

ARISTOTLE'S EMPIRICISM AND THE UNITY OF THE SENSES

Rosemary Twomey

Successful perception demands that the senses work in unison. For example, joint-perception, or 'cross-modal binding,' requires that we perceive sensible properties from different modalities as inhering in a single object. When I recognize that a particular dog is black and barking, the information I take in from sight and hearing must be entertained in a single psychological state; it is in virtue of that state that I grasp that a single object has both perceptible properties. Perception of differences among features of a single object similarly requires perceptual unification. It is clear, though, that the five special-senses are distinguished from each other in terms of the bodily organ each depends on and the type of perceptible object (color, sound, etc.) each is especially sensitive to. If the senses are distinct, however, the question of how they come to be unified is not an idle or trivial one. Is the perceptual faculty in fact a unity, divided only in its functionality? Or do we have five isolated and distinct senses that are unified one level up, so to speak, when brought together by thought and reason?

In *Theaetetus*, Plato accepts the second alternative: he argues that a non-perceptual act of mind grounds our ability to grasp the common-objects, i.e. properties like existence that are not special to any particular sense [186a]. This discussion comes at a crucial point in his argument against the thesis that knowledge is perception, and it leads to the rationalist conclusion that perception is not sufficient for knowledge. Aristotle, on the other hand, is driven to adopt the first alternative. In a way that accommodates the fact that non-human animals possess perception but lack thought and reason,¹ Aristotle claims that the perceptual

¹ See *De Anima (DA)* II.3; *Nicomachean Ethics (NE)* I.7.

faculty provides its own synthesis.² Commentators call the Aristotelian perceptual capacity that accomplishes this unity the ‘common-sense.’^{3,4}

In this paper, I argue that a controversial passage from *De Anima (DA)* III.2 has been misread as narrowly focused on conscious awareness. Instead, I contend, it is meant as a response to the problem presented by *Theaetetus*; here we get Aristotle’s account of how the perceptual capacity is internally unified. My reading, called the ‘Common-Sensing Reading’ (CSR), will be shown to be superior to the narrower ‘Awareness Reading’ (AR)⁵ in three main respects. First, CSR unites and provides a single explanation of joint perception, perceptual discrimination, and perception of the common-objects. Second, according to CSR it is by perception strictly so-called that we are able to fulfill these functions, so Aristotle is shown to provide a specific and substantive empiricist response to the rationalist conclusions of *Theaetetus*. Third, the puzzles that open III.2 are shown to be better motivated by a broad concern with unified perception than they are by a specific interest in conscious awareness.

1. The Legacy of *Theaetetus*

At *Theaetetus* 184b-186e, Plato argues for the rationalist conclusion that perception is not sufficient for knowledge. Given two reasonable premises, Socrates contends, it is evident

² See especially *De Sensu (DS)* 7 449a10-20.

³ The unification of the senses will not, of course, be itself a sixth sense—for if it were, it would not amount to a unity. Aristotle is very clear on this (see esp. *DA* III.1 425a13). We must be careful, then, to understand that the common-sense is not a distinct faculty. Accordingly, where possible I will talk not about the *common-sense*, which sounds like a substantive, but about *common-sensing*. For recent work on the common-sense, see Everson [1999]; Gregoric [2007]; Modrak [1987].

⁴ Aristotle rarely uses the exact Greek phrase for ‘common-sense’ (*koinē aisthēsis*). The *locus classicus*, at *DA* III.1 425a29, ascribes in-itself perception of the common-objects to the *koinē aisthēsis*. The phrase also appears at *De Memoria* 1 450a9-14, but passages that discuss the unified activity of sense often employ other phrases, including: ‘common potentiality’ (*koinē dunamis*), ‘primary sense faculty’ (*prōton aisthētikon*), and ‘the sense faculty of all things’ (*aisthētikon pantōn*).

⁵ In what follows, I will be using ‘consciousness’ and ‘awareness’ interchangeably.

that perception alone cannot determine what is true.⁶ First, Theaetetus is made to agree that strictly speaking it is not the eyes that see but *we* who see *through* (the use of) our eyes [184c-d].⁷ Second, he concedes that the objects perceived by one sense cannot be perceived by means of another sense [185a], which leads to a puzzle. We are prone to predicating the same properties to objects of distinct modalities: Socrates's first example is that, subsequent to a perception, we think both of a color and of a sound that they are. In these cases, we *seem* to perceive being (*ousia*) by sight (as when we determine that there is a color) and also by hearing (as when we determine that there is a sound). But since Theaetetus has agreed that nothing is perceptible by more than one sense, and since no one sense can claim special proprietary access to being, Theaetetus is forced to conclude that being is not in fact *perceived* at all. Socrates goes on to list several other common-objects—objects and properties that seem to be perceptible by more than one sense—including number and likeness/unlikeness [185d]. Given their underlying commitments, Socrates and Theaetetus ultimately deny that these common-objects are objects of perception.

So how do we access these qualities if not through perception? Socrates claims that the soul considers the common-objects through itself, not through the body and its perceptual organs [185e]. Since being is among the common-objects, and given that we cannot get at truth without going through being [186c], it follows that knowledge is a function of reasoning [186d] rather than of perception. Plato here endorses a type of

⁶ Plato appears to deny that perceptions have any propositional content whatsoever—it seems that it is at least partially for this reason that Plato rejects the so-called Protagorean view that perception is knowledge. On this, see Cooper [1970] and Burnyeat [1976]. Modrak [1981], however, contends that perception can contain simple judgments of the type ‘this is F’ where F is a special sensible (an object of perception, like color, that bears a special relation to a sensory modality).

⁷ For a discussion of the import of this move, see Burnyeat [1976].

rationalism: given the above assumptions, it follows that no knowledge arises from perception alone, but rather all require acts of judgment consequent to those perceptions.⁸

The thesis that the senses work in isolation and are unified by the mind has far-reaching consequences. Aristotle notices that such diverse phenomena as joint perception (*DA* 425a30-b3; *De Sensu (DS)* 449a10-20), perceptual discrimination (*DA* 426b17-23), self-consciousness (*Nicomachean Ethics (NE)* 1170a25-b5), memory (*De Memoria (DM)* 450a7-15), sleep (*De Somno et Vigilia (DSV)* 455a12-22), and dreaming (*De Insomniis (DI)* 459a11-14) require the senses to act together. According to the theory of perception found in *Theaetetus*, all of these activities will require non-perceptual (non-bodily) acts of mind.

Aristotle agrees with Plato that the special senses stand in a special relation to their objects [*DA* 418a24-26] and that the senses must converge in order to allow for joint perception and discrimination [*DA* 425a30-b3; 426b17-19]. But Aristotle shows these two facts to be consistent with empiricism by claiming that the common-sense, i.e. the unity of the senses, is a purely perceptual capacity. Much turns on the success of this argument, for the defensibility of Aristotle's empiricism hangs in the balance. Fortunately, I argue, Aristotle's underlying theory of perception is able to accommodate the common-sense's status as a power possessed by the senses in a way that doesn't invoke a sixth sense or an act of non-perceptual mind.

⁸ The original claim at 151e is that perception is necessary and sufficient for knowledge. While it is clear from the conclusion at 186e that perception will not be sufficient for knowledge, Plato's position on its necessity is more complicated. He does suggest that perception leads to (what he metaphorically calls) the "wax imprints" used in judgment [191d-e], but he also includes our own conceptions (*ennoiai*) among the causes of the imprints. Later, at 201b, he makes clear that perception is a necessary condition for *some* types of knowledge: his example is knowledge of whether someone is guilty of robbery or assault.

2. *De Anima* III.2 425b12-22

There is virtually nothing uncontroversial about Aristotle's remarks on the common-sense. For instance, some interpreters argue that the *locus classicus* [*DA* 425a14-30] addresses only the perception of the common-objects; according to that view, binding and discrimination are accomplished by some distinct unity of the senses.⁹ This interpretation is apparently motivated by the fact that the phenomena strike contemporary philosophers as disparate: we do not expect sleeping to have the same account as perception of squareness, which itself has the same account as binding. Deborah Modrak is troubled by this; she says of the diverse functions Aristotle ascribes to the common-sense: 'If there are no underlying similarities, then Aristotle's conception of the common-sense seems ad hoc at best and arbitrary at worst.'¹⁰ But CSR suggests that these functions do indeed have an underlying similarity: all require that the perceptual capacity be unified in its activity. My reading is buttressed by the fact that Aristotle discusses binding and discrimination at the same time as he introduces the metaperceptual apparatus that AR takes to be constitutive of perceptual awareness, for it is this apparatus that CSR expands to cover all cases of common-sensing.

To elaborate: after discussing perception of the common-objects and joint perception in *DA* III.1, Aristotle opens III.2 by abruptly claiming that 'we perceive that we see and hear' and introducing two *aporiai* (puzzles) he takes to follow from this fact.

Since we perceive that we see and hear, it is necessary [that it is] by sight that one perceives that one sees or by another [sense]. **[A]** But [then] the same [sense] would be of sight and of the color which is the subject [of sight], with the result that either there will be two [senses] for the same thing, or [the sense] itself will be of itself. **[B]** Yet if the sense for sight were indeed different [from sight] either there will be an infinite regress or some sense will be of itself. **[C]** So we should admit this of the first [in the series]. **[D]**

⁹ See Block [1961]; Gregoric [2006]; and especially Hamlyn [1968]. The latter unity of the senses is also taken to be responsible for the other functions just mentioned, viz. memory, sleep, dreaming, and self-consciousness.

¹⁰ Modrak [1987], 62. See also Hamlyn [1968], 207-8.

But there is a puzzle. For if to perceive by sight is to see, and if one sees color or the thing having [color], then, if one sees that which sees, that which primarily sees will have color. [E] It is clear then that to perceive by sight is not one thing; for even when we do not see, it is by sight that we discriminate darkness and light, but not in the same way.¹¹

At [A], Aristotle asserts that the capacity by which we metaperceive will have to take both sight and the color seen as its object. Moreover, he assumes at [B] that *all* perceptions will have to be the subjects of a metaperception, for it is only given this assumption that the threat of a regress follows.¹² Aristotle concludes at [C] that the best way to resolve these puzzles is to say that the same sense underpins the lower-order perception and the perception of that perception. Commentators, most of whom take ‘since we perceive that we see and hear’ to describe some type of conscious awareness,¹³ have found it difficult to account for the assumptions made by [A] and [B]. I will argue below that CSR, on the other hand, is able to organically motivate the puzzles.

As the passage continues, Aristotle worries about whether and how sight is able to see itself, since the very possibility would seem to suggest that the eye would have to be colored.¹⁴ He resolves the puzzle at [E] by claiming that the appearance in [D] is mistaken: the role played by sight in the metaperception will be importantly different from the role it plays in paradigmatic first-order perception. The difference here is one we are familiar with: Aristotle takes that familiarity to show that the *prima facie* problem that [C] introduces will have a resolution. He clarifies what he means by using the example of sight. To perceive by

¹¹ Adapted from Hamlyn [2002].

¹² This will be discussed below, see §4.

¹³ Caston [2002], Johansen [2005], and Kosman [1975] think Aristotle is addressing perceptual consciousness; Block [1961] and Hamlyn [2002] think the topic is reflective self-consciousness; Gregoric [2006] and Osborne [1983] take the issue to be the monitoring of what sense or senses are in activity.

¹⁴ “That which primarily sees” is an odd phrase, and he could have either the special-sense itself or its physical organ in mind here, but since Aristotle almost immediately references the organ [425b23-5], it is likely he is thinking of the eye.

sight is not one thing, he says. When we perceive color, we are rightly said to see. But we can perceive darkness—the absence of color—by sight, and this in spite of the fact that it does not involve the reception of color. In a way, then, we perceive darkness by *sight*, just not by *seeing*—that is, not by sight doing its special work. Aristotle thus takes himself to have shown that his perceptual apparatus is equipped to allow for the special-senses to perform the more generic work that metaperceiving requires.

Of course the fact that a phenomenon is ubiquitous does not suffice to show that it is unproblematic. We would like, then, an account of how a special-sense can engage in non-paradigmatic work while still being (in a way) that very sense. Hendrik Lorenz, in his review of Pavel Gregoric [2007], offers a promising suggestion. He analogizes the role that sight plays in perception of the common-objects to the role that being isosceles plays in accounting for the sum of an isosceles triangle's interior angles. Here Lorenz is alluding to *Posterior Analytics (APo)* I.23, where Aristotle says that it is because of something they have in common that both isosceles and scalene triangles have interior angles equal to two right angles [84b6-9]. It is not in virtue of being isosceles that the interior angles sum as they do, so the triangle's essence *qua* isosceles is not operative in the explanation of the sum.

Nonetheless, Lorenz suggests, the common figure that accounts for the sum is part of what it is to be an isosceles triangle (and also, of course, part of what it is to be a scalene triangle), and as such having interior angles that sum to 180 degrees follows from the generic nature shared by all types of triangle. Indeed, it is likely because of this shared nature that we find, in the next chapter of *APo*, that there is a demonstration from a triangle's being isosceles to its having interior angles equal to two right angles. Though the universal demonstration, which proceeds from something's being a triangle *simpliciter* to the fact that its angles equal two right angles, is said to be a better demonstration, the particular demonstration is still an

instance of a demonstration [85b7-13]. Similarly, to use the example of perception of the common-objects, while sight does not grasp squareness in virtue of being sight, it nonetheless happens that being able to perceive shape follows from the faculty's being sight, for sensitivity to shape is a consequence of the common nature of the perceptual faculty as it holds across special-senses. To extend the analogy that Lorenz presents, I suggest that the following two explanations are true but incomplete: (1) a particular triangle's interior angles equal two right angles because that triangle is isosceles; (2) I am aware of the motion of that car because I perceive it by sight. But before we can conclude that Aristotle has perception of the common-objects in mind when he invokes metaperceptions, we must consider the evidence in favor of CSR and its view on the explananda of the passage quoted above.

3. The scope of metaperceiving

If the phrase 'we perceive that we see and hear' is meant to describe the phenomenon of consciousness, as AR has it, the resolution of the puzzles will have consequences for the mechanism underlying consciousness. Accordingly, some AR theorists have read Aristotle as defending a higher-order perception model of consciousness, along the lines of D.M. Armstrong's account,¹⁵ while others have interpreted him as defending a same-order perception model similar to Brentano's.¹⁶ The turn of phrase that opens *DA* III.2, though, is at best an oblique reference to consciousness. Indeed, I will argue that it is better to understand the metaperceptual apparatus as invoked to explain common-sensing in general rather than consciousness in particular. Of course, if it turns out that consciousness is a function of the common-sense, then *ipso facto* there will be an account of consciousness

¹⁵ Armstrong [1968]. For this reading of Aristotle, see especially Johansen [2005].

¹⁶ Brentano [1995]. Caston [2002] offers this interpretation of *DA* III.2.

in the offing. But CSR differs from AR in that it can afford to remain agnostic about the relation between common-sensing and consciousness.

And, indeed, it seems there is good reason to be skeptical that Aristotle is troubled by consciousness. While the recognition of consciousness as a phenomenon has a long history in philosophy, consciousness as a *problem* is not prominent in the classical period.¹⁷ Aristotle does acknowledge conscious awareness in a variety of places, but it does not seem that he sees it as introducing added difficulties. For instance, in *Physics* VII.2, Aristotle notes that animate creatures, when altered in respect of the senses, are not unaware of being affected, and he goes on to claim that such creatures may be unaware of being affected if those affections are not alterations by means of the senses [244a15-245b1]. The introduction of modality in the latter case—non-perceptual alteration *may* escape our notice—suggests an analogous commitment in the former case: perceptual change *must not* escape our notice. Thus, on Aristotle’s view, awareness of a perception is a necessary condition for something’s being a perception in the first place.¹⁸ Accordingly, his account of perception *just is* an account of conscious perception, and there is no evidence that Aristotle views consciousness as a *sui generis* phenomenon that requires a special explanation. Indeed, the only passage where he is even alleged to give an account of awareness is the passage in question, and, I will show, there is no compelling reason to understand it in that way.

For while it is natural for modern readers to understand the phrase ‘since we perceive that we see and hear’ as an oblique reference to conscious awareness, there are other things that could equally be called to mind. In particular, CSR argues that we should understand this locution as a gloss on common-sensing in general. Consider the common-

¹⁷ Certainly there is no precedent in Plato for viewing consciousness as a problematic feature of psychology.

¹⁸ In *Metaphysics* Λ.9, he says that—unlike in the case of the divine mind—animal knowledge, perception, and thought are about themselves on the side [1074b36]. The point seems to be that the divine mind is directly aware of itself, whereas animal minds are only indirectly aware. See Caston [2002], 786-787.

sensing activity of joint perception, which Aristotle explicitly discusses just a few sentences before the passage quoted in the last section. There he says that the senses acting together are able to perceive bile as yellow and bitter in a single perceptual act [425b1-3]. But how is this possible? How does one take in such varied information, across distinct sensory modalities, and how can that information manifest itself in a single perceptual activity?

Imagine that I am trying to account for my perception of an orchestral performance. This perception involves a wide array of perceptual information, including a variety of shapes, sizes, colors, and sounds. What needs explaining is how I perceive this array as a single phenomenon. The explanation, I suggest, is that each sense, in addition to perceiving its special-objects, also has the potential to perceive those perceivings. In other words, I have, at a certain level of description, countless seeings of different colors and hearings of diverse sounds. But my sensory faculty is able to unite those perceptions in an activity that is itself a perception and therefore should be described as a perception of my perceptions.

Accordingly, the phrase ‘since we perceive that we see and hear’ is not only a natural way to refer to conscious awareness—it is also a way to describe the activity of joint perception. But for Aristotle the perception of multiple properties as compresent requires that the properties be perceived in one perceptual activity at one time.¹⁹ The metaperceptual apparatus, at this point, simply provides a way of describing the problem: it doesn’t yet provide the solution. In particular, it remains to be seen that diverse first-order perceptions can be united in a single metaperceptual act.

According to CSR, Aristotle goes on to show how a single perceptual state can have a complex content, complete with information from different sensory modalities. For he notes that perception occurs when a sensible object’s potential to be perceived and a

¹⁹ See *DS* 7 447b14-26, *passim*.

perceiver's potential to perceive are jointly actualized in one state [425b29-426a1]. Thus, a first-order perception is a single activity that can be described in at least two ways: one description focuses on the object of perception ('this is the activity of the timpani being heard') and another on the perceiver ('this is the activity of me hearing the timpani'). The same will hold of the metaperception. The perception of my hearing of the timpani (my metaperception) will be identical to the lower-order perception (the hearing of the timpani), which is in turn identical to the object's being perceived (the timpani being heard). The introduction of the metaperceptual apparatus, then, shows how a single psychological state can actualize multiple potentialities, and thereby allows for complex perceptual content. Talk of metaperceptions captures what needs to be provided for joint perception to be possible, and it does it in a way that requires only one perceptual state. Thus, Aristotle has shown that the perceptual faculty itself can account for joint perception in a way that doesn't require appeal to reason or thought.²⁰

Of course joint perception is only one of the functions of common-sensing, so my interpretation must be shown to cover its other functions, including perception of the common-objects and perceptual discrimination. Aristotle turns to perceptual discrimination towards the end of *DA* III.2, where he plausibly observes that different properties must be presented to a single subject in a single moment if discrimination is to occur [426b8-23]. In other words, discrimination also requires a unified perceptual faculty that can grasp a complex content in one activity. The possibility of a complex but numerically singular

²⁰ In order for the view to be plausible, Aristotle must not be thinking of physical change in the organs as constitutive of sensing, for in that case seeing red and hearing middle C would be in different parts of the body and therefore would be non-identical. Nonetheless, to reject that constitutive claim does not, it seems to me, commit Aristotle to denying the presence of any physical change in the organ. For a qualitative alteration of the organ could be correlated with an act of perception. Further, given our particular material constitution, that alteration *might* even prove to be a necessary condition for a successful perception. Thus, CSR can afford to remain neutral as to whether there are any such physical changes for Aristotle, though it is committed to denying that any such alteration *just is* the act of perceiving. For views that do not remain neutral, see Burnyeat [1995a], [1995b], [2001]; Caston [2005]; Sorabji [1975].

activity has already been established through appeal to metaperceptions, which have been shown to cover the case of joint perception. Accordingly, it is clear both that discrimination shares an account with joint perception, and that that account is provided by the metaperceptual apparatus.

It is less obvious how these claims relate to the perception of common-objects by the common-sense.²¹ The common-objects are those objects of perception that *seem* at any rate to be perceptible by more than one sense; it is these very qualities that Socrates claims are grasped by the mind rather than perceived through the body in *Theaetetus*. On my account, it must be equally plausible to understand ‘perceiving that we see and hear’ as a reference to the perception of the common-objects, since I have argued that Aristotle posits one faculty to cover joint perception, discrimination, and perception of the common-objects, *inter alia*.

In the concluding passage of *DA* III.1, Aristotle claims that perception of the common-objects would be harder if we had only one sense [425b4-11]. But since common-objects are perceptible by more than one sense, he continues, we are better able to tell that those objects are *different* from the special-objects of each sense. Putting this observation together with his claim that the common-sense is responsible for perceptual discrimination, we can see how the common-sense facilitates perception of those common-objects. The fact that I can both see and feel an object moving helps me to grasp motion as well as I can: it is by first perceiving that I am seeing and feeling a moving object that I am able to perceive motion and to distinguish motion from color.

²¹ Aristotle actually says that the common-sense is responsible for the “in-itself” (*kath’ hauto*) perception of the common-objects. “In-itself” is a technical term for Aristotle, and it is contrasted with “coincidental” (*kata sumbebēkos*). He does think that the common-objects are coincidentally perceived by the special-senses, so all references in what follows to perception of the common-objects should be understood as restricted to in-itself perception of those objects. For more on the in-itself/coincidental distinction as it applies to perception, see my thesis, Chapter Three.

So CSR contends that the opening phrase of *DA* III.2 ('since we perceive that we see and hear') refers not just (or perhaps not even) to consciousness, but, rather, to all functions of the common-sense: joint perception, perceptual discrimination, and perception of the common-objects, and, additionally, self-consciousness, memory, sleep, and dreaming.²² On this reading, Aristotle uses *DA* III.1 and III.2 to show that his theory has the ability to account for sophisticated perceptual activity without involving thought and reason. For given the dialectical legacy of *Theaetetus*, Aristotle cannot just assert that the perceptual faculty is able to discharge these functions: he must show *how* it can do so. The ontological simplicity of his theory of perception, where a numerically singular activity can be the actualization of many potentialities, makes it possible for Aristotle to reject Platonic rationalism.

4. The Puzzles of *DA* III.2 425b12-17

It is not enough to show that CSR provides a plausible interpretation of the opening phrase of *DA* III.2; the dominance of AR approaches necessitates that their appeal be dulled. But when the puzzles that follow Aristotle's claim that we perceive that we see and hear are taken into account, it is apparent that AR is not able to motivate them as successfully as CSR does. The first puzzle, labeled '[A]' above, reads as follows:

But [then] the same [sense] would be of sight and of the color which is the subject [of sight], with the result that either there will be two [senses] for the same thing, or [the sense] itself will be of itself.

²² There are several places where Aristotle addresses the last four phenomena. In each case, the function in question is shown to require the unified activity of the perceptual faculty. CSR claims that that unity arises from the fact that a single perceptual activity is able to actualize many and varied potentialities. The possibility of this type of complexity is highlighted and illustrated by means of the metaperceptual apparatus. See my thesis, Chapters Three and Four, for discussions of the relevant texts.

Aristotle is here understood as concerned with the faculty that is involved in the metaperception. If it is sight that sees what is seen, then sight will have to see itself, but if it is not sight, then both sight and some other sense will perceive the color. Since Aristotle agrees with Plato that the special-senses are especially concerned with their own objects, no other sense will perceive the color.²³ But a difficulty ensues only if Aristotle assumes that the metaperception must also take on the object of the lower-order perception. Many commentators have been unable to understand why he makes this assumption. Thus, D.W. Hamlyn writes:

It is not clear why Aristotle supposes this consequence to follow. He seems to assume that if I perceive by sense *Y* that I see *X*, I must therefore perceive *X* by *Y*... [O]ne can clearly be aware that one is seeing without being aware of what one is seeing.²⁴

Notice that Hamlyn's worry trades on understanding the explanandum of this section to be reflective awareness. It is this assumption that leads him to take the introspectively accessible fact that I can be aware of a perception without being aware of what it is a perception of as evidence that Aristotle is making an error. All AR readings begin with this assumption.

According to CSR, however, Aristotle is right to assume that the metaperception must contain the content of the lower-order perception. Take the example of joint perception: since we are looking for an explanation of the unified perception of the various perceptible properties possessed by, say, an orchestra, that explanation must contain those properties. If I have a metaperception that doesn't contain all of the jointly-perceived shapes, colors, and sounds of the orchestra, it will not provide an account of that unified perception.

²³ At *DA* III.1 425a30, Aristotle says 'the senses perceive each other's objects coincidentally.' Some modern commentators have criticized this feature of Aristotle, claiming that coincidental perception should not be thought of as perception at all, but, rather, as a kind of inference. See especially Irwin [1990]. I deal with this in Chapter 3 of my thesis.

²⁴ Hamlyn [2002], 112

Just as the explanation of seeing has to include reference to the objects seen, so too the explanation of joint perception must include the contents jointly perceived. The connection is so obvious that it doesn't require defense—which is precisely why Aristotle doesn't provide any.

Since AR theorists do not interpret this passage as concerned with common-sensing in general, they cannot help themselves to the motivation just suggested. Several alternative accounts have been offered. First, it has been noted that the puzzle is reminiscent of one raised in Plato's *Charmides*.²⁵ At issue in *Charmides* is the definition of temperance. At 166e-167a, Critias defines temperance as knowledge of what one knows and knowledge of what one doesn't know. The basic idea is that temperance is a quality displayed in one's approach to all activities, so it requires a second-order understanding not just of what one understands, but also of what she doesn't. At 167d-e, Socrates challenges this definition by questioning whether any faculty can have the form Critias suggests for temperance. He asks whether, in an analogous case, there could be vision that sees itself but doesn't see color.²⁶ It is accepted by all parties in the dialogue that this would be absurd, and so, it is later concluded, temperance cannot be this fairly empty kind of self-knowledge. Some commentators have read Aristotle's first puzzle as a recognition of the challenge Socrates here poses, and so have understood this passage as complicating any claim that sight can see itself without seeing color.

But the superficial similarity of the two cases does not adequately motivate the puzzle. First, note the dialectical structure of the passage. At [A], Aristotle has yet to conclude that the sense perceives itself: that conclusion awaits the troubling regress. As such, it has yet to be established that whatever it is that perceives vision is itself a type of vision.

²⁵ Caston [2002], 772; [2004b], 524-525; Gregoric [2007], 176; Sorabji [2006], 202.

²⁶ One might reasonably question how analogous this case is, but there is no doubt that it is presented as such.

The worry in *Charmides*, though, trades on reflexivity. Plato does not express a general concern with the idea of some faculty that takes seeing but not color as its object. The problem as Socrates presents it is that *sight itself* cannot see itself without seeing color. This follows, as Richard Sorabji notes, because senses are specified by their objects, so if there is no perception of color, we do not have an instance of seeing.²⁷ If Aristotle has yet to conclude that it is sight that (in a way) sees that it sees, the *Charmides* worry cannot yet arise.

Victor Caston offers an alternative explanation of the motivation for the first puzzle. He argues that while Hamlyn is right to insist that we could be reflectively conscious without being aware of the content of our perceptually-conscious states, such a possibility is beside the point.²⁸ According to Caston, if we understand the passage as providing an explanation of perceptual-consciousness rather than self-consciousness, it will be apparent that the contents of our perceptions must be a part of the metaperception. This is, it seems, the most promising avenue for AR to take. Caston's approach resembles CSR's since it holds that what Aristotle is explaining necessitates, in a straightforward sense, that the lower-order content be taken on by the higher-order perception. According to CSR, the requirement follows from Aristotle's attempt to explain joint-perception, perceptual discrimination, and the perception of the common-objects: we cannot perceive black, barking dogs without perceiving black and barking, and so on for the rest of the cases. Similarly, as it applies to Caston's lower-order perceptual awareness reading, we cannot be aware of a black dog without black figuring in the perceptual content. But while his is a possible reading, Caston's account does get stuck on the second *aporia*, as I will show below. Moreover, I would emphasize that it, like all versions of AR, covers less explanatory ground than CSR.

²⁷ Sorabji [2006], 202.

²⁸ Caston [2002], 771.

Other commentators account for the assumption that the metaperception will have to contain the contents of the lower-order perception by appealing to Aristotle's subsequent claim that the actuality of the sense is identical to that of the sensed object.²⁹ If the activity of perceiving is numerically identical to the activity of being perceived, then perceiving my perceiving will be the same thing as perceiving the object perceived. This response is inadequate, though, for Aristotle does not express a commitment to this identity until several lines *after* he sets up the puzzle.³⁰

According to CSR, this first worry is independently motivated by the fact that the metaperception is invoked to explain complex perceptual contents. The complex content, moreover, must be presented in a single state. It is for this reason, I argue, that Aristotle subsequently notes that the activity of the sense and of the sensed-object are numerically identical. Since CSR can motivate the first puzzle without appealing to something Aristotle has yet to say, and since it is also able to explain why Aristotle would say what he does, my reading has a superior account of the first puzzle.

The second puzzle, labeled '[B]' above, reads as follows:

Yet if the sense for sight were indeed different [from sight] either there will be an infinite regress or some sense will be of itself.

While Hamlyn's commentary notes that this worry is 'better,'³¹ it has struck most commentators as at least as problematic as the first. In particular, while the solution to the regress is clear, the motivation is not. Notice that no regress will follow unless it is a

²⁹ *DA* III.2 425b26-27. Gregoric [2007], 178; Kosman [1975], 514, Johansen [2005], 9, Osborne [1983], 403-404. Kosman takes the first *aporia* to follow only for the second disjunct; that is, he takes it that only if another sense is responsible for the metaperception will it follow that that sense will take as its object both sight and the lower-order perceptual object (500), whereas Johansen (8) and Osborne (401) both take it to follow no matter what faculty is responsible for the metaperception.

³⁰ Also, the identity Aristotle proposes later on in III.2 is sameness in number, not in account. Since AR interprets the metaperception as explaining awareness, and awareness introduces an intensional framework, it would seem sameness in account would be necessary to motivate the worry Aristotle is expressing here.

³¹ Hamlyn [2002], 122.

necessary fact that our perceptions are themselves perceived. If we ‘just so happen’ to have a perception that we see and hear, then there will be no expectation that we will have a perception of our perception that we see and hear, much less a perception of our perception of our perception that we see and hear. Of course once it gets going Aristotle resolves the worry by denying that a regress actually does ensue, which he does at [C]. But why does he think there is a threat in the first place? The possibility of regress arises iff the existence of the thing in question (in this case a perception) requires another thing of the same kind, which in turn requires another, and so on.

For example, the regress regarding wishing that opens *Nicomachean Ethics* [1094a18-21] only threatens because of Aristotle’s antecedent commitment to the claim that, of necessity, everything we wish is wished for the sake of something. Clearly we must also wish the end that our wish is for the sake of. So, for example, if I wish for X, I must wish it for the sake of something, say Y. Since I also wish for Y, I must in turn wish *it* for the sake of something, and so on. Applied to the case at hand, then, no regress threatens if it is merely a contingent fact that we perceive that we see and hear. In other words, the threat of a regress is predicated on the presupposition that *all* perceptions, not just lower-order seeings and hearings, must themselves be perceived: in order for the perception to exist, it must rely on another thing of the same type, i.e. another perception. Why would Aristotle assume that all perceptions must themselves be perceived?

CSR again provides a straightforward justification for this assumption. Since our perceptual experience of the world always involves higher-order perceptual activities like joint perception and discrimination, common-sensing must occur whenever we perceive. But if there are multiple simultaneous activities of the common-sense, the metaperception will

not provide the required unity, and we will, accordingly, need another higher-order state to unify the activities of the common-sense. In this case, regress will ensue.

AR, on the other hand, is not well-positioned to account for the assumption that all of our perceptions must themselves be perceived. All AR views, despite substantial disagreement in the details, hold that the metaperception is the mechanism that makes us aware of some perception or other. On the AR view, then, Aristotle is here worrying himself over a regress that, were it to go through, would make us aware of an endless number of perceptual states. Furthermore, he is concerned to do so because he assumes that being aware of any perception somehow *requires* us to be aware of endless states.³² The implausibility of such a conclusion undermines the reasonableness of the initial assumption: why wouldn't Aristotle choose to deny that all of our perceptions must be perceived rather than accept the possibility of regress? AR theorists owe us an account as to why Aristotle would accept the possibility, but none succeeds.

Victor Caston, for instance, suggests that while we can find no compelling independent reason for the assumption, it is clear that Aristotle is committed to the general principle that we perceive all of our perceptions. He says: 'Aristotle may view it ... as an acceptable generalization of the opening of the chapter, when he claims that we perceive that we see and hear.'³³ For support he turns to *NE* IX.9 1170a29ff, where Aristotle claims that there is something in us that perceives all of our activities. Caston does not explicitly endorse the generalized claim as found in our current passage (indeed, he notes that it is 'obviously

³² Johansen [2005] sees the regress problem as following even though he thinks that the metaperception is contingent, but Kosman [2005]'s reply rightly notes, for reasons like those just discussed, that the metaperception has to be necessary in order for a regress to threaten.

³³ Caston [2002], 774.

controversial³⁴), but he does take the *NE* reference as sufficient to show that Aristotle is so committed.

I have already addressed the claim that the regress could be motivated by extrapolating from an otherwise contingent fact that we perceive that we see and hear. For while it might at first look like an acceptable generalization, the threat of regress would certainly have led Aristotle to reject the broadened form were that broadening not independently motivated. Instead, Aristotle must be committed to the necessity of metaperception. Unlike AR, CSR is able to motivate that commitment: insofar as the perceptual state is meant to supply unification, a regress threatens until there is just one perceptual activity that encompasses all of the lower ones. CSR, then, is able to account for both puzzles, while AR has to rely on under-motivated assumptions in order to get the worries off the ground.

5. Support for CSR in *De Somno*

While the arguments given above get their support from *De Anima*, Aristotle does discuss the functions of common-sensing in other works, several of which provide further evidence for CSR. Most notably, in *De Somno* (*DSV*) 2, Aristotle ascribes responsibility for sleep and waking to a common potentiality that unifies the special-senses:

Since each sense has something special as well as something common—for example, seeing is special to sight, and hearing to the sense of hearing, and similarly for each one of the other senses, there is some common potentiality accompanying all of them by which one also perceives that he sees and hears—for certainly it is not by sight that one sees that one sees, and certainly one discriminates, and is capable of discriminating, that sweet is different from white neither by taste nor by sight nor by both, but by some common part of all sense-organs; for this is a single sense, and its proper sense-organ is one.³⁵

³⁴ Ibid., 775. I discuss the *NE* passage at length in Chapter Four of my thesis.

³⁵ 455a12-21. Adapted from Ross [1955].

Here Aristotle is invoking the common-sense: he lists several of its functions, including perceptual discrimination, and he observes in this context that the perceptual faculty is a single thing, i.e. it is unified. Moreover, his description of the special-senses as having both special- and common-work harkens back to the resolution of the puzzles of III.2. There he says that to perceive by sight is not one thing. Though we perceive color by sight, we can also perceive a lack of color, i.e. darkness. This activity is not an act of sight strictly so-called, since it is not sight doing its own special work, but the ability to grasp darkness nonetheless depends on that special-sense.

Given that Aristotle explicitly discusses common-sensing in the *DSV* passage, it is suggestive that he observes that this common potentiality is responsible for perceiving that one sees and hears. While AR theorists would have it that Aristotle is just mentioning yet another function of the common power in question, viz. awareness, CSR has a contrary understanding of the import of this reference to metaperceiving.

According to CSR, it is not the case that Aristotle is here talking about another *function* of the common sense. Rather, he is talking about *how it is that this common power manages to perform all of its functions*, which includes the discrimination mentioned above and is here extended to sleep and waking. The fact that Aristotle uses an instrumental dative supports this interpretation: it is *by* perceiving that we perceive that the functions of common-sensing are accomplished. Here Aristotle says that the common-sense is able to provide the means by which we discriminate, and by which we sleep and wake, in virtue of the fact that it has the potentiality to perceive our perceptions, and these functions are performed because that potentiality is actualized whenever we are perceiving.

We have, then, evidence from across the corpus that Aristotle does not merely assert that the perceptual capacity is unified: he also explains how that unification is consistent with his overall perceptual apparatus. The metaperceptions that allow for common-sensing explain a seemingly motley collection of capacities, but we have seen that these capacities are importantly similar in that each requires that the perceptual capacity and its special-senses operate in unison. I have argued that this unity can, given Aristotle's picture, be accomplished by a single activity of the perceptual system, and I have shown that the activity is best understood as a type of metaperception.

Of course one may choose to reject Aristotle's perceptual apparatus. There is a lesson to be learned either way. Aristotle and Plato both think that functions that involve more than one sense stand in need of a special account. Such activities include joint perception, discrimination, perception of the common-objects, and sleep and waking, to name a few. If the unity of the senses turns out to be a part of the perceptual faculty, as it is for Aristotle, then a broadly empiricist picture will follow. If, on the contrary, it takes an act of thought or reasoning to bring together the perceptual contents and thereby synthesize them, Plato's rationalist conclusions follow. In any case, there is a plausible argument to be made for the claim that, *contra* contemporary intuitions, these many and varied psychological activities introduce the same problems and therefore demand parallel solutions.

Bibliography

- Armstrong, David [1968], *A Materialist Theory of the Mind* (New York: Routledge).
Block, Irving [1961], 'The Order of Aristotle's Psychological Writings,' *American Journal of Philology* 82:1, 50-77.
Brentano, Franz [1995], *Psychology from an Empirical Standpoint* (New York: Routledge).
Burnyeat, Myles [1976], 'Plato on the Grammar of Perceiving,' *The Classical Quarterly*, 26:1, 29-51.

- _____ [1995a], 'Is an Aristotelian Philosophy of Mind Still Credible?', in Nussbaum, Martha, and Amelie Oksenberg Rorty, eds. *Essays on Aristotle's De Anima* (New York: OUP).
- _____ [1995b], 'How Much Happens When Aristotle Sees Red and Hears Middle C?', in Nussbaum and Rorty, eds.
- _____ [2001], 'Aquinas on "Spiritual Change" in Perception,' in Perler, Dominik, ed. *Ancient and Medieval Theories of Intentionality* (Leiden: Brill).
- Caston, Victor [2002], 'Aristotle on Consciousness,' *Mind* 111:444, 751-815.
- _____ [2004], 'More on Aristotle on Consciousness: A Reply to Sisko,' *Mind* 113:451, 523-533.
- _____ [2005] 'The Spirit and the Letter: Aristotle on Perception,' in Salles, Ricardo, ed., *Metaphysics, Soul, and Ethics in Ancient Thought: Themes from the Work of Richard Sorabji* (Oxford: Clarendon Press).
- Cooper, John [1970], 'Plato on Sense-Perception and Knowledge (Theaetetus 184-186),' *Phronesis*, 15:2, 123-146.
- Everson, Stephen [1999], *Aristotle on Perception* (New York: OUP).
- Gregoric, Pavel [2006], *Aristotle on the Common Sense* (New York: OUP).
- Hamlyn, D.W. [1968], 'Koine Aisthesis,' *The Monist* 52: 195-209.
- _____, ed. [2002], *Aristotle: De Anima* (New York: OUP).
- Irwin, Terence [1990], *Aristotle's First Principles* (New York: OUP).
- Johansen, T. K. [2005], 'In Defense of Inner Sense: Aristotle on Perceiving That One Sees,' *Proceedings of the Boston Area Colloquium in Ancient Philosophy* 21.
- Kosman, L.A. [1975], 'Perceiving that We Perceive: On the Soul III,2,' *The Philosophical Review* 84: 499-519.
- _____ [2005], 'Commentary on Johansen,' *Proceedings of the Boston Area Colloquium in Ancient Philosophy* 21.
- Lorenz, Hendrik [2009], '[untitled],' review of Pavel Gregoric's *Aristotle on the Common Sense*, *Rhizai* VI.2, 225-231.
- Modrak, Deborah [1981], 'Perception and Judgment in the "Theaetetus,"' *Phronesis*, 26:1, 35-54.
- _____ [1987], *Aristotle's Theory of Perception* (Chicago: University of Chicago Press).
- Osborne, Catherine [1983], 'Aristotle, De Anima 3.2: How Do We Perceive That We See and Hear?' *Classical Quarterly* 33: 401-411.
- Ross, W.D., ed. [1955], *Aristotle: Parva Naturalia* (Oxford: Clarendon Press).
- Sisko, John E. [2004], 'Reflective Awareness *Does* Belong to the Main Function of Perception: Reply to Victor Caston,' *Mind* 113:451, 513-521.
- Sorabji, Richard [1975], 'Body and Soul in Aristotle,' in Barnes, Jonathan, et al., eds., *Articles on Aristotle, Vol. IV* (London: Duckworth).
- _____ [2006], *Self: Ancient and Modern Insights about Individuality, Life, and Death* (Chicago: University of Chicago Press).