the exclusive objects] and is not deceived about colour or about sound, but about what the coloured object is and where it is, or what the sounding object is or where it is. (*An.* 2.6, 418a14–16)

Recent translations tend to give κρίνειν in this passage the discriminative meaning, partly as a result of Ebert's influence, it seems. However, Ebert himself took this passage to be the *exception* to the rule, arguing that κρίνειν here cannot be rendered in terms of 'discriminating/discerning'.<sup>14</sup> The idea seems to be that one can very well say that 'S judges *about/of* x',<sup>15</sup> but it is not obvious what 'S discriminates/discerns *about/concerning* x' would mean,<sup>16</sup> and the preposition περί cannot be simply ignored.<sup>17</sup> Ebert, in any case, analysed this passage convincingly as employing κρίνειν in a well-established meaning derived from the judicial context, such that the best translation would be 'each sense *decides about* these'.

Ebert is drawing here on a group of passages from Aristotle's *Politics*, listed already by Bonitz, in which Aristotle uses the expression κρίνειν περί with the genitive in the sense of having the authority to decide some issue. More specifically, such an authority is standardly ascribed to the judge in matters that are not unambiguously determined ('decided') by the law.<sup>18</sup> The question of authority (who is κύριος, who is entitled to ἄρχειν, who is ὁ κρίνων or κρίνων) often comes to the fore in these contexts<sup>19</sup> – so much so that on some occasions the correct translation of κρίνειν seems to be just 'to have (judicial) authority', as in a curious fragment from the *Protrepticus* where Aristotle says that the rational part of the soul 'by nature governs and has (judicial) authority over us' (κατὰ φύσιν ἄρχει καὶ κρίνει περί ἡμῶν).<sup>20</sup> Unlike in nature, political matters often feature more options about how the

<sup>14</sup> Ebert 1983: 189–90 (the only other exception in the *De Anima* being allegedly at 1.2, 405b8, which has nothing to do with the nature of perception); cf. de Haas 2005: 331.

<sup>15</sup> As the passage was commonly translated before Ebert's work, see e.g. Hicks 1907 and Ross 1961: 238 ('judges of'), Hamlyn 1993 ('judges about'); cf. Jannone and Barbotin 1966 ('juge-t-il de').

<sup>16</sup> Cf. Reeve 2017 ('discerning about these'), Polansky 2007: 251, Miller 2018 ('discriminates concerning these'), or Corcilius 2017 ('unterscheidet ... betrifft dieser').

<sup>17</sup> Cf. Wallace 1882, Rodier 1900 ('discerne [correctement] ses sensibles'), Smith 1931 ('which it discerns'), and Shields 2016 ('discerns these').

<sup>18</sup> See e.g. *Pol.* 3.16, 1287b15–18; cf. 3.15, 1286a27–9.

<sup>19</sup> See e.g. *Pol.* 3.16, 1287b23–5; cf. 3.11, 1282a18; 4.4, 1291a39–40; 4.14, 1298a30–1; 4.15, 1299a25–7, 1300b38–40; 7.4, 1326b12–18; 7.9, 1329a3–6.

<sup>20</sup> *Protr.* 60.1–2 (which is cited neither by Bonitz nor by Ebert).

authority to decide various issues can be distributed.<sup>21</sup> However, Aristotle does not, of course, take the question of distribution to be arbitrary; there is a certain normativity involved, which implies that the judge, for instance, is *correctly* recognized as the authority to decide certain kinds of issues. So, the question of who is ὁ κρίνων or κρίνων in a given matter is often to be understood as asking about the ultimate authority to which one *ought* to defer should any uncertainty arise.<sup>22</sup>

Ebert argues that, in *An.* 2.6, Aristotle ‘makes each sense, as it were, sit as a judge, an arbiter upon its corresponding special sensibles’.<sup>23</sup> This is an important observation that has not, I think, been sufficiently appreciated. It can, however, be further shown that (1) *An.* 2.6 is *not* the single exception: there is at least one other important passage in the *De Anima*, overlooked by Ebert, which draws clearly on the judicial sense. Moreover, (2) the clear-cut dividing line drawn by Ebert between ‘the primary sense’ of κρίνειν on the one hand and meanings derived from its ‘judicial sense’ on the other is misleading. Rather, the judicial overtones come more or less into the foreground throughout the *De Anima*, without ever entirely disappearing; recognizing this fact is important if we are to understand correctly what is at stake when Aristotle characterizes perception as a case of κρίνειν.<sup>24</sup>

The quoted passage from *An.* 2.6 deserves detailed attention because it is *the* passage in which Aristotle introduces the notion of κρίνειν into his account of perception (only two other passages mention κρίνειν in the rest of Book 2). However, this term does not appear suddenly or unexpectedly. Aristotle has already employed the notion of κρίνειν when addressing *LKL* in *An.* 1.5,<sup>25</sup> and this is hardly accidental because Theophrastus uses κρίνειν fairly often for what his predecessors thought (or should have

<sup>21</sup> See e.g. *Pol.* 4.15, 1300b38–1301a1.

<sup>22</sup> Cf. e.g. *Soph. Ref.* 25, 180b26–7.

<sup>23</sup> Ebert 1983: 190.

<sup>24</sup> One reason Ebert 1983: 190 gives (cf. de Haas 2005: 331) for taking the occurrence of κρίνειν in *An.* 2.6 to be peculiar and not directly relevant to the core account of perceptual discrimination is that he believes it applies only to ‘special sense objects’, whereas in the case of ‘the common sensibles . . . it is always possible to appeal to another sense against the verdict of the first’. This argument is based on Ebert’s assumption that the basic account of perceptual κρίνειν must apply to all three kinds of perceptual contents as distinguished in *An.* 2.6 (see Ebert 1983: 195–6; cf. de Haas 2005: 336, Perälä 2018: 265, or Charles 2020: 22–3 *et passim*). It is telling, however, that there is no single passage in *An.* in which Aristotle would actually apply κρίνειν to common or coincidental objects.

<sup>25</sup> There are two other passages in Book 1 (*An.* 1.2, 404b21–7 and 405b8) employing κρίνειν or its derivatives (the second of which is identified by Ebert as the only other judicial ‘exception’). However, neither of them is directly relevant to our question: the first passage seems to be only reporting a Platonist διαίρεσις (cf. *An.* 3.3, 428a3–5), while the second does not concern perception at all.

thought) is achieved in perceiving.<sup>26</sup> In *An.* 1.5, Aristotle raises an objection against the assumption that, if the perceiver is to know (γνωρίζειν) – that is, to κρίνειν – two opposites, such as black (dark) and white (pale), she must contain them both. In the Empedoclean picture, for instance, it means that she must contain passages of both water and fire. This assumption, Aristotle argues, is idle, for one of the opposites would be sufficient:

But even if it were necessary to compose the soul out of the elements, it would by no means be necessary to compose it out of all. For one member of the contrariety is sufficient to κρίνειν both itself and what is contrary to it. For by the straight we know (γινώσκουμεν) both it and the bent, because the straight edge (ὁ κανὼν) is the judge (κριτής) of both, while the bent is [the judge] neither of itself nor of the straight. (*An.* 1.5, 411a2–7)

The idea seems to be that the straight edge,<sup>27</sup> so to speak, ‘makes’ (or serves to make) authoritative, and, indeed, objective assessments whether something is straight or bent – much like a judge is the ultimate authority in deciding whether something is just or unjust. This agrees with the original meaning of κρίνειν as sieving: the sieve has an undisputable, perfectly objective authority with regard to isolating grain. *Mutatis mutandis*, Aristotle expects a successful theory of perception to explain how the senses can be the ultimate and infallible authority with regard to modal-specific qualities.<sup>28</sup> Moreover, he seems to be implying that at least some proponents of the *LKL* principle were already attempting to offer this kind of explanation, albeit not successfully.

So, what kind of authority exactly is being ascribed to the senses here? Theophrastus’ *De Sensibus* articulates a contrast between two different understandings of perceptual κρίνειν as a part of the overarching contrast between *LKL* and the idea that contrary is known by contrary (*CKC*).<sup>29</sup> The Empedoclean version of *LKL*, as construed by Theophrastus, provides a perfectly *objective* and *impartial* account of perceptual κρίνειν: the

<sup>26</sup> See the very first sentence introducing Empedocles’ doctrine at *Sens.* 7, 500.19–23, which is restated for criticism at *Sens.* 15, 503.25–9; cf. 19, 504.26–7; 20, 505.4–5. See also *Sens.* 25, 506.23–8 on Alcmaeon and 45, 512.7–10 on Diogenes. Quite a different account of perceptual κρίνειν is ascribed to Anaxagoras; see *Sens.* 28, 507.14–19; 33, 508.24–7; 34, 509.3–4.

<sup>27</sup> Democritus probably called both the senses and νοῦς κανόνες in his eponymous work, cf. Sextus, *M* 7.138–9 (cf. Lee 2005: 229–33); for a similar use of κανὼν, see Aristophanes, *Birds* 1001–9. For Aristotle, κανὼν sometimes becomes virtually synonymous with μέτρον; see e.g. *EN* 3.4, 1113a31–3.

<sup>28</sup> Cf. *Metaph.* A.1, 981b10–13. Cf. also Aristotle’s objectivist proto-version of the Knowledge Argument at *Phys.* 2.1, 193a7–9.

<sup>29</sup> For references, see n. 26.

passages of water are such that only effluences of water fit into them and the passages of fire are such that only effluences of fire fit into them, so that there is effectively no room for error or anything ‘subjective’ with regard to identifying the black (dark) and the white (light) colour of external objects. The Anaxagorean version of *CKC*, in contrast, makes perceptivity directly dependent on the actual state of the subject: we perceive and discriminate, for instance, the drinkable out in the world by the briny in us (and so only as long as there is something briny and thirsty in us). Anaxagoras, to be sure, still ascribes a remarkable authority to the senses in determining the objective features of things (the account is not relativist or sceptical); only the range of accessible features becomes dependent on the current state of the perceiver’s body, because we perceive only what *we lack*.<sup>30</sup>

This background provides a further reason for Aristotle’s focus on *LKL* in the *De Anima*:<sup>31</sup> in contrast to *CKC*, it can be presented as attempting to develop an account of perceptual κρίνειν that is *entirely* objective and impartial, a task that Aristotle is interested in taking over. As presented by Theophrastus, the Anaxagorean *CKC* would not be helpful in this respect, because it does not appreciate the impartiality of the rudimentary perceptual κρίνειν. That seems to be why Aristotle makes a different contrast central to the discussion he undertakes of his predecessors’ views on knowing – namely, the contrast with the Anaxagorean account of νοῦς as entirely impassive.<sup>32</sup> It is that position, and not *CKC*, which provides a genuine alternative to *LKL* with regard to accounting for the objective and impartial cognition achieved in perceiving. This alternative is not absent in Theophrastus’ presentation – but only marginal attention is paid to it. Theophrastus alludes to an alternative interpretation of Anaxagoras on κρίνειν when discussing Clidemus in chapter 38. Here, the idea seems to be that none of the senses really κρίνει anything; they only send the affections further to something else, namely νοῦς, which alone is capable of κρίνειν.<sup>33</sup> Again, the account seems to be modelled on a judicial

<sup>30</sup> See especially *Sens.* 28, 507.14–21. For a sceptical interpretation of Anaxagoras, see Sextus, *M* 7.90 (i.e. B 21); cf. Aëtius 4.9.1 (i.e. A 96), Sextus, *PH* 1.33.2–6 (i.e. A 97/1), Cicero, *Academica* 2.31.100 (i.e. A 97/2).

<sup>31</sup> Complementary with the reasons spelled out in Chapter 2. This is not to say that Aristotle was not attentive to the fact that different people in different circumstances notice different things (for a systematic treatment of Aristotle’s approach to this phenomenon, see Cagnoli Fieccconi 2021). The point is that this is not relevant for the definition of the primary perceptual acts.

<sup>32</sup> See *An.* 1.2, 405b10–23 and Sections 2.2 and 2.7 for a discussion.

<sup>33</sup> ‘Only about the organs of hearing [does Clidemus say that] they do not κρίνειν themselves, but rather send [what they received] further to νοῦς, so he does not, like Anaxagoras, make νοῦς the principle of everything’ (*Sens.* 38, 510.9–11; cf. Section 2.3). Compare the Platonic contrast

situation in which certain questions are deferred to a judge for decision. The presumption is, in any case, that the cognition achieved by Anaxagorean νοῦς is at least as objective and impartial as the one provided by *LKL*. That seems to be why Aristotle contrasts in the *De Anima* precisely this kind of account with *LKL*: both accounts can be presented as agreeing on *what* is achieved in perceiving – namely, a perfectly objective and impartial cognition – but disagreeing on *how* it is achieved.<sup>34</sup>

If this observation is correct, then it sheds additional light on the two intuitions that we identified (in Sections 1.4 and 2.7) behind the two horns of the key puzzle in *An.* 1.2. They can now be spelled out as two intuitions about the source and the nature of the judicial authority to be ascribed to perceivers. The *Unbiasedness/Externality Requirement* can be seen as drawing on the idea that, for something to have judicial authority over a certain question, it is necessary for that thing to be absolutely unbiased and not to be involved in it in any way whatsoever. It seems to be the same kind of intuition as the one occasionally articulated by Aristotle that no one rightly κρίνει things concerning himself. This is, for instance, why medical doctors are often unable to treat themselves properly.<sup>35</sup> The *Acquaintance/Contact Requirement*, on the other hand, would be drawing on a very different intuition about the source of a judicial authority – namely, that in some areas at least, it is not possible to decide the question without being intimately acquainted with the matter, for it is only by having, or being able to have, personal experience with what is at stake that one is able to arrive at the requisite understanding.<sup>36</sup> One model for this intuition about the source of judicial authority would be the idea of σύμβολα (which Aristotle associates with Empedocles).<sup>37</sup> To decide on some matter, I already need, so to speak, to have one of the σύμβολα in my possession (say, a past impression of a scar) because that is the only way to identify the decisive σύμβολον (a scar) in the matter under consideration. Similarly, the fire in the eye is like one half of a die (*tessera hospitalis*) that

between perceiving *by* and perceiving *through*, as analysed by Burnyeat 1976, and Alexander's account of perception as summed up in Section 5.3.

<sup>34</sup> For a very different understanding of the contrast, which interprets *LKL* as articulating a relativist view of perception, see Kelsey 2018.

<sup>35</sup> See e.g. *Pol.* 3.9, 1280a16–22 and 3.16, 1287a41–b3. On an unbiasedness/externality requirement concerning a good judge, cf. also Plato, *Resp.* 409b–c.

<sup>36</sup> Cf. von Fritz 1946: 19: 'when we see an angry or sad person . . . , we have . . . the impression . . . that there is something in us which responds to it and that . . . we understand the mood or the emotion of the person in its individual quality because, at least potentially, it is also in ourselves'.

<sup>37</sup> See e.g. Herodotus, *The Histories* 6.86.28–9; Euripides, *Medea* 613; or Plato, *Symp.* 191d. In Aristotle, see e.g. *EE* 7.5, 1239b31; *Pol.* 3.9, 1280a36–40; *GC* 2.4, 331a23–36; or *Meteor.* 2.4, 360a21–7. For Empedocles (in the context of animal generation), see *GA* 1.18, 722b6–11.



perfectly fits into the other half, represented by all the fire found in the external world, so that perceptual discrimination is like a case of a guest-friend (ξένος) recognizing his guest-friend (ξένος).

The two intuitions are thus very different, but what they have in common is their concern with the kind of authority that can decide a matter under consideration in a perfectly just manner – that is, to assess it objectively as it truly is. Aristotle shares this concern (unless we say he is projecting it onto his predecessors) and seems to think that there is something right about both intuitions, although each of them was muddled by errors committed by earlier thinkers. The demand of unbiasedness, on the one hand, must not be absolutized in the Anaxagorean manner, because that would cripple the alleged judge from any contact with the thing on which she is supposed to decide. The ‘symbolic’ idea of κρίνειν, on the other hand, reifies the requisite likeness in such a way that it leads to unacceptable results, as exposed in *An.* 1.5. Aristotle already suggests an amendment in the quoted passage (411a2–7): the judicial authority must be rather like that of the straight edge which allows us to identify reliably not only straight but also bent things. This amendment, as we shall see, is then further developed in the final section of *An.* 2.11. Aristotle’s aim here is, arguably, to provide an account of perceptual κρίνειν that would preserve what is true about each disputing side, while preventing their respective shortcomings.

More could be said about the ‘judicial’ overtones of perceptual κρίνειν. They become even more prevalent against the background of Aristotle’s engagement, particularly in *Metaph.* Γ.5–6 (and K.6), with the ‘narrow’ Protagoreanism, as developed and discussed in Plato’s *Theaetetus*, which is largely about the judicial authority of the senses.<sup>38</sup> The Protagoreans, on the one hand, insist that every perceiver contains a perfect criterion (κριτήριον) and measure (μέτρον), which makes her an ultimate infallible authority (κριτής, ὁ κρίνων) in the matter of what is perceived, albeit only insofar as it is perceived *by her* and so *appearing* to her.<sup>39</sup> Socrates, on the other hand, draws into question the very authority of the senses to decide about truth.<sup>40</sup> Aristotle emphatically asserts that the senses, in a healthy

<sup>38</sup> For the distinction between ‘narrow’ and ‘broad’ Protagoreanism, see Fine 1994: 213–14.

<sup>39</sup> See *Theaet.* 160c4–d4, 161d4–7, 167a7–8, b3–4, 178b2–8.

<sup>40</sup> Socrates refutes the pretension of the measure doctrine to provide a universal account of knowledge (the ‘broad’ Protagoreanism), and Aristotle follows him steadfastly on this point. However, with regard to the cases of the warm or the sweet, Socrates undeniably shows much more sympathy for Protagoras (see e.g. *Theaet.* 171d9–e3, 179c2–7). I agree with Lee 2005: 112–17 that the collapse of the Secret Doctrine at *Theaet.* 182d–183a is *not* intended as a decisive refutation of ‘narrow’

condition, *are* a perfect criterion (κριτήριον) and measure (μέτρον) for deciding (κρίνειν) about truth, the assessments of which cannot be further questioned in any meaningful way (*contra* Socrates), while insisting that what the senses access is an objective, and not merely a relative, truth (*contra* Protagoras).<sup>41</sup>

The senses, in a healthy condition, are an objective and impartial authority, albeit only in the narrowly limited domain of modal-specific qualities. Indeed, Aristotle insists that the senses are the ultimate authority (κυρίον) in this domain in a sense that Socrates wishes to reserve for expert knowledge. Although our senses may lead us astray in causing us to believe, for instance, that the wine that is so sweet tonight will still be sweet tomorrow, there is no error possible about the perceived sweetness of sweet things itself:

the sweet, such as it is when it exists, has never changed; [the sense of taste] is always right about it, and that which is going to be sweet is of necessity just such a nature. (*Metaph.* Γ.5, 1010b23–6)<sup>42</sup>

Protagoreanism. When Socrates finally expresses some reservations about it, this amounts to a doubt whether a notion of truth is applicable to perception *at all*: because perception does not concern the ‘being’ of things, it cannot, apparently, be properly speaking ‘true’ (*Theat.* 186a–e, cf. Narcy 1996: 239–42, Lee 2005: 155–7). The question of whether Plato does or does not accept something along the lines of the Protagorean account of perception is, of course, a controversial one, dividing the two influential readings of the *Theaetetus* that are represented by Cornford 1935 and Burnyeat 1990, respectively. For an alternative reading, see Sedley 2004, according to whom the Protagorean account is not as such accepted by Plato but is intended to ‘foreshadow’ the physical account presented at *Tim.* 45b–46c, 67c–68d.

<sup>41</sup> See *Metaph.* K.6, 1062b35–1063a5 (adapting the Protagorean notions from *Theat.* 178b2–8 by purging them of their relativist flavour) and *Metaph.* Γ.6, 1011a3–9 (where Aristotle seems to block the kind of argument from second-order κρίνειν raised against Protagoreanism at *Theat.* 170d4–10; cf. *Metaph.* Γ.5, 1010b3–11). As Lee 2005: 162 puts it: ‘We have here a concession and an objection. Protagoras is correct in so far as a certain kind of perception, perception of “special”, or “proper” (*idion*) objects, is always correct. But it doesn’t follow that all appearances are true, because appearing is not the same as perceiving.’ For μέτρον, see also *Metaph.* I.1, 1053a35–b3. For a recent discussion, see McCready-Flora 2015.

<sup>42</sup> See *Metaph.* Γ.5, 1010b11–30 as a reaction to Socrates’ argument from the future against Protagoras at *Theat.* 178b–179b. In the first part of this passage, Aristotle explicitly agrees with Plato’s Socrates that the case of expert knowledge refutes ‘broad’ Protagoreanism. However, in the second part, he goes far beyond anything Plato ever wrote by making a similar claim about the senses being the ultimate authority (κυρίον) when it comes, say, to what it is – and indeed what it *ever will be* (and always was) – for something to be sweet. Aristotle seems to be correcting Socrates’ claim here that the vine-grower is the authority with respect to ‘the future sweetness’ as Socrates maintains (*Theat.* 178c9–d2; cf. 186a): what he should have said is rather that the vine-grower is the expert and authority with respect to the *wine* and how it acquires its qualities from the vines out of which it is produced. As far as these qualities themselves are concerned, however, there is no authority besides the healthy sense of taste. Moreover, even the vine-grower’s expert knowledge depends on this condition. There are good reasons to think that, at *Metaph.* Γ.5, 1010b11–30, Aristotle is directly reacting to *Theat.* 178b–179b: there is no other passage within *Metaph.* Γ.5–6 or K.6 in which Aristotle uses the language of κυριότης and, similarly in the *Theaetetus*, this language is practically limited to the mentioned passage (it is used at 178c9–d2, 178d9 and 179b6–9; none of

Aristotle's account of perceptual κρίνειν and its first principle in the *De Anima* can, then, be understood as effectively addressing an obvious objection that one may raise against his optimistic epistemology of perception as outlined in *Metaph.* Γ.5–6 and K.6. The grievance is that such an objective and impartial κρίνειν is, on the level of perception at least, simply impossible, and that no such authority can meaningfully be ascribed to the senses.<sup>43</sup> In the *De Anima*, Aristotle blunts at least one edge of this criticism by identifying the first explanatory principles on the basis of which this kind of perceptual κρίνειν can be scientifically explained.

If this is, indeed, the background against which the notion of κρίνειν in *An.* 1.5 should be understood, then it confirms the centrality of the judicial sense of the verb. However, even without this wider context, the passage quoted from *An.* 1.5 is sufficient to suggest that it is more difficult than Ebert claimed to distinguish between the meanings of κρίνειν that are and those that are not derived from the *sensus iudicialis*. In the first sentence, κρίνειν can very well be translated as 'to discriminate', but in the second sentence the word κριτής (in whatever way it is translated) clearly evokes the judicial context. Thus, the passage strongly suggests that there is a continuity between the two meanings that Ebert wanted to separate.<sup>44</sup> This continuity agrees well with the original meaning of κρίνειν as sieving, which is a (non-propositional) kind of discrimination involving a perfectly objective authority.

Aristotle's judicial use of κρίνειν in *An.* 2.6 is, thus, far from being an exception that could be put aside when we attempt to understand his account of perceptual κρίνειν and of 'what is done in perceiving'. The notion of κρίνειν introduced here rather encapsulates the task that Aristotle wishes to accomplish in what follows, including, crucially, the account of the 'discriminative mean' in *An.* 2.11.

### 6.3 Discrimination of the Imperceptible

As noted above, Aristotle's use of the κρίνειν vocabulary in the *De Anima* is surprisingly sparse given how important a concept it is to his theory (as is broadly agreed by interpreters). Within *An.* 2.7–3.2, there are no more than two occurrences of it, besides the passage on the discriminative mean

the remaining three occurrences at 161d5, 169e2, and 206b8 is directly relevant to Aristotle's discussion in *Metaph.* Γ.5). The striking notion of necessity in the quoted passage from *Metaph.* Γ.5 seems to be responding directly to *Theat.* 160b5–8.

<sup>43</sup> One could raise this objection from all sorts of positions, be it Platonic, Protagorean, Democritean, or (proto-)sceptical.

<sup>44</sup> The same seems true of *An.* 2.6, 418a14–16.

in *An.* 2.11 and the final section of *An.* 3.2 (on which, see Sections 6.4 and 6.6, respectively). These two occurrences are worth briefly commenting on here because they have a direct bearing on the question of the logic of perceptual discrimination, as well as on how the verbs κρίνειν and αἰσθάνεσθαι relate to each other. More specifically, these passages suggest that κρίνειν is a *broader* notion.

In both passages (*An.* 2.10, 422a20–31 and 3.2, 425b20–2), Aristotle employs the verb κρίνειν to articulate a thought that he elsewhere expresses without mentioning κρίνειν. The idea is that, for instance, sight is *of* both the visible and the invisible, hearing is *of* both the audible and the inaudible, and so on. Aristotle makes this claim four times within *An.* 2.7–3.2 and he never phrases it in terms of, say, sight *seeing* the invisible.<sup>45</sup> However, in both passages in which he employs κρίνειν, he affirms that sight *discriminates* (κρίνει) – or that we *discriminate* (κρίνομεν) by sight – ‘the invisible’, namely darkness. This nuance should not be overlooked: the notion of discriminating under individual sense modalities seems to be broader than the notion of perceiving under them – as understood throughout *An.* 2.5–12 where, for instance, ‘perceiving by sight’ is equivalent to ‘seeing’. It is true that at *An.* 3.2, 425b20–2, Aristotle employs the notion of ‘perceiving by sight’ in a broader sense than ‘seeing’ that appears to be co-extensive with the notion of ‘discriminating by sight’.<sup>46</sup> However, this seems to be an innovation vis-à-vis *An.* 2.5–12. Throughout these early chapters, ‘perceiving by sight’ is treated as equivalent to ‘seeing’, and so it would be wrong to say that sight perceives darkness, although sight is *of* darkness and *discriminates* it. One of the four passages making this claim (*An.* 2.11, 424a10–15) immediately follows Aristotle’s account of perceptual discrimination at *An.* 2.11, 423b31–424a10, and so the described mismatch between perception and discrimination is not unlikely to have a bearing on it.

Before considering that passage, however, let me add two preliminary observations concerning the logic of perceptual κρίνειν. First, the two passages insisting that sight discriminates darkness speak against the idea of κρίνειν as a three-place predicate: when I am ‘discriminating’ darkness, I am obviously not discriminating it from any actively perceived colour or light that would, thus, be symmetrically discriminated from

<sup>45</sup> Besides *An.* 2.10, 422a20–31 and 3.2, 425b20–2, see 2.9, 421b3–8; 2.11, 424a10–15; cf. 2.8, 420a15–19.

<sup>46</sup> His claim is introduced as spelling out *a specific sense of* perceiving by sight (τῇ ὁψει αἰσθάνεσθαι, *An.* 3.2, 425b20).

darkness. Second, in the first of these passages (*An.* 2.10, 422a20–31) the meaning of κρίνειν seems, once more, to be directly connected to the judicial context. Again, the question is about distributing authorities, and the claim that ‘sight κρίνει this [i.e. darkness] as well’ could plausibly be paraphrased as ‘sight is also the authority to decide whether it is dark’. Indeed, given that this is the first occurrence of κρίνειν after *An.* 2.6, Aristotle’s claim is naturally read in direct connection with it: sight is *not only* the authority to decide about colours, *but also* the authority to decide about invisibility (darkness), and similarly for the other sense modalities. If this is correct, then the passage confirms that the *sensus iudicialis* plays a more central role in Aristotle’s argument than is usually assumed.<sup>47</sup>

#### 6.4 Discrimination within the Assimilation Model

Let us now finally turn to the part of *An.* 2.11 in which Aristotle introduces the notion of a ‘discriminative mean’. Most of *An.* 2.11 has been dedicated to defending the thesis that flesh is not the organ, but merely the medium of touch. The concept of the ‘discriminative mean’ is then introduced in the context of tactile blind spots.<sup>48</sup> Aristotle argues for the existence of these blind spots (at 423b26–424a4) drawing on the classification of tangible qualities as distinguishing features of bodies qua bodies (i.e. qualities that all bodies necessarily have to some degree),<sup>49</sup> combined with the assimilation model of perception as developed in *An.* 2.5. The fact that Aristotle proceeds in this way is convenient for our purposes because the passage explicitly embeds the account of perceptual discrimination within the assimilation model:

(i) The perceptive organ responsible for them [i.e. the tangible qualities], that is, that which is capable of touching and in which the perceptive capacity called touch is primarily present, is a bodily part that is such in

<sup>47</sup> It is also telling, then, to compare this passage with that in *An.* 3.2 claiming that ‘we κρίνομεν by sight also darkness’: here, the translation ‘we discriminate’ seems very natural, but the passage is making exactly the same point as the one from *An.* 2.10, so there is a clear continuity between the judicial ‘deciding’ on the one hand and ‘discriminating’ on the other. If that is right, then these cannot be contrasted as two different meanings of κρίνειν. Rather, it confirms the suggestion made above that judicial overtones are essential to Aristotle’s employment of κρίνειν throughout the *De Anima*, even in the cases where ‘discriminating’ (or ‘discerning’) is the most natural translation.

<sup>48</sup> Cf. Theophrastus, *Sens.* 2, 499.9–10.

<sup>49</sup> Aristotle mentions only hot, cold, wet, and dry and does *not* include hard and soft, apparently because these latter properties are emergent and do not belong to the element themselves (see *Meteor.* 4.4–5, 382a8–27).

capacity [as the tangible objects are in fulfilment]. For perceiving is a kind of being affected, and so, what the agent is like in fulfilment, such it is making the other thing [i.e. the perceptive organ] which is [such] in capacity. (ii) That is why we do not perceive what is equally warm and cold or hard and soft [as our body] but only the extremes because the perceptive capacity is a sort of mean of the contrariety in perceptual objects. And that is why one [or: it, i.e. the perceptive organ] discriminates the perceptual objects. For what is in a mean state is capable of discriminating, because with respect to each [object] it comes to be the other extreme. (iii) And just as that which is going to perceive what is white and what is black must be neither of them in fulfilment, while being in capacity both (and similarly also for the other senses), so also in the case of touch it [i.e. that which is going to perceive hot and cold] must be neither hot nor cold.

(i) τὸ δὲ αἰσθητήριον αὐτῶν τὸ ἀπτικόν, καὶ ἐν ᾧ ἡ καλουμένη ἀφή ὑπάρχει αἴσθησις πρώτη, τὸ δυνάμει τοιοῦτόν ἐστι μόνον· τὸ γὰρ αἰσθάνεσθαι πάσχειν τι ἐστίν· ὥστε τὸ ποιοῦν, οἷον αὐτὸ ἐνεργεία, τοιοῦτον ἐκείνο ποιεῖ δυνάμει ὄν. (ii) διὸ τοῦ ὁμοίως θερμοῦ καὶ ψυχροῦ, ἢ σκληροῦ καὶ μαλακοῦ, οὐκ αἰσθανόμεθα, ἀλλὰ τῶν ὑπερβολῶν, ὡς τῆς αἰσθήσεως οἷον μεσότητός τινος οὔσης τῆς ἐν τοῖς αἰσθητοῖς ἐναντιώσεως. καὶ διὰ τοῦτο κρίνει τὰ αἰσθητά. τὸ γὰρ μέσον κριτικόν· γίνεταί γὰρ πρὸς ἐκότερον αὐτῶν θάτερον τῶν ἄκρων· (iii) καὶ δεῖ ὥσπερ τὸ μέλλον αἰσθήσεσθαι λευκοῦ καὶ μέλανος μηδέτερον αὐτῶν εἶναι ἐνεργεία, δυνάμει δ' ἄμφω (οὔτω δὲ καὶ ἐπὶ τῶν ἄλλων), καὶ ἐπὶ τῆς ἀφῆς μήτε θερμόν μήτε ψυχρόν.

(*An.* 2.11, 423b29–424a10)

The first thing to notice about this passage is that, although the account of the discriminative mean in (ii) is developed specifically with respect to touch, it seems to be intended to apply generally to all sense modalities, as suggested by the generalization in (iii) and confirmed by Aristotle's later uses of μεσότης.<sup>50</sup> Just as the notion of mediation was introduced as applying primarily to sight and hearing and then extended, somewhat surprisingly, to all other senses, so the notion of the discriminative mean is introduced as applying primarily to touch before being extended to the remaining sense modalities.<sup>51</sup>

Another salient feature of our passage is the exceptional clarity with which Aristotle distinguishes the material and the formal aspects of

<sup>50</sup> See especially *An.* 3.7, 431a17–20, which insists that there is a numerically identical μεσότης for all sense modalities (more on this passage in Section 6.6).

<sup>51</sup> For touch as a μεσότης, see also *An.* 3.13, 435a21–b3 and *Meteor.* 4.4, 382a16–20 (for a mean disposition of sight, cf. *GA* 5.1, 780a22–5). For more on the questions raised by the extension, see Sections 6.5 and 7.2.

perceivers – that is, the bodily perceptive organs on the one hand, and the perceptive capacity of the soul, on the other. In (i) he explicitly distinguishes between the organ (αἰσθητήριον) of touch and the sense of touch (ἄφή), which is what makes the organ capable of touching (ἅπτικόν). The assimilation model from *An.* 2.5 is then clearly applied to the perceptive organ rather than the perceptive capacity, which aligns perfectly with *An.* 1.3–4.<sup>52</sup> This suggests that Aristotle is willing to tell us something important about the respective roles of the body and the soul.<sup>53</sup>

Furthermore, there is no reason to assume that he is any less careful in this respect in (ii) and (iii). Yet, most translators and interpreters disregard the difference between μεσότης τις and τὸ μέσον in (ii): most often they are translated by the same word,<sup>54</sup> and even when not, the difference usually plays no role in interpretation.<sup>55</sup> Because it is αἰσθησις (apparently in the sense of the perceptive capacity, as a generalization of ἄφή) that is identified with μεσότης, however, (i) makes it natural to expect that the intended example of τὸ μέσον would be *the organ* as determined by the μεσότης, just as the organ of touch is ἅπτικόν owing to the ἄφή operative in it.<sup>56</sup> This is not to say that μεσότης could not be treated in a more relaxed manner as a case of τὸ μέσον; rather, the point is that the present context strongly suggests that Aristotle expects the reader to be sensitive to the difference between that which is in a mean state and the mean itself.<sup>57</sup>

<sup>52</sup> See *An.* 2.9, 422a6–7; 2.10, 422a34–b5, b15–16.

<sup>53</sup> In the rest of *An.* 2.5–11, Aristotle usually talks of ‘that which can perceive’ (or ‘touch’, ‘taste’, ‘smell’ ...) without spelling out the respective roles of the body and the soul (cf. Sections 1.1 and 5.4).

<sup>54</sup> See e.g. Hicks 1907: 414–5, Oates 1936: 394, Corcilius 2014: 40 (cf. Corcilius 2022: 144), Shields 2016: 47, 246–7, Reeve 2017, Perälä 2018: 267–8.

<sup>55</sup> Polansky 2007: 333 n. 16 draws a difference between the two notions, but applies both to the perceptive capacity as well as to the perceptive organ. Hamlyn 1993: 112–13 distinguishes between the perceptive organ as ‘the mean’ and its ‘mean state’, but he takes it for granted that both terms in Aristotle’s text (μεσότης and τὸ μέσον) refer to the same thing – namely, the organ. Johansen 2002: 180 distinguishes between ‘a mean’ and ‘what is in the middle’, but without drawing any implications from that distinction. Grasso 2020: 257 distinguishes between ‘a mean’ and ‘the middle’, but the difference does not seem to play any role in his interpretation. Contrast Theodore Tracy’s careful reading reported in the following footnote.

<sup>56</sup> Cf. Tracy 1969: 206 (cf. 221), who spells out μεσότης in terms of ‘form disposing and activating its matter in a state of equilibrium’, and takes τὸ μέσον to refer to ‘this “middle state” or equilibrium’ of the organ that enables it to discriminate. Unfortunately, Tracy does not explain what discrimination amounts to or how it takes place (cf. n. 97).

<sup>57</sup> Here are some parallels that highlight the contrast in functions between the abstract noun μεσότης and the corresponding adjective: ‘With regard to anger also there is an excess, a deficiency, and a mean (μεσότης). Although they can scarcely be said to have names, yet since we call the intermediate person (τὸν μέσον) good-tempered let us call the mean (τὴν μεσότητα) good temper; of the persons at the extremes let the one who exceeds be called irascible, and his vice irascibility, and the man who falls short an inirascible sort of person, and the deficiency



The final phrase of (i) clearly recalls the assimilation model from *An.* 2.5, and it has been interpreted in very different ways, depending on the literalist, spiritualist, or analogical understanding of the role of the perceptive organs from which interpreters have begun. However, the present passage brings into focus again how each of these approaches falls flat.<sup>58</sup> It is notoriously difficult for spiritualism to account for the phenomenon of blind spots introduced in (ii) as a consequence of the assimilation model: if only a 'spiritual' acting is involved in perception, the claim that 'that is why we do not perceive what is equally warm and cold' would be a clear non sequitur.<sup>59</sup> If, on the other hand, the assimilation model was just about acquiring literal likeness, then the change that is supposed to underlie perception would effectively make it impossible. On becoming literally like the perceptual object, the organ would become unable to be affected by it and thus, as Aristotle clearly implies here, unable to perceive it.<sup>60</sup> The change supposed to bring perception about would, in fact, only produce a perceptual *blind spot*.<sup>61</sup> Finally, the analogical reading does not fare any better on this point (as observed in Section 4.6). If the way in which a perceptual object *F* acts on the perceiver consists in making it *G* (i.e. making it embody the same ratio in a different pair of contraries) and if the result of this acting is that the organ comes to *be G*, then, again, the change that is supposed to underlie perception makes it effectively impossible, for it implies that the organ cannot be further affected by the perceptual object *F* in the required way, and so that the organ cannot perceive *F*.

The interpretation of Aristotle's first general account developed in Chapters 1–3 offers a viable alternative (spelled out in Section 4.6), and Aristotle's phrasing in the present passage provides additional support for it. The perceptual object *F* is *making* (ποιεῖ) *F*<sup>62</sup> the organ, which is *F* in

inirascibility' (*EN* 2.7, 1108a4–9, *Revised Oxford Translation*; cf. *Pol.* 4.11, 1295a35–9). 'With regard to justice and injustice we must consider what kind of actions they are concerned with, what sort of mean (μεσότης) justice (ἡ δικαιοσύνη) is, and between what extremes that which is just (τὸ δίκαιον) is in the middle (μέσον)' (*EN* 5.1, 1129a3–5, *Revised Oxford Translation*, modified; cf. *MM* 1.33.8). For an illuminating discussion of μεσότης and τὸ μέσον in the ethical context, see Brown 2014 (building on Brown 1997); cf. e.g. Hardie 1965, Young 1996, Hursthouse 2006, Rapp 2006, Fisher 2018.

<sup>58</sup> Cf. Sections 3.7 and 4.6.

<sup>59</sup> This is a classical objection against spiritualism, for which see already Sorabji 1992: 214–15.

<sup>60</sup> This seems to follow even under the homeostatic 'organic' reading proposed by Ducharme 2014, who maintains that perception consists in literal form replication, albeit just temporary because the organs 'strive' to return to their neutral state. Cf. already Tracy 1969: 200–22.

<sup>61</sup> Cf. Price 1996: 289, Magee 2000: 319, and Grasso 2020: 259–61.

<sup>62</sup> Whether this is to be understood literally or analogically.



*capacity* (δυνάμει ὄν). Aristotle says nothing here about *the result* of this making. However, combining this claim with the assertion that perceiving *is* a kind of being affected has an important implication that could have hardly escaped Aristotle's notice: throughout the time of perceiving *F*, the respective organ must remain *F in capacity*; indeed, to continue being affected, and so perceiving, the organ must remain *unlike* the object (i.e. *not F* in fulfilment).

The present passage is not the only additional support for the proposed interpretation of the assimilation model. The same idea can, arguably, be found in a convoluted sentence from *An.* 2.10 describing how the tongue, as the alleged organ of taste, is affected by flavours:<sup>63</sup>

ἀναγκαῖον ὅρα ὑγρανθῆναι τὸ δυνάμενον μὲν ὑγραίνεσθαι σωζόμενον μὴ ὑγρόν δὲ τὸ γευστικὸν αἰσθητήριον. (*An.* 2.10, 422b3–5)

The syntax of this passage is uncertain and there are at least three ways to construe the sentence. The position of δέ calls for the insertion of a comma after σωζόμενον and suggests that this participle should be understood as a part of the μὲν clause. This leaves the meaning of σωζόμενον underdetermined. (1) On one reading, it tends to be translated along the lines of 'without being harmed' and the sentence is taken to be saying at best something very vague.<sup>64</sup> But Aristotle is more likely to have something more precise in mind, namely, (2) that the organ is moistened in such a way that it is preserved *as being capable* of being moistened: that is, upon being moistened, it does not lose its capacity for being moistened.<sup>65</sup> The δέ clause ('not being moist') would then seem to be not simply describing the state *before* being moistened, but rather the state that needs to be preserved also when the tongue is being moistened. (3) Finally, a third construal that would elucidate this idea even more clearly would place a comma before σωζόμενον and take it already to be a part of the δέ clause. (This does not seem quite right stylistically, but it can hardly be excluded as a possibility in a manuscript of Aristotle's work.) The sentence would then be saying

<sup>63</sup> As noted in Section 4.4, one puzzling aspect of *An.* 2.10 is that, throughout the chapter, Aristotle speaks as if the tongue were the proper organ of taste, rather than a part of its medium, as he argues in *An.* 2.11. However, for our purposes, we can ignore this apparent inconsistency. What matters is the way in which Aristotle applies the assimilation model to the tongue here, as an example of a perceptive organ.

<sup>64</sup> See e.g. Hicks 1907 ('without losing its nature') or Jannone and Barbotin 1966 ('en gardant son intégrité'); cf. Themistius, *In An.* 71.35–6 and Philoponus, *In An.* 405.18–21.

<sup>65</sup> Cf. Grasso 2020: 268–9.

that the organ of taste is moistened as something (a) that *can be* moistened (μέν), but (b) that, upon being moistened, is preserved as not moist (δέ).

What follows at 422b5–10 seems to support (2) or (3) against (1). Aristotle explains here that the tongue cannot properly taste anything if it is itself too moist: what happens then is that we do not really *taste*, but rather experience an after-taste on our tongue. This suggests that, although tasting involves the tongue being moistened, it must at the same time be preserved as itself *not being (too) moist*, because otherwise the moistening would eventually lead to the tongue becoming incapable of being moistened, and thus incapable of tasting, for it would acquire an (excessive) moisture (and, with it, apparently a flavour) of its own. Under (2) or (3), the passage fits perfectly with the interpretation of preservative πᾶσχειν proposed in Chapters 1–3,<sup>66</sup> as well as the reading of (i) in the quoted passage from *An.* 2.11 proposed above.

Returning to the 2.11 passage, I have been arguing that Aristotle describes here what happens in perceiving in terms of the perceptual object *making* the perceptive organ like itself, with the organ, however, having its *unlikeness preserved* as a condition of being further affected, and so of continued perceiving. If that is true, then (i) spells out only *a part* of the assimilation model as developed in *An.* 2.5: it does not say anything explicit about the likeness acquired by the perceiver for the time of perceiving. And there is a good reason for this omission: it is, I shall argue, because Aristotle is going to tell us something new and important about the likeness in (ii). Put very roughly: the perceptive organ must not be assimilated to the perceptual object in the sense of acquiring a material quality *of its own*, because only then can it receive a quality *of the external perceptual object*. My suggestion in the following section will be that the notion of the ‘discriminative mean’ in (ii) is intended precisely to explain how the latter kind of likeness (further spelled out in *An.* 2.12 in terms of forms without the matter) comes to be present in the perceptive organ without compromising its neutrality.<sup>67</sup>

<sup>66</sup> For the idea that the present passage draws on the notion of preservative πᾶσχειν from *An.* 2.5, see e.g. Polansky 2007: 318–19 and Grasso 2020: 269.

<sup>67</sup> If this suggestion is on the right track, then the notion of capacity employed in (i) is worthy of a special attention: it seems that the capacity involved here cannot be interpreted either as simply a capacity for being *materially* assimilated (in the literal or analogical way), or as simply a capacity for being *phenomenally* assimilated. Instead, it appears to essentially involve *both* of these aspects in a way that is yet to be determined.

## 6.5 The Discriminative Mean

In (ii), Aristotle argues that the perceptive capacity (αἴσθησις), such as touch,<sup>68</sup> is a certain μεσότης of the respective contrariety; this is why something or someone κρίνει the perceptual objects: καὶ διὰ τοῦτο κρίνει τὰ αἰσθητά. The grammatical subject is not expressed, but it clearly refers to the same kind of thing as ‘τὸ μέσον’ in what follows: τὸ γὰρ μέσον κριτικόν. Usually, interpreters assume that the grammatical subject of κρίνει is the μεσότης from the preceding sentence; this leads them, understandably, to treat ‘μεσότης’ as a case of ‘τὸ μέσον’. However, this is not the only possible reading.<sup>69</sup> The sentence with κρίνει can also be taken as an absolute construction, ‘that is why one discriminates’, playing the same role as the first person plural at the beginning of (ii) ‘that is why we do not perceive’.<sup>70</sup> Alternatively, the grammatical subject may be τὸ ἀπτικόν from 423b30, to which Aristotle has already referred back by the demonstrative pronoun ἐκεῖνο at 424a2.

Both of these readings suggest that the intended instance of τὸ μέσον capable of κρίνειν on account of μεσότης is not this μεσότης itself. Rather, it is the organ in which this μεσότης – that is, the perceptive capacity (αἴσθησις) in question – is primarily present, as outlined in the first sentence of (i).<sup>71</sup> This reading is supported by the beginning of (iii) where Aristotle talks of ‘that which is going to perceive white and black’ (τὸ μέλλον αἰσθήσεσθαι λευκοῦ καὶ μέλανος). He says that this must be neither black nor white in fulfilment but both in capacity, and he clearly compares this with what he has already said in (i) about the *organ* of touch (it is neither hot nor cold in fulfilment). Accordingly, τὸ μέλλον αἰσθήσεσθαι must be the perceptive organ. Now, there would be a strange shift if Aristotle were not also referring to the organ in the preceding sentence concerning τὸ μέσον. Rather, throughout the whole passage, he seems to be carefully distinguishing between that which can perceive, can touch, can κρίνειν, on the one hand, and that on account of which it can do so, on

<sup>68</sup> Or, perhaps each kind of touch – for, unlike other senses, touch is of more than one range of qualities (cf. *An.* 2.11, 422b23–7).

<sup>69</sup> It should also be noted that this is not a very natural reading, either, given that μεσότης did not figure in the main sentence but in a subordinate absolute genitive construction.

<sup>70</sup> The switch from the first-person plural to the impersonal third-person singular is stylistically awkward but is certainly not unique in Aristotle’s work. For another example we need to wait less than two Bekker pages: ‘Since we perceive (αἰσθανόμεθα) that we are seeing (ὅτι ὁρώμεν) . . . , it is necessary to perceive (ἀνάγκη αἰσθάνεσθαι) that one is seeing (ὅτι ὁρᾷ) either . . . or . . .’ (*An.* 3.2, 425b12–13).

<sup>71</sup> The same can also be said, in a secondary manner, about the perceiver who possesses the organ.

the other. The passage thus seems to be perfectly in line with the ‘Rylean passage’ in treating discrimination as something performed by an animal on account of its soul.<sup>72</sup> And this is no accident for, I shall argue, Aristotle is telling us something very important here about *how* the soul makes the animal capable of discriminating and perceiving.

Aristotle claims that the perceptive capacity is ‘a sort of mean’. This claim has been interpreted in various ways – of which I shall mention only two.<sup>73</sup> According to Klaus Corcilius, Aristotle characterizes the perceptive soul here as a neutral value of each range, which is ‘a metaphysical given’ for Aristotle<sup>74</sup> and is localized in a non-metaphorical way ‘somewhere in the heart’.<sup>75</sup> As such, the soul can serve literally as the end point of perceptual motions transmitted, according to *An.* 1.4, ‘up until’ the soul.<sup>76</sup> Upon their arrival at this spatial point in the heart, ‘a sort of *contact* between body and soul’ is established and thus also a literal ‘contiguity of the soul with the incoming ... motions’.<sup>77</sup> Such a juxtaposition generates *a contrast* between the neutral value (i.e. the soul) and the value of the incoming motion. Because the former value is neutral, the contrast just *is* the manifestation of the incoming value: it *is* the perceptual object in activity – the form without the matter of the external object acting on the senses. It is in this context that Corcilius suggests an alternative to Ebert’s three-place model of perceptual discrimination: the perceptive soul *qua* mean discriminates the quality of the perceptual object *from itself*.<sup>78</sup> Much can be said in favour of this account. It accomplishes what has rarely been achieved by providing a concrete model of the perceptive soul’s causality that is neither circular nor compromises the soul’s impassivity. I shall, accordingly, discuss this view further below.

In a recent paper, Roberto Grasso offers a different interpretation of μεσότης. He claims that it refers to *a state of the perceptive organ resulting* from two opposite agencies cancelling each other out: (1) the agency of the perceptual object assimilating the organ to itself and (2) the counterbalancing agency of the organ. (2) neutralizes (1), and so retains the organ in its

<sup>72</sup> See Section 5.2. This is not to say that Aristotle is always so cautious. See e.g. *An.* 3.3, 427a20–1 where *the soul* is said to discriminate something in both perception and thought. In passages like these, I take it, Aristotle expects us to apply the lesson of the ‘Rylean passage’ on our own.

<sup>73</sup> See Grasso 2020: 261–4 for a critical overview of other existing interpretations.

<sup>74</sup> Corcilius 2014: 48. <sup>75</sup> Corcilius 2014: 44, 48; cf. Corcilius 2022: 142.

<sup>76</sup> Cf. Corcilius and Gregoric 2013: 54–78. However, see Gregoric forthcoming for a non-literal understanding of Aristotle’s analogy between the perceptive soul and a point at *An.* 3.2, 427a9–14.

<sup>77</sup> Corcilius 2014: 46; cf. Corcilius 2022: 145–6.

<sup>78</sup> Corcilius 2014: 42; see also de Haas 2005: 335–6 for the idea that what is ‘compared’ is the incoming sensible form and the mean; cf. Polansky 2007: 255–6.

neutral state. The μεσότης is just this state ‘that results from opposite extremes’ – a ‘zero vector sum’.<sup>79</sup> I shall argue below that Aristotle does indeed have a homeostatic mechanism in mind in our passage; however, I do not share Grasso’s view that the passage is simply about physiology.<sup>80</sup> As noted above, Aristotle seems to be promising to tell us something about the role of the soul. And, indeed, it is difficult to read the sentence about μεσότης as not concerning the perceptive soul. It is αἴσθησις that Aristotle identifies with ‘a sort of mean’, and although the word αἴσθησις can also refer to the activity of perceiving and is occasionally used to denote the ensouled organ, the present context strongly suggests that Aristotle has the perceptive capacity in mind (see 423b31).<sup>81</sup> It is difficult to see how the claim that αἴσθησις is a mean could be read as a claim about the preserved physiological state.<sup>82</sup>

However, if Aristotle *does* have the perceptive capacity in mind, how should we interpret its status ‘as a sort of mean’ and its role in perceptual discrimination? One problem with the first mentioned interpretation is that, as on most other interpretations, it disregards the difference between ‘μεσότης’ and ‘τὸ μέσον’. If I am right about Aristotle’s intention behind this difference, then it is *not* the perceptive capacity itself that is said to discriminate. Rather, Aristotle is saying that the organ (or the living being endowed with this organ) discriminates on account of the perceptive capacity operating in it ‘as a sort of mean’ and so determining the organ as ‘being in a mean state’. If this is the case, then there is some hope that we need not take the perceptive capacity as ‘a sort of mean’ to be a static constant whose mode of presence in the perceptive organ cannot be further analysed. Instead, a story can be told regarding how the μεσότης determines the organ as τὸ μέσον and thus makes it capable of discriminating. One reason for preferring this interpretation, I submit, is that it need not assume that the soul is non-metaphorically located in a spatial point ‘somewhere in the heart’.<sup>83</sup>

<sup>79</sup> See most clearly Grasso 2020: 272, cf. 267. <sup>80</sup> This is also the view of Ducharme 2014.

<sup>81</sup> For the different meanings of αἴσθησις, see Section 7.4.

<sup>82</sup> In fact, Grasso himself renders αἴσθησις in our passage as ‘the sense’, and he seems to understand it in terms of the perceptive capacity rather than the organ, see Grasso 2020: 257 n. 1 (cf. 261 n. 12).

<sup>83</sup> Neither Aristotle’s adoption of the Platonic catchphrase ‘up until the soul’ in *An.* 1.4, nor his comparison with a geometrical point at *An.* 3.2 427a9–14 is sufficient to commit him to this view. One can have a strongly cardio-centric reading of Aristotle (as, for example, Alexander of Aphrodisias does) and still insist that the soul is present in the heart in a very different way: for example, as Alexander says (cf. Section 5.3), by being indivisibly present throughout the whole organ (presumably this was also the way in which Alexander read *MA* 9 and 11, 703b26–35).

Such a non-metaphorical *localization* of the soul, which underlies the idea of a *contact* between the body and the soul and a *contiguity* between the soul and the incoming motion, seems to be at odds with the spirit of *An.* 1.3–4. Aristotle's very first argument against the soul itself undergoing a change was that it would imply that the soul is in a place.<sup>84</sup> That was considered to be patently absurd, and Aristotle never suggests that the idea of the soul itself having a position (θέσις), like a point, is more acceptable than that of it having a place (τόπος). Moreover, Aristotle's definition of touch in *Phys.* 5.3 implies that only extended entities, not points, can be in touch with other beings.<sup>85</sup> And, although his commitment to there being a touch between the mover and the moved leads him to introduce the notion of a non-reciprocal touching in *GC* 1.6 as a way of accounting for the case of unmoved movers,<sup>86</sup> it is not at all obvious that this should be understood in terms of the unmoved mover *having a determinate position*.<sup>87</sup> Accordingly, ascribing such a position to the soul would still be objectionable as a way of assimilating it to spatial entities (although not bodies) and would thus go against the thrust of *An.* 1.3–4.<sup>88</sup>

In my understanding of the passage, Aristotle is proposing an entirely different model of the soul's involvement in perceptual discrimination. The soul figures in it as 'a sort of mean' not in the sense of a static constant, literally contiguous with the incoming motions, but rather in the sense of dynamically determining the perceptive organ as being in a

<sup>84</sup> See *An.* 1.3, 406a12–22 (cf. Ferro 2022: 96). <sup>85</sup> *Phys.* 5.3, 226b21–3.

<sup>86</sup> *GC* 1.6, 323a28–33.

<sup>87</sup> Neither the example in *GC* 1.6 nor anything in the *De Anima* suggests this.

<sup>88</sup> As support for the claim that Aristotle assumes non-metaphorical contact and juxtaposition between the perceptive soul and the incoming motions, Corcilius 2014: 46–7 cites *Phys.* 7.2, 244b2–245a11, where Aristotle says that the perceptual qualities, such as flavours, are adjacent (ἐμας) to the senses, such as γεῦσις. But the passage is not without ambiguities, and Aristotle may well want to say nothing more than that the flavoured *body* must be in contact with the *body* of the perceiver, so that *coincidentally* the quality of the former and the capacity of the latter are also 'adjacent' (because the bodies *in which* they exist are adjacent in their own right). Aristotle also says here that colours are adjacent to light and that light is adjacent to sight. However, given Aristotle's theory of light as a disposition (ἐξις) or fulfilment (ἐντελέχεια) of the transparent medium developed in *An.* 2.7 (and *Sens.* 3), it seems impossible that by 'being ἐμας' he means a literal non-coincidental spatial contiguity. It is clear that light is not in a place (and that it does not have a position) in its own right – but only coincidentally on account of being a disposition/fulfilment of the illuminated air that is itself in a place. If we do not assume that Aristotle adopts an entirely different theory of light in *Phys.* 7 than he does in *An.* and *Sens.*, it is difficult to see how the passage in *Phys.* 7.2 could imply that sight is non-coincidentally in a place or has a position. If, instead, we do assume that there are two different theories of light presupposed in *An.* and *Phys.* 7, then it is not clear why we should take *Phys.* 7 to be helpful for interpreting *An.*'s account of perception. Another reason for caution is Aristotle's adoption of the *Platonic Formula* in *Phys.* 7.2–3 (248a6–9; cf. Section 5.1), which goes beyond anything that he accepts in *An.* (the passages that might suggest the opposite – some of which are quoted by Corcilius 2014: 47 n. 42 – are discussed in Sections 7.4 and 7.5 and in the Appendix).

mean state and so being discriminative, as it ‘comes to be the other extreme’ with respect to each object. This account can fill precisely the gap in the assimilation model left open in (i): it contains the key to understanding the sense in which the perceiver *is* assimilated to the perceptual object acting on her, while *remaining neutral*, and thereby capable of being further affected.

The persisting neutrality of the organ is, I suggest, captured exactly by its description as τὸ μέσον.<sup>89</sup> The most obvious case, which Aristotle seems to have primarily in mind here, is that of perceiving the heat and the cold. The cold air acts on my body by literally cooling it down. If I were a plant or a kettle of water, this acting would result simply in the lowering of my temperature, not in perception. The reason for this would be exactly my lack of the requisite mean, as Aristotle says in *An.* 2.12: the reason why plants do not perceive, although they are cooled and warmed, is that ‘they do not have a mean (μεσότης)’; they ‘are affected with the matter’, rather than receiving the forms of perceptual objects.<sup>90</sup> Having the requisite mean, I contend, implies precisely that the air acting on my body does *not* result in the lowering of my temperature, but rather in something else. Presumably, my temperature remains *exactly* the same (with smaller or larger local oscillations) owing to a homeostatic reaction that counterbalances the agency of the external object acting on me.<sup>91</sup> This homeostatic mechanism is what guarantees that I can continue being affected by the same object and thus can continue perceiving it.<sup>92</sup>

<sup>89</sup> If we imagine all colours as having values between  $x$  (corresponding to black) and  $y$  (corresponding to white), all of which are ‘measured’ by white (cf. *Metaph.* 1.2, 1053b29–34), the mean in question can hardly be the geometrical, the arithmetical, or the harmonic mean (it is neither the grey nor the sallow, cf. *Cat.* 10, 12a18–20; nor is it the purple or the red, identified, apparently, as corresponding to the fifth and the fourth among colours at *Sens.* 3, 439b25–440a6). Rather, as Johansen 2002: 181 puts it, the mean is ‘the point at which the two extremes cancel each other out’. In this sense, a certain temperature, for instance, can serve as the mean for touch (almost) as well as transparency does for sight.

<sup>90</sup> *An.* 2.12, 424a32–b3. For a discussion of this passage and the notion of receiving forms without the matter, see Section 7.4. Cf. *An.* 3.13, 435a19–b4; for homeostatic readings of this passage, see Murphy 2005: 333–8 and Grasso 2020: 278–80.

<sup>91</sup> In terms of the mean, Aristotle also describes a more general homeostatic mechanism possessed by animals; see e.g. *PA* 2.7, 652b7–27; *GC* 2.7, 334b15–29; cf. *Meteor.* 3.1 (cf. *PA* 3.4, 666b20–667a4; *HA* 1.17, 496a4–27; 3.3, 513a27–b1; and *Somm.* 2, 458a10–19, where the principle of the mean leads Aristotle to infer that the middle ventricle of the heart serves as the centre and origin of the self-preserved and perceptual activity of animals; cf. also *Iuv.* 1, 467b25–468a4). For further analysis, see Tracy 1969: 178–200 and King 2001: 74–129, who focuses on *Long.*, *Iuv.*, and *Resp.* (cf. Terzis 1995, who claims to reconstruct the role of homeostasis in Aristotle’s account of emotions).

<sup>92</sup> This idea turns out largely to agree with Grasso 2020, with the main difference being whether μεσότης is to be understood as referring to (a) the neutral state of the organ *resulting from* the



But there is more to be said. It is not just that my organ remains in its neutral state: when doing so, ‘it comes to be the other extreme’ with respect to the perceptual object acting on it, *and so* it discriminates this object. Aristotle seems to be capturing here the sense in which the perceiver is *assimilated* to the perceptual object acting on her, while remaining neutral with respect to it. The sense of ‘coming to be’ that Aristotle has in mind can hardly be a mere Cambridge change. He cannot mean just that τὸ ἄπτικόν ‘comes to be the other extreme’ with respect to anything we might wish to compare it with (just as something tepid ‘becomes’ warm in comparison with ice, and cold in comparison with boiling water). This would not explain why τὸ ἄπτικόν is κριτικόν, which is exactly what Aristotle is trying to explain. Rather, it seems, when affected by something cold, τὸ ἄπτικόν ‘comes to be the other extreme’, and *exactly* the other extreme, in the sense that, to remain a μέσον, it must undergo a certain amount of internal heating that corresponds exactly to the amount of cooling caused by the external object.

The key point here is that the counterbalancing reaction is – in a way that is yet to be explored – *governed by the perceptive capacity* that serves, in this precise sense, as the mean of the organ that defines the normative state in which the organ is always retained (or to which it returns as quickly as possible). This homeostatic mechanism provides a model for the involvement of the soul in perceiving that is not circular, does not compromise the soul’s impassivity, and need not ascribe a literal spatial position to the soul. Rather, the perceptive soul can be understood as being a kind of unmoved mover, which ‘meets’ the incoming motions not by becoming literally contiguous with them, but by its ‘acting’ on the organ, with the result that this ‘acting’ is directly determined by the agency of the perceptual object. This, I submit, is how the relevant quality comes to be present in the perceiver exactly as a measured quality *of the external object* rather than as a quality of the perceiver herself.<sup>93</sup>

An important point to notice about this model is that the soul cannot be *absolutely* impassive (like Anaxagoras’ or Aristotle’s divine νοῦς). Crucially,

counterbalancing reaction, or to (b) the perceptive capacity as the principle *responsible* for this counterbalancing. The latter seems to be further supported by the closeness of μεσότης at *An.* 2.12, 424a32–b3 to ‘the principle capable of receiving forms of the perceptual objects’.

<sup>93</sup> We can surely perceive more than one quality of the same range by a single organ at a given time. This does not conflict with the proposed account. We need only to realize that the organ (unlike the soul) is a spatially extended entity that can ‘come to be the other extreme’ with respect to a plurality of qualities *in spatially differentiated parts* of it. Cf. Alexander’s view that the perceptive soul is indivisibly present throughout the perceptive organ (Section 5.3). This is not to say that the case of simultaneous perception of homogeneous qualities is a trivial matter for Aristotle. For a discussion of some of the issues involved in it, see Gregoric 2007: 141–4.

it is *coincidentally affected* by perceptual objects insofar as its organ is affected. Moreover, its activity is occasioned by the agency of the perceptual object and, indeed, is fully determined by it to the extent that the counterbalancing reaction does nothing more and nothing less than perfectly neutralize the agency of the perceptual object. In this sense, the activity can be described as receptive: it consists in nothing other than ‘receiving’ (in an inverted form comparable to a wax imprint) the quality of an external perceptual object. However, it is crucial that the reception does not take place *in* the perceptive soul itself. The soul does not ‘absorb’ the quality of the object into itself, not even in the etiolated sense of undergoing a kind of ‘spiritual’ alteration. Rather, the quality is received *in the soul’s very acting on the organ*, and so the soul is not affected in any non-coincidental way that would compromise its impassivity.<sup>94</sup> We shall return to this point in Sections 7.4 and 7.5 when discussing the passages in *An.* that may *seem* to compromise the perceptive soul’s impassivity.

It is interesting, for the overall reconstruction, to note that the notion of μεσότης, when interpreted in the proposed way, can be directly related to the notion of ἀπάθεια that Aristotle ascribes to ‘that which can perceive’ in *An.* 3.4, drawing on *An.* 2.5. Characterizing the perceptive capacity as a mean comes very close to describing it in terms of an impassivity of the organ along the lines of *Metaph.* Δ.12 and Θ.1 – that is, in terms of a power for resisting a certain (detrimental) kind of being affected, which is a prerequisite, or even a constituent, of a capacity for being affected in an excellent way.<sup>95</sup> It is exactly because the organ resists – in a determinate way owing to the soul – undergoing the change that non-perceptive entities would normally undergo when so affected that it is assimilated to the perceptual object in the requisite way (i.e. that it receives a quality of the external perceptual object not as a quality of its own but exactly as a quality *of that object*).

This goal is achieved by means of a homeostatic mechanism, through which the agency of perceptual objects is very precisely *measured*.<sup>96</sup> The quality comes to be present in the ensouled organ as a result of this measurement: as a precisely determined *proportion* (λόγος) defining the quality in question. We could compare the way of measurement that

<sup>94</sup> Contrast Johansen 2002: 181, who takes *An.* 2.11, 423b31–424a10 to describe ‘the manner in which the sense faculty deviates from its mean when it is affected’.

<sup>95</sup> See Section 3.7. The perceptive capacity seems, thus, to have the role of ‘that which brings about standstill’ (τὸ στατικόν, *Metaph.* Δ.12, 1019a34–5).

<sup>96</sup> For the close relation between measuring (μετρεῖν) and discrimination (κρίνειν), see the Protagorean background sketched out in Section 6.2.

Aristotle appears to have in mind here with weighing:<sup>97</sup> τὸ ἀππικόν is like a qualitative balance scale with one pan turned towards the perceptual objects and the other pan turned, so to speak, towards the soul; it resembles the beam of a balance scale continually brought to equilibrium by a mechanism governed by the soul as its unmoved mover. This weighing, in which the ‘weight’ of the perceptual object is continually determined, *is* the activity of perceiving – as a way of being affected by the perceptual object that *is* a case of discriminating that object.

The metaphor of weighing in the last paragraph was intentionally embellished as a way of emphasizing one question raised by the proposed account, namely: how exactly should we understand the alleged agency of the soul? It must, of course, not be understood as turning the soul into a quasi-bodily agent – that would be an obvious failure by the criteria set out in *An.* 1.3–4. Rather, as the nutritive soul, it is an impassive agent, much like an art<sup>98</sup> – with the difference that it resembles not so much the art of carpentry but rather a measuring art.<sup>99</sup> That, of course, does not fully answer the question, which will need to be discussed in its own right in Section 7.3. For now, however, the point is only that there is no *prima facie* reason for rejecting such an account of the perceptive soul as an efficient cause.<sup>100</sup> What needs to be discussed is how exactly the model Aristotle develops for the nutritive soul can be adapted to perception.<sup>101</sup>

Another question that must be addressed (in Section 7.2) is how far the proposed account can be extended from touch to the other sense modalities. Assuming that it works fairly well for the heat and the cold, one might

<sup>97</sup> I owe the comparison to Stephen Menn. The same model of κρίνειν is, in connection with the Peripatetics but in a different way, applied by Sextus, *M* 7.226 (the senses, here, function as a balance scale for νοῦς). The simile is also employed by Tracy 1969: 207, but it is not quite clear how it is supposed to work on his model where the organs come to acquire a quality of their own for the duration of perceiving: if there is any ‘weighing’ going on, it is only when the object ceases to act on the organ (and the organ returns to its equilibrium), which would, absurdly, imply that while I am observing *x* I do not discriminate *x*, and that discrimination of *x* takes place only once I stop observing *x*. The comparison is also used by Bradshaw 1997: 155, but in a way that openly compromises the impassivity of the soul. It is also used, in a very different way, by Johansen 2012b: 84.

<sup>98</sup> See *An.* 2.4, 416b20–3. Cf. *An.* 1.3, 406a3–4 for Aristotle’s conviction that the notion of an unmoved mover has already been established elsewhere, and so can be taken for granted.

<sup>99</sup> Cf. Menn 2002: 130, who refers to Plato’s account of μετρητική τέχνη at *Prot.* 356d–e. The question is (a) how exactly such a measuring art relates to the productive arts, and (b) in precisely what way it provides a model for the involvement of the perceptive soul.

<sup>100</sup> Cf. Section 5.5.

<sup>101</sup> This model clearly needs to be adapted if we are not to lose sight of the essential passivity of perception, which sharply distinguishes it from nutrition.

wonder whether there is a way of making it plausible for other perceptual objects, as suggested by (iii) in the quoted passage from *An.* 2.11.

If we assume, for now, that these questions can be satisfyingly answered, we can see what kind of solution Aristotle provides in *An.* 2.11 to the key puzzle from *An.* 1.2 when rephrased in terms of κρῖνεῖν (as proposed in Section 6.2). The judicial authority of perceivers is not based on any ‘symbolic’ relation to their objects – that is, it is not based on a *static likeness* preceding perception (as in the model of a guest-friend recognizing his guest-friend). Rather, to possess the requisite judicial authority, the senses need to be more unbiased than that: the perceiver must be, and remain throughout the duration of perceiving, neutral with respect to the perceived object and any other perceptual object within the given range.<sup>102</sup> However, this neutrality does not preclude the perceiver being in contact with the perceived object, and, indeed, being intimately acquainted with it, by means of a *dynamic likeness* constantly re-established by a measuring homeostatic reaction to the agency of the perceived object. The perceptive organ measures the perceived object not as a static straight edge (κανών), but rather by constantly *receiving*, so to speak, the perfect measure of the object from the object itself.

This may explain why Aristotle can say both that the perceiver *measures* perceptual objects and that she *is measured* by them.<sup>103</sup> The perceiver measures the objects in the sense that, without the homeostatic reaction governed by the soul there would be no perceptual measuring whatsoever. However, the perceiver is also measured by these objects insofar as she does not contain any fixed measure (like κανών) of them: she is rather *receiving* the measure from the objects themselves throughout the activity of

<sup>102</sup> Tangible qualities represent a partial exception to this rule, because no body can be entirely neutral with respect to them. However, the existence of a blind spot changes nothing about the main principle (see Section 6.6).

<sup>103</sup> See *Metaph.* Δ.15, 1020b30–1021a14 for the former and *Metaph.* 1.1, 1053a30–b3 with 1.6, 1057a9–12 for the latter. Prima facie, the two accounts appear to be incompatible, as observed by Menn forthcoming a: Appendix to 1y2a (cf. Broackes 1999: 99–100). The former employs a notion of measure as related per se to the thing measured (‘the thing measured will remain unchanged in itself if we measure it in spans instead of cubits, unlike Protagorean sense-objects, which alter when they are “measured” by a new perceiver’), whereas the latter employs a notion of measure as that to which the thing measured is related per se (‘being in conformity or not with that standard (e.g. being equal or unequal to the appropriate length for that kind of thing, or lying flat against a straightedge or curving away from it) is an intrinsic attribute of the thing measured, while for the standard to be “in conformity” or not with the thing is not an intrinsic attribute of the standard’). The co-existence of both accounts in the *Metaphysics* is puzzling, not least because each seems to contain a counterargument to the other. However, the passage in *Metaph.* 1.1 is actually moving from one account to the other, which suggests that the tension was not unnoticed and that, instead, Aristotle took the two accounts to be, ultimately, compatible.

perceiving them, as they constantly determine, by their agency, the precise counterbalancing reaction governed by the soul.

## 6.6 The Single Mean and the Core of Perceptual Discrimination

Let us now step back from the details of the proposed reading of *An.* 2.11, 423b25–424a15. The interpretation of this passage offered in Sections 6.4 and 6.5 fits well with the overall picture of perceptual discrimination in the *De Anima* that I have been developing. What matters for now is that the passage neither supports the three-place model of perceptual discrimination, nor does it necessarily imply the alternative two-place model proposed by Corcilius in which the soul qua neutral value discriminates the quality of the perceptual object *from itself*. Instead, what Aristotle has in mind when he speaks of discriminating darkness, for instance, is an act of singling it out as being distinct from all potential objects of vision, that is, colours – plus apparently (intense) light in which no colour can be seen. This will also hold for colours themselves and for the other modal-specific qualities: when a colour is discriminated, it means that it is identified as just being *this* colour and no other; as on a sieve, it is discerned from the background of all potential colours (and objects of sight in general).

One can worry at this point whether the case of discriminating darkness and the case of discriminating colours can really fall under the same notion of discrimination. After all, we have seen that in *An.* 2.11 Aristotle embeds the account of perceptual discrimination firmly in the assimilation model and spells it out in terms of coming to be the other extreme. But it is obvious that none of this happens in the case of darkness. So, how could ‘discrimination’ mean the same thing here?

I think the answer is contained in the passages that have often been taken to support the three-place model of discrimination. The question at *An.* 3.2, 426b12–14 is what makes us capable of discriminating various qualities – of the same or of different modalities – *in relation to each other* (πρὸς ἑκάστων), and so to ‘perceive that they differ’. On the most general level, I take Aristotle’s answer to be that it is because the perceptive capacity is a *single* capacity.<sup>104</sup> Later in *An.* 3.7, the claim is formulated in yet stronger terms: that ‘up until’ which all the perceptual motions, of various modalities, extend is a *numerically single mean* (μία μεσότης) with

<sup>104</sup> See *An.* 3.2, 426b18–19, 20, 21.

more than one being.<sup>105</sup> Thus, when Aristotle identified a perceptive capacity such as touch as ‘a sort of mean of the contrariety in perceptual objects’, what he was describing was, effectively, just one of the beings (or aspects) of a more complex entity numerically identical for all sense modalities, and beyond.<sup>106</sup>

The idea of a numerically single mean seems to be directly connected to Aristotle’s account of perceiving the bearers of perceptual qualities, as discussed in Section 4.2. Furthermore, it can help us understand the discrimination of what is imperceptible. Suppose that I am standing on a mountain in the midst of a cloudy moonless night, and I am, in Aristotle’s terms, perceptually discriminating darkness. What happens, I take it, is this: I am perceiving the air around me by touch and smell, while perhaps also hearing how it moves; that is, I am perceiving this curious three-dimensional thing that is the air surrounding me, and I am perceiving it by the single mean active in me under several modalities at once. In the case of the three aforementioned modalities, the discriminated qualities of the air are all acting on me; and even one of them would be sufficient to make me perceive this thing (i.e. the surrounding air), because even one of them is sufficient to activate the single perceptive mean. As long as this mean is activated, albeit just by a single quality (say, the cold), it produces a holistic discrimination of its bearer. If the air makes no noise, then it cannot be heard, but it can be discriminated (under the auditory modality) as silent; and if there is no light present in it, it cannot be seen (or nothing can be seen through it), but it can be discriminated (under the visual modality) as dark; and so on. Thus, to return to our question: it seems true that all episodes of perceptual discrimination can be fitted into the assimilation model with the organ ‘coming to be the other extreme’ and so receiving a quality not as a quality of its own but as a quality of the external object acting on the perceiver; but it does not follow that the perceiver is assimilated to *all* the features of the perceptual object that she discriminates. There is sufficient room for discrimination of what is imperceptible, without any need to assume that this is an entirely different kind of discrimination or that it lacks any connection to the assimilation model.<sup>107</sup>

<sup>105</sup> *An.* 3.7, 431a19–20 (καὶ μία μεσότης, τὸ δ’ εἶναι αὐτῇ πλείω); cf. *An.* 3.1, 425a30–b2; *Sens.* 7, 449a5–13.

<sup>106</sup> Cf. *An.* 3.7, 431a10–11, which defines the experience of pleasure and pain as ‘being active in virtue of the perceptive mean (τὸ ἐνεργεῖν τῇ αἰσθητικῇ μεσότητι) with respect to what is good and bad as such’.

<sup>107</sup> When I discriminate the darkness of the air outside it is exactly because no countervailing reaction takes place in the visual modality, while I am affected by the air and countervail its agency under a

This consideration also sheds some light on the phenomenon of tactile blind spots and on why, after presenting the account of the discriminative mean, Aristotle returns, in the final lines of *An.* 2.11 (424a10–15), to the topic of discrimination of what is imperceptible with an emphasis on what is non-tangible. One kind of the non-tangible is ‘that which has an entirely indistinct διαφορά of tangible qualities, such as the air’. Now, air can surely have a very strong tangible διαφορά, for instance, when it is very cold;<sup>108</sup> but it can also have no thermal διαφορά at all when it has the same level of heat as the perceiver’s body.<sup>109</sup> This applies to other objects as well. When a pot of water has exactly the same temperature as our body, we cannot *feel* it, for it coincides with our blind spot; but it is nonetheless an object of touch and we can, in line with *An.* 2.10, *discriminate* its temperature by touch. When I put my hand into the pot and am affected by its humidity, I use touch to discriminate not only this humidity but also the water’s non-tangible tepidity.<sup>110</sup>

What leads scholars to interpret Aristotle’s account of perceptual discrimination in terms of a three-place model is primarily the final part of *An.* 3.2, where he discusses the question of how we discriminate various qualities *in relation to each other* (ἐκαστον τῶν αἰσθητῶν πρὸς ἑκαστον κρίνομεν, 426b13–14), which implies that ‘we perceive that they differ’.

different modality, and so am in a constant perceptual engagement with it which allows me to distinguish its visual quality from all potential colours (as well as intense light).

<sup>108</sup> For the case of ‘excesses’ that are ‘destructive’ and the way in which they are discriminated, see Section 7.3.

<sup>109</sup> Most of us, needless to say, would experience this, subjectively, as a pretty hot day. However, this evaluation may have nothing to do with the objective status of discrimination; it may simply be the result of the fact that we are used to constantly countervailing the cooling agency of the outside air (of a certain intensity). Accordingly, if there is nothing or very little to countervail, we feel hot (presumably because we miss the usual opportunity for getting rid of some of our inner heat), but that subjective feeling should be distinguished from perceptual discrimination itself: even when I feel pretty hot, I am still able to appreciate the fact that the outside air is somewhat cooler than my body.

<sup>110</sup> One might insist that the meaning of ‘by touch’ cannot be exactly the same in the case of the tangible humidity and the case of the non-tangible lukewarmness: the former is discriminated by touch itself, whereas the latter is discriminated by touch in virtue of its integration with the other senses. The point is that this contrast does not, by Aristotle’s lights, turn the latter into a common or coincidental perceptual object: it is still discriminated *by touch*. ‘Privative’ objects, like intangible temperature or darkness, seem to be special cases of exclusive objects (ἴδια). Another question is whether discrimination of these objects can be analysed into an awareness of the inactivity of the respective sense plus an assurance that this inactivity is not caused by some harm on the side of the perceiver (for such an analysis, see Gregoric 2021: 123–8). I don’t see much evidence that Aristotle was attracted by this kind of analysis (he never mentions any reflexive awareness of *inactivity* being involved). I am more inclined to think that, for him, this discrimination is *an activity* of the respective sense (albeit an activity performed in virtue of its integration with the other senses) of which we are reflexively aware just as we are aware of the standard cases of modal-specific perceptual acts.



What Aristotle analyses here, I take it, is not a special case, but rather something that happens in all (or nearly all) cases of perceiving: we standardly perceive the external object simultaneously under a plurality of its qualitative aspects, which implies that we also, in a way, perceive that these qualities differ from each other (otherwise there would be no perceived plurality at all). In this sense, it is true that in perception we standardly discriminate between actively perceived qualities (of a single modality, as well as of different modalities). However, it does not follow that the basic, and explanatorily primary, kind of discrimination is conceived by Aristotle as a three-place predicate. We have already seen several pieces of evidence telling against this assumption. Moreover, the way in which Aristotle introduces his inquiry into simultaneous perception in *An.* 3.2 provides no support for such a claim, either. Rather, if anything, it provides an additional piece of evidence *against* it. Aristotle writes:

Each sense, being present in the perceptive organ qua perceptive organ, is of the underlying perceptual object and discriminates the διαφοραί of the underlying perceptual object, as, for instance, sight [discriminates] white and black, and taste [discriminates] sweet and bitter, and this is similar also in the case of the other senses. But since we discriminate both white and sweet and [we discriminate] all [perceived qualities] in relation to each other, there is something by which we also perceive that they differ.

ἐκάστη μὲν οὖν αἴσθησις τοῦ ὑποκειμένου αἰσθητοῦ ἐστίν, ὑπάρχουσα ἐν τῷ αἰσθητηρίῳ ἢ αἰσθητήριον, καὶ κρίνει τὰς τοῦ ὑποκειμένου αἰσθητοῦ διαφοράς, οἷον λευκὸν μὲν καὶ μέλαν ὄψις, γλυκὺ δὲ καὶ πικρὸν γεῦσις· ὁμοίως δ' ἔχει τοῦτο καὶ ἐπὶ τῶν ἄλλων. ἐπεὶ δὲ καὶ τὸ λευκὸν καὶ τὸ γλυκὺ καὶ ἕκαστον τῶν αἰσθητῶν πρὸς ἕκαστον κρίνομεν, τινὶ καὶ αἰσθανόμεθα ὅτι διαφέρει.

(*An.* 3.2, 426b8–14)

Aristotle's phrasing here is, admittedly, somewhat ambiguous. Elsewhere in the *De Anima* he speaks, for instance, of black and white both as διαφοραί of colour and as διαφοραί of visible bodies.<sup>111</sup> These are, then, two candidates for the intended 'underlying perceptual object' in our passage. Given that the two remaining passages in the *De Anima* using this latter expression refer unambiguously to the quality rather than the body,<sup>112</sup> it seems safer to assume that this is also what Aristotle has in mind here. In any case, the term διαφορά does not refer to a *difference*

<sup>111</sup> For the first usage of διαφορά, see *An.* 2.9, 421a13; 2.10, 422b14; 2.11, 422b31–2; cf. *An.* 2.6, 418a13–14. For the second usage, see *An.* 2.8, 420a26–7; 2.11, 423b27–9, 424a12–15; cf. 3.13, 435a21–4.

<sup>112</sup> *An.* 2.11, 422b32–4; 3.2, 425b13–15.

between two qualities; rather, it refers to what is specific about one quality in contrast to the other qualities of the same kind.<sup>113</sup> The only alleged source of support for the three-place model in the quoted passage thus can be taken to be found in Aristotle's description of sight as '[discriminating] white *and* black' and of taste as '[discriminating] sweet *and* bitter'. It has been argued that what Aristotle has in mind here are cases of discriminating the actively perceived white colour *from* the actively perceived black colour, and so on.<sup>114</sup> However, there is hardly any support for this reading, which would be very difficult to reconcile with the preceding passages on κρίνειν (as we have seen). Rather, even the present passage suggests that Aristotle has something else in mind. First, it would be *prima facie* awkward if he was claiming that we can discriminate sweetness only from an actively perceived bitterness, implying that no simple perception of sweetness was possible but that our experience is always literally bittersweet.<sup>115</sup> Furthermore, the μέν ... δέ structure of the quoted passage suggests that Aristotle intends to consider the discrimination of multiple qualities in relation to each other (implying a perception of their difference) separately from the basic case of discrimination, which is taken for granted as something that has already been analysed before.<sup>116</sup>

The key meaning of κρίνειν in the basic account, as I have argued, was that of singling out or identifying the quality of the given range possessed by the perceptual object acting on the perceiver – that is, deciding, with the ultimate authority, what the perceived object is like, not *for* the perceiver, but *on its own*.<sup>117</sup> This has nothing to do with distinguishing two perceived qualities from each other. Rather, we should think of contexts like the wind passage from the *Theaetetus*.<sup>118</sup> There may arise disagreements about what some perceptual object is like (what colour it has, whether it is cold or warm, and so on), where the question becomes

<sup>113</sup> Much in the same way that the *differentia* in a canonical definition does not refer to a difference between two entities but rather to the feature that distinguishes the *definiendum* from other objects of the same genus. This fact is acknowledged by Perälä 2018: 262–3.

<sup>114</sup> Perälä 2018: 263. <sup>115</sup> Against this, see e.g. *Metaph.* Γ.5, 1010b23–6 (quoted in Section 6.2).

<sup>116</sup> Cf. *An.* 3.7, 431a17–22. Cf. also *An.* 3.3, 427a20–1 where the object of discrimination, in both perception and thinking, is described in the singular as 'one of the beings' (τὸ τῶν ὄντων).

<sup>117</sup> This will arguably hold, *mutatis mutandis*, for thinking (for a characterization of thinking as a case of κρίνειν, see *An.* 3.3, 427a20–1 and 3.9, 432a15–18). In the only passage that explicitly discusses thinking as a case of κρίνειν – namely, *An.* 3.4, 429b10–22 – the question is *not* how we discriminate the essence of flesh *from* flesh, for instance (as assumed by some ancient commentators, starting with Themistius, *In An.* 96.8–21; cf. e.g. Perälä 2018: 289–90 n. 70). Rather, the question is what has the authority to identify flesh (as distinct from bone and sinew), and what has the authority to identify the unique essence of flesh.

<sup>118</sup> *Theaet.* 152b–c.

what authority we should call on. Aristotle's emphatic answer is that the ultimate, objective, and impartial authority with regard to modal-specific aspects of perceptual objects is the perceptive organ in a healthy condition.<sup>119</sup>

In *An.* 2.11, Aristotle seems to come closest to explaining how this authority is grounded and how it is exercised. In the following chapter, we shall explore the loose ends of this account and ask how it builds up to Aristotle's second general account of perception in *An.* 2.12.

<sup>119</sup> Cf. *GA* 5.2, 781a18–20. It is telling that there is no single passage in the *De Anima* where Aristotle would talk about 'discrimination' of common or coincidental objects (cf. n. 24). This fact confirms the observation that the notion of perceptual κρῖναι remains here closely bound to Aristotle's infallibility thesis, as it was first introduced at *An.* 2.6, 418a14–16. The only two passages in the *De Anima* where κρῖναι is used as potentially fallible are *An.* 1.2, 404b21–7, where Aristotle seems to be reporting a Platonist διαίρεσις, and *An.* 3.3, 428a1–5, where this διαίρεσις is recalled. I am, of course, not saying that Aristotle ascribed this narrow meaning to the verb κρῖναι as such. There is plenty of evidence to the contrary. See e.g. *Insomn.* 2, 460b22 where the verb is used to express a potentially false judgement on the side of the perceiver, and *Mem.* 2, 452b8, which talks about estimating the length of time. Moreover, for our purposes, a relatively weak interpretation of Aristotle's infallibility thesis is entirely sufficient (see *An.* 3.3, 428b18–19 for a qualification on Aristotle's part; cf. *Meteor.* 3.4, 375a22–8): it is sufficient for the notion of κρῖναι to work as proposed if we assume with Aristotle that the modal-specific objects are correctly perceived *in normal circumstances*, and, so, are correctly perceived for the most part. This qualification takes nothing away from the senses being the ultimate authorities in their domain (artisans, too, are sometimes hindered by circumstances that prevent them from properly actualizing their art, without this in any way undermining their status as the ultimate authorities in their respective domains).