

ARISTOTLE ON PERCEPTUAL CONTENT

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THERE IS A CERTAIN TENSION in Aristotle’s theories, at least *prima facie*, between the nature and role of perception. Aristotle gives a prominent role to perception not just in the acquisition of knowledge, but also in the explanation of human action and the behavior of animals more generally.¹ All animals, including humans, move in the ways they do at least in part because they perceive the world to be a certain way: they are able to survive and to flourish, to extent that they do, because they can respond to relevant features of their environment (*DA* 3.12, 434b16–18). In addition to perceiving objects as crimson or spicy, and as darting rapidly or far away, animals must also be capable of perceiving objects as threatening or tasty or enticing, not to mention the more complex object recognition and even the social categorization some animals are capable of, such as when a horse recognizes his rider or I see the son of Diareos approaching. In Aristotle’s view, it is precisely because the senses “report many distinctions” (*πολλὰς εἰσαγγέλλουσι διαφοράς*) that perception is for the sake of survival and, in the case of higher animals, for well-being too (*σωτηρίας ἕνεκεν ... οὐ ἐὶ ἕνεκα*, *Sens.* 1, 436b12–437a9).² Perceptual content thus needs to be fairly rich already, even before we consider the

1. This emphasis on animal behavior, and what is required of Aristotle’s psychology if it is to provide an explanation of it, is one of the important and lasting contributions of Martha Nussbaum’s early essay, “The Role of *phantasia* in Aristotle’s Explanation of Action” (Nussbaum, 1978, #37339) even though her concern there is primarily with *phantasia* and its relation to perception, rather than just perception alone, which will be my focus. It is a special pleasure to dedicate this essay to Martha, in recognition of both this and her many contributions to the field, but for me still more as a former colleague and long time friend.
2. ‘Report’ (*εἰσαγγέλλουσι*) occurs at 437a2 and a6, and implicitly at a9–11. For the general role of perception in promoting the survival and well-being of the animal, see also *DA* 3.12, 434b11–27; 3.13, 435b19–24.

critical role Aristotle assigns it in scientific inquiry and ethical deliberation.³ Perception must inform an animal about features of the environment that are *significant* for it, even animals with a very crude and limited behavioral repertoire.

Yet Aristotle's official account of perception appears somewhat meager in this regard, since it is not clear on his view how we perceive the relevant *range* of things. His explanation of the causal mechanisms involved in perception seems to apply primarily to those things which are intrinsically perceptible (*καθ' αὐτὰ αἰσθητά*) to a single sense exclusively (*ἴδια*), namely, sensible qualities like colors, tones, odors, flavors, heat and moisture. Each falls between a pair of contraries, such as white and black or hot and cold, and as such is able to stimulate the relevant perceptual organ in the relevant ways.⁴ Aristotle apparently intends his account of this type of perception to provide some sort of basis for all the rest. But he can hardly be said to work this out systematically or in detail. How on his view do we perceive features like shape or motion, which are also intrinsically perceptible, but shared (*κοινά*) by more than one sense? More importantly, how do we perceive anything that is extrinsically perceptible (*κατὰ συμβεβηκὸς αἰσθητά*), which includes much of what is necessary for the explanation of behavior, such as being dangerous or nourishing, or even human? This difficulty is sufficiently great that some interpretations regard this last group as "indirect" perceptions, while others deny that they are strictly perceptions at all.⁵ But while there are no doubt differences in the causal mechanisms underlying these different cases, Aristotle seems to regard them all as genu-

3. See, e.g., *Cael.* 3.7, 306a16–17 [[ADD NE REFERENCES]]

4. Exactly how we are to understand this interaction is itself a matter of some controversy (on which see my [%Caston, 2004, #40374]). My only point here is that this is the *best* understood case in his theory.

5. [[ADD REFERENCES Not strictly perception at all: Ross. Indirect perception: {McKirahan, 1992, #10951}, 254. One source of this tendency may come from misconstruing *κυρίως αἰσθητά* at *DA* 2.6, 418a24–25 as 'strictly perceptible' (e.g., {Everson, 1997, #31390}, 18), rather than 'pre-eminently' or 'primarily perceptible,' as Aristotle's technical usage requires.]]

ine forms of perception. The challenge facing the interpreter, then, is not only to uncover the underlying mechanisms, but to find the sense in which each can be regarded as a genuine form of perception.

This first worry suggests another, more fundamental one. Bracket the question of *how* animals are able to perceive the variety of things they manifestly can. Is it the case, according to Aristotle, that whenever we perceive, we perceive *that* some object is *F* or perhaps perceive it *as F* (for some value of *F*)? Could a perception in fact have such content independent of conceptual activity? This problem applies across the entire range of perceptibles: it arises just as much for a sensible quality like green as it does for curly or poisonous.⁶ It is most acute for nonhuman animals, who are incapable of reasoning and inference on Aristotle's view, and even more fundamentally of forming beliefs, since they do not possess concepts.⁷ He does allow that things appear (*φαίνεσθαι*) to animals in various ways and that something like "experience" (*ἐμπειρία*) can develop in animals that have memory. But it is still unclear how we should understand the content of the perceptions themselves.⁸

This second worry is not limited to lower animals, though. In many places, Aristotle seems to endorse a Platonic dichotomy between the objects of perception and the objects of knowledge, where perception is directed exclusively at particulars and knowledge at univer-

6. Thus, even if Everson were right that animals need not detect food *as food* (Everson, 1997, #31390, 14 n. 5, 164), it seems they would still have to perceive things *as* dry or moist and hot or cold, at the very least (*DA* 2.3, 414b6–9). But the behavior of most, if not all, animals will require more than this for Aristotle.

7. See n. XX below.

8. The question of animal cognition in antiquity and the pressures it places on theories of cognition more generally is one of the central themes of Richard Sorabji's Townsend Lectures (Sorabji, 1993, #27640), which are characteristically rich and wide-ranging, and from which I have learned an immense amount. Although we differ on certain points of detail, I regard my approach in this paper as broadly sympathetic and complementary, since I concentrate more directly on the question of perceptual content in humans.

sals. But then it looks like no one can, strictly speaking, *perceive* something as belonging to a kind, even animals who have conceptual abilities like humans, since perception itself does not seem to involve kinds in any way. According to one recent line of interpretation, this is not strictly a function of perception, but is due to the further operation of what Aristotle calls “*phantasia*.” On this view, we can be said to perceive an object, however it is described. But it will not follow that we recognize it *as such* in the perception. To account for our recognizing it *as* belonging to a certain type, more is needed than perception itself strictly can provide.⁹

Traditionally, it has been the first worry, about the range of perceptible characteristics, that has been more visible. The idea that all knowledge ultimately rests in some way on the perception of sensible qualities, like white or sweet, is a controversial epistemological strategy, which will not sit easy with many people. But Aristotle’s view faces far more crippling difficulties if it cannot account for the fact that animals perceive things *as* white or *as* sweet. In

9. An early adumbration of the view can be found already in Ross (Ross, 1949, #44567), who thinks that this sort of view is suggested by passages in *De anima* 3.3 (428a24–b9, b18–30): “[S]ensation would accordingly be reduced to the level of a mere passive affection which has to be interpreted by *φαντασία* before it can give any information or misinformation about objects.” (143) But Ross goes on to characterize this suggestion as a “reversal of his doctrine of sensation” and doubts whether it “represent[s] his deliberate view.” (143).

The most well known proponent of this view, though, is surely Nussbaum: “... *phantasia* is the faculty in virtue of which the animal sees his object as an object of a certain sort, so that we can say the perception has for him some potentially motivating content ... *aisthêsis* is, by itself, insufficient to present the object in such a way that the animal is moved to act” (Nussbaum, 1978, #37339), 255–56). And again: “it is because of the passive character of Aristotelian *aisthêsis* that a further faculty is required to explain the agent’s selective fastening on certain aspects of the environment ... it is because of the prevalence of the passive picture ... that Aristotle is forced to turn to *phantasia* in a number of passages to explain the agent’s selective interpreting of his environment.” (257–58; cf. also 231, 233–34, 240–41, 246). Her view is complicated by the fact that she views the capacity for perception and for *phantasia* as a *single* capacity, described in two different ways (235–36, 255–56, 261, 268); but certain functions are ascribed to this faculty solely under its description as *phantasia*.

For a more recent version of this view, see Everson (Everson, 1997, #31390), 190–93, 227–28), who is broadly sympathetic to Nussbaum’s interpretive approach, even though he criticizes details of her account (159–65).

this paper, I will concentrate on this second, deeper worry, since if there is no solution to it, the first is completely moot. To see how the second worry is to be dissolved, though, it will be important to see exactly where other approaches break down.

I will begin by chasing the cat up the tree, by examining passages that seem to commit Aristotle to a kind of “Two World” theory, in which particulars are the exclusive objects of perception and universals the exclusive object of knowledge (§1), and then considering a purely extensionalist interpretation which attempts to defend this dichotomy (§2). Then I will gradually try to coax the cat down again, by showing how this sort of approach, even when amended in various ways, is unable to account for several key features of Aristotle’s theory of perception (§§3–5). His theory, I shall argue, presupposes that perception, in all its forms, takes its object on each occasion as belonging to some kind, that taking an object to be a certain sort of thing is *essential* to perception as such. As Aristotle articulates this assumption and defends it as part of his overall epistemological framework, perception can be seen to have a *de re* content, which exhibits both extensional and nonextensional features (§6). It also commits him to a certain view about nonconceptual content as well (§7). On this basis, we can offer more precise reconstructions of the central notions in Aristotle’s theory of perception (§8).

1. We perceive particulars, not universals

Perception, Aristotle says on various occasions, is “of particulars” (τῶν καθ’ ἕκαστον).¹⁰ In one way, this is entirely unremarkable. Plato conspicuously identifies perceptibles as particulars,¹¹ and as an heir to this legacy Aristotle often uses these terms indifferently.¹² But in the contexts that interest us he is not deploying them in the service of some large-scale metaphysical agenda. He is concerned primarily with our cognitive abilities and their scope or reach. To say that perception is “of particulars” is to make a general claim about which sorts of things can be perceived and which cannot. Aristotle develops this point explicitly in *Posterior Analytics* 1.31.¹³ Whenever one perceives, he says,

one necessarily perceives a *this* in a particular place in the present.¹⁴

The phrase “a this” (τόδε τι) signifies here, as it often does in Aristotle’s works, a single thing

10. *APo.* 1.18, 81b6; 1.31, 87b38; 2.19, 100a17; *Phys.* 1.5, 189a5–8; *DA* 2.5, 417b22; *NE* 6.11, 1143b4–5; cf. *Metaph.* A 1, 981b10–11; *NE* 3.3, 1112b33–1113a2; 7.3, 1147a25–26. Although Aristotle often uses καθ’ ἕκαστον for particulars, he doesn’t always, as John Cooper has rightly insisted: on occasion Aristotle also uses it for determinate kinds or species, in contrast to the genera to which they belong ([Cooper, 1975, #82032], 28–32, esp. nn. 30–31). But to pose the difficulty discussed in this section, it is important to take it as referring to particulars, as is widely assumed, and in many of these cases it is evident that Aristotle does have in mind perceiving individual particulars. But if it turns out that perception can also be of definite species (as Cooper himself argues is the case with certain inductions, 29), it will only lend further support to the position I am ultimately arguing for in this paper. [[REVISE?]]
11. This is clearest where Plato is contrasting the “many” perceptible particulars with the true objects of knowledge, which are not sensible. [[Plato on sensible particulars: Phaedo, Republic, Timaeus.]]
12. *APr.* 1.27, 43a27; *DA* 2.5, 417b27–8; *MA* 1, 698a12; *Metaph.* B 4, 999b1–3; Z 15, 1039b28; Z 16, 1040b31–32; M 2, 1077a6; M 4, 1078b36–1079a1; M 9, 1086a37; *Peri ideôn*, 79.17, 81.28 (in mss OAC); cf. *APo.* 1.13, 79a2–6; *NE* 4.5, 1126b3–4; though contrast *Metaph.* Z 10, 1036a2–3. On one occasion, Aristotle explains the connection between the two by appealing to matter: “given that the heaven is perceptible, it should be a particular, for in general every perceptible is in matter” (ἐπεὶ οὖν ἐστὶν ὁ οὐρανὸς αἰσθητός, τῶν καθ’ ἕκαστον ἂν εἴη· τὸ γὰρ αἰσθητὸν ἅπαν ἐν τῇ ὕλῃ ὑπῆρχεν, *Cael.* 1.9, 278a10–11).
13. The discussion of this passage here is intended only to be aporetic. We will return to it again for a closer and more positive examination in §6 below.
14. 87b29–30: ἀλλ’ αἰσθάνεσθαί γε ἀναγκαῖον τόδε τι καὶ ποὺ καὶ νῦν.

which at any particular time is in a particular place, something isolable and nonrepeatable.¹⁵ His point is not simply that perception is anchored to the here and now, unlike thought, or memory and expectation.¹⁶ It is that *what* one perceives, the *object* of perception, is always a particular. Aristotle immediately draws the corollary for universals:

It is impossible to perceive what is universal and holds across all cases, since it is not a this or in the present. For that would not be universal. We call “universal” that which holds in every instance and on every occasion.¹⁷

Both claims are apodeictic and plainly meant to express something about the nature of perception. They can easily be put together as follows: necessarily, whenever a subject *S* perceives,

1. *S* perceives a particular
2. *S* does not perceive a universal.

The objects of perception thus cleanly fall on one side of the dichotomy between particulars and universals.

The intended contrast here is with knowledge (*ἐπιστήμη*), as Aristotle directly proceeds to make clear:

15. For a useful discussion of the meaning of the phrase *τόδε τι* and its semantic range in Aristotle, see {Gill, 1989, #7680}, 31–4, who also comments on earlier discussions in {Smith, 1921, #46397}, 19 and {Frede and Patzig, 1988, #14178}, 2.15. She rightly cautions that the phrase does not always indicate something particular, as it plainly does here, but in some contexts only something definite or specific. See also n. XX below. [[CHECK LEAR 1987, 169–71; Scott, 154 n. 10]]
16. On the requirement that the object of perception be present contemporaneous with the perceiving of it, see *Mem.* 1, 449b13–18, b27; *DA* 3.2, 425b26–426a26 (esp. *ἄμα* at 425b31 and 426a17); cf. *Rhet.* 1.11, 1370a33. Memory (*μνήμη*) and expectation (*ἐλπίς*) are directed at past and future objects, respectively (*Mem.* 1, 449b10–13, b24–28; cf. *Rhet.* 1.11, 1370a29–35). Thought similarly does not require the presence of an external object: *DA* 2.5, 417b23–25.
17. 87b30–33: *τὸ δὲ καθόλου καὶ ἐπὶ πάντων ἀδύνατον αἰσθάνεσθαι· οὐ γὰρ τόδε οὐδὲ νῦν· οὐ γὰρ ἂν ἦν καθόλου· τὸ γὰρ ἀεὶ καὶ πανταχοῦ καθόλου φημὲν εἶναι.* Cf. 87b33–4, 88a2.

For while one necessarily perceives a particular, knowledge occurs by apprehending the universal.¹⁸

Elsewhere, he puts it even more simply: knowledge is “of universals” (τῶν καθόλου).¹⁹ Part of the motivation here is straightforward. Knowledge is more comprehensive than perception, as it concerns general patterns and common features which extend beyond any given object of perception. But Aristotle goes even further. He makes the additional and surprising claim that knowledge is also *not* “of particulars.” It cannot provide the grasp of particulars that perception does. In fact, Aristotle argues earlier in the *Posterior Analytics* that someone who lacked perception could not generalize from particular cases (ἐπαχθῆναι) in the first place, *because* (γάρ) it is perception instead which is “of particulars” (τῶν καθ’ ἕκαστον, I.18, 81b5–6). For, he continues,

it is not possible for it to acquire knowledge of them.²⁰

These two claims are again apodeictic and can be framed in a parallel fashion; necessarily, whenever a subject *S* knows,

3. *S* does not know a particular
4. *S* knows a universal.

Together, these four claims allow Aristotle to distinguish perception and knowledge by refer-

18. 87b37–9: αἰσθάνεσθαι μὲν γὰρ ἀνάγκη καθ’ ἕκαστον, ἢ δ’ ἐπιστήμη τῷ τὸ καθόλου γνωρίζειν ἔστιν, reading τῷ with most manuscripts. If Ross is right to prefer τὸ with Marc. 201, Aristotle’s claim is even stronger: knowledge would just *be* the apprehension of a universal.

19. *DA* 2.5, 417b23; *Metaph.* M 10, 1087a10–11; cf. *Phys.* I 5, 189a5–8. But see n. XX below.

20. 81b6–7: οὐ γὰρ ἐνδέχεται λαβεῖν αὐτῶν τὴν ἐπιστήμην. I punctuate the passage with Ross, so that αὐτῶν here refers back to τῶν καθ’ ἕκαστον in the previous line, against Barnes (XXXX, 168–9), puts in a full stop between them. I take the résumé of the chapter to begin, not with οὐ γὰρ ἐνδέχεται at a6, but with οὔτε γὰρ ἐκ τῶν καθόλου at a7. [[ADD *Metaph.* B 6, 1003a13–15: “but if they [sc. the principles] are not universal but particulars in kind, they will not be knowable, since the knowledge of everything is universal” (εἰ δὲ μὴ καθόλου ἀλλ’ ὡς τὰ καθ’ ἕκαστα, οὐκ ἔσονται ἐπιστηταί· καθόλου γὰρ ἢ ἐπιστήμη πάντων).]]

ence to their objects, effectively pigeonholing them with the dichotomy between particulars and universals:

	particulars	universals
knows	—	✓
perceives	✓	—

A Two Worlds theory?

This sort of dichotomous approach is reminiscent of one which is often attributed to Plato and thought to raise the specter of a “Two Worlds” theory. In passages such as *Republic* V 476E–480A and *Timaeus* 27D–28A and 51E–52B, Plato distinguishes knowledge (*ἐπιστήμη*) and belief (*δόξα*) on the basis of a distinction between their objects which is strikingly similar: the objects of knowledge are universal Forms, while the objects of belief are sensible particulars. If these attitudes are directed to their respective objects *exclusively*, then they seem to be concerned with two entirely separate realms, one eternal and unchanging, the other transient and changing. The problem is not simply that this opens up a metaphorical divide, which must somehow be crossed if we are to progress towards knowledge. The difficulties are more fundamental. On such a view, it will not be possible to stand in both attitudes to the same things: nothing that can be believed can be known, and nothing that can be known can be believed. There is no overlap between them—they are just clean different things. Worse, the content of each would be unrecognizable. Beliefs could not involve universals or types in any way, nor knowledge particulars. Both of these results conflict with ordinary ascriptions of

these attitudes. However sceptical one is about the possibility of attaining knowledge, we ordinarily think that we can manage beliefs about objects of knowledge. Even Plato's Socrates does, when he disavows knowledge of the Form of the Good and offers his beliefs instead (*Rep.* VI, 506CD; cf. 509C). Our beliefs about sensible particulars often concern the general features we take them to share in common. It is part of their content, whether or not those beliefs are well-founded in reality. But such content is ruled out from the start on the sort of theory presently under consideration, in favor of contents that seem to form no part of our phenomenology. It is hard to see how on this sort of theory we could have a foot in either world, so to speak, much less straddle between them as we seem in fact to do.

The question for us is not whether Plato is committed to such a view. Obviously, it is a matter of controversy how best to read these passages, and Two Worlds readings can and should be questioned.²¹ The point is rather that *Aristotle* appears to be committed to something similar as regards perception and knowledge. For the difficulties just raised do not depend on features peculiar to Plato's philosophy, such as his conception of Forms or the fact that his distinction is formulated in terms of belief rather than perception. If the division between the objects of two attitudes is strictly dichotomous—as Aristotle takes the division between universals and particulars to be (*De interp.* 7, 17a38–b1)—and the content of these attitudes on any given occasion is *exhausted* by identifying their objects, then the same problems arise: the contents of these two attitudes can never overlap and neither attitude can be about a given particular exemplifying a common feature of any kind. Not only would the content of knowledge have to be general through and through, but perceptions would have to be somehow exclusively about particulars. Yet if it is impossible to perceive a particular as

21. [[ADD REFERENCES to Two Worlds readings.]]

being of a certain type, not even the simplest qualitative information about our immediate environment can be conveyed. Our earlier worries about the *range* of characteristics that can be perceived by the senses would never even get out of the starting blocks.

It is clear, in fact, that Aristotle is willing to qualify half of this division, concerning knowledge. He fully recognizes that one can know whether a given particular is subsumed under some type or generalization (*APr.* 2.21). Such an ability is crucial for explaining the application of knowledge to one's present circumstances, whether it be ethical knowledge or technical expertise, and correspondingly for explaining various failures, where we do not recognize a case as being subsumed under a general rule.²² Exactly how this is possible, and to what extent it involves the cooperation of other faculties like perception, is not our present concern. What matters is that (3) above is not correct as stated—it does not represent accurately Aristotle's considered view. Even if knowledge always involves the grasp of a universal, as (4) claims, and even if there are some cases where it *only* involves the grasp of universals, there are also other cases that involve particulars as well.

On the other hand, it does not follow that such flexibility extends to perception and a corresponding revision of (2). It may be that for Aristotle subsuming particulars under universals is not something that belongs to perception proper, especially in lower animals that lack general concepts. He might take a view like the one Plato advances in *Theaetetus* 184–86 or expressed in Cicero's *Academica* 2.21, that it is some further faculty, beyond perception, whose content combines particulars and universals, so that we do not have such contents

22. [[*Metaph.* M 10, 1087a14–18; *DA* 2.5, 417b26–8. DISCUSSION OF *APr.* 2.21 as well as accidental ignorance in practical circumstances. It is clear in *APost* 1 31, 87b35–9 that we cannot know facts about triangles just by perceiving.]]

from the senses themselves, but only by means of them.²³ If Aristotle cleaves to the simply dichotomy expressed in (1) and (2), much of the content we associate with perceptual experience would have to be due to other cognitive faculties. The content of perception, taken strictly, will be exceedingly meager.

Could Aristotle have accepted such a view? Charity might incline us to think not. But such views, as we have just seen, are not without precedent elsewhere in the tradition. A useful way to proceed, then, is to see how far Aristotle can get if he were to rely solely on the dichotomy stated in (1) and (2). For if it turns out to be inadequate, we will be able to specify where it falls short and so identify the key requirements of his notion of perceptual content.

2. Object readings

On what I will call “object readings,” particular objects are the sole and exclusive concern of perception. Start with a simple version of the view, where reports of perceptual activity have the following form

(A) *S* perceives *x*

where ‘*S*’ and ‘*x*’ are to be replaced by singular terms for the perceptual subject and object respectively. At this stage, we can leave open what sorts of particulars are recognized on this theory, whether they are “thick” concrete particulars, like Socrates or the tree in the quad, or “thinner” particulars, such as color patches or fragrances. According to (A), perception is to be understood *relationally*: whenever someone perceives, there is some particular to which the subject stands in relation. It does not matter how the object is specified in the perceptual report, since on this reading Aristotle is not concerned with what *kind* of particular is perceived,

23. [[Note on Burnyeat, Plato on grammar of perceiving.]]

but which *one*. So long as an expression succeeds in picking out the relevant object (and similarly for the subject that perceives it), the resulting statement will be true. It is simply a question of securing the right denotations, and not the linguistic means used to achieve this. On this reading, the verb ‘perceives’ is construed *purely extensionally*: we can substitute any coreferential expression for any singular term in the report without affecting its truth value.

From this core notion, we can easily derive related notions. The most important for Aristotle’s theory is the general category of a “perceptible” (*αἰσθητόν*): something is perceptible just in case it is possible for some subject to perceive it.²⁴ This should be understood as likewise ranging over particulars exclusively in line with (A), so that Aristotle would accept every instance of the following schema

(P) x is perceptible *iff* x can be perceived

where ‘ x ’ is to be replaced by any singular term.²⁵ Obvious variants of (A) and (P) can also be constructed for each of the sensory modalities, which Aristotle would equally endorse.

Neither type of schema taken in itself is objectionable. Perceptual locutions can be used purely extensionally in Greek as well as English. The question before us, though, is not about ordinary usage, but Aristotle’s *theory*. He certainly regards perception as a relation to an object. But is a purely extensional notion sufficient to make sense of his theoretical claims about perception? On one recent suggestion it is, at least in the critical case of perceiving extrinsic

24. Whether something is perceptible does not depend on whether there are actually perceivers who can perceive it, since Aristotle believes that there would be perceptible objects even if there were no perceivers at all: *Categ.* 7, 7b35–8a12 (cf. 7b22–35); *Metaph.* Γ 5, 1010b30–1011a2; cf. *DA* 3.2, 426a20–26. [[INCLUDE SMALL MAGNITUDES IN SENS.??]]

25. For ease of exposition, I omit the reference to a subject here, although it should always be understood: the expression ‘ x can be perceived’ can always be expanded to ‘it is possible that there is a subject that perceives x ’. On the scope of the modal operator, see n. XX above.

perceptibles.²⁶ On this sort of view, any richer notion of perceptual content will depend on resources such as *phantasia*, which go beyond perception taken strictly just on its own.²⁷

In the following sections, I shall argue against such an approach. Object readings face at least three obstacles in trying to accommodate distinctive features of Aristotle's account. Some of these can be met by introducing modifications to the simple, purely extensional view just given above. But no object reading is in a position to handle them all.

3. The need for generalizations over contents

The first obstacle turns on the *generality* required of theoretical explanations. In his theory of perception, Aristotle repeatedly makes generalizations about the *types* or *sorts* of things can be perceived and their various characteristics, and not just particulars taken one by one. Colors, for example, are what are primarily visible on his view; and different types of color are related to each another in determinate ways.²⁸ As they stand, (A) and (P) are not up to this task, since types play no essential role in them. By design: we initially looked to a purely extensional formulation as a way of capturing the simple dichotomy embodied in (1) and (2) above. These two aims seem irreconcilable. If Aristotle insists that universals are not involved in perception in any way, how can types be incorporated into perceptual reports? But if they cannot, how can his theory of perception generalize over types, as it in fact does?

There may be some room for negotiation, however. Suppose that Aristotle requires that

26. This suggestion is examined in {Everson, 1997, #31390}, ch. 5, §1. Although he clearly seems to be attracted to it and defends it against objections, he never quite endorses it himself without hedging. See n. XX below.
27. {Everson, 1997, #31390}, ch. 5. [[Give references for particular claims too]]
28. [Color as main sensibles, in terms of which to understand commons. Similar remarks about flavors and odors in Sens. Intramodal relations in Sens.]

the generalizations in question must ultimately be cashed out in terms of the perception of particulars. For example, in addition to (P) Aristotle might also endorse every instance of the following variant of it,

F is perceptible *iff* some *F* can be perceived

where ‘*F*’ can be replaced (roughly) by any general term. This schema explicitly incorporates types and allows us to consider types as in some sense perceptible, while keeping the main emphasis on particulars, which are still perceptible in the primary sense. A type *F* will be perceptible just in case a *token* of that type can be perceived, where this is spelled out relationally in terms of (A) and (P). It thus does not require us to expand the core notion to include types. We can see this clearly when this last schema is stated more perspicuously as

(P') *F* is perceptible *iff* it is possible that there is an *x* such that

- i.* *x* is perceived
- ii.* *x* is *F*.

The verb ‘perceives’ occurs only in the first conjunct, (*i*), and takes only particulars for its arguments. Types are a separate matter, mentioned only in the second conjunct, (*ii*), where it is simply an objective question of whether the particular in fact exemplifies the type. The schema thus preserves the simple dichotomy of objects we started from, while permitting generalizations over types. A parallel and equally harmless modification of (A) is likewise possible:

(A') *S* perceives an *F* *iff* there is an *x* such that

- i.* *S* perceives *x*
- ii.* *x* is *F*

where ‘perceives’ in (i) is again the same relational sense used in the original (A). Some such amendment is necessary if an object reading is to remain in play.²⁹

Such modifications are not enough, however. A modified object reading still faces two further difficulties, when amended in this or similar ways. The first concerns the *permissiveness* of such readings, the second their *strictness*.

4. Perception is selective

The easiest way to see the worry about permissiveness of object readings is to consider the last schema, (A'), more closely. All that is required for a type *F* to be perceived is for something to be perceived which *happens* to be *F*. Its being *F* need have nothing to do with its being perceived. As (A') makes clear, the two conditions are independent. The schema only requires the object perceived to *be F*. It does not require it to be *perceived as F*, for *F* to figure in the content of the perception. The schema is silent on what the object is perceived as, or even whether it is perceived as anything at all. But if so, then *any* type that a particular exemplifies will be perceived when that particular is perceived. Suppose that one of Aristotle's acquaintances, Coriscus, happens to be the 500th person born in Athens in 374, or 4.2 light years away from the center of Alpha Centauri. According to (A'), it will also be true that Aristotle sees the 500th person born in Athens in 374 and that he sees an object 4.2 light years away from the center of Alpha Centauri. According to (P'), *being the 500th person born in Athens in*

29. Someone might object that (P') places the bar too low for the perceptibility of a type, by allowing the perceptibility of a single token to suffice. But in the present context it does not matter. Even if we adopt a stronger version of the schema, such as

(P†) *F* is perceptible *iff* every *F* can be perceived

we will still face objections similar to those below. See n. XX.

374 and *being 4.2 light years away from the center of Alpha Centauri* are both perceptible types.³⁰ And the same will hold equally for any type which an object of perception exemplifies, indiscriminately. There is no room here for *selectively registering* features of an object, of perceiving certain features but not others. On this reading, if any of the types an object exemplifies are perceptible, all of them are equally.³¹

Such permissiveness should come as no surprise. It simply spells out what object readings are already committed to with (A)—for some, in fact, it may even be part of the attraction. If perception is purely relational, we only need to pick out the particulars which stand in that relation. Any type an object falls under can be invoked; for a perceptual report to be true, any one is as good as another. The only question is whether Aristotle’s theory is so permissive or whether, as I shall argue, he takes perception to be selective.

On the face of it, Aristotle appears to be fairly permissive about perceptual reports, at least once extrinsic perceptibles are taken into account. He never explicitly delimits this class or offers a general characterization. But his examples suggest that it extends quite widely. When I look at some bile, to take one of his examples, it is not only true that I see something yellow, it is also true that I *see* something *bitter*. It is just that I see it extrinsically (*κατὰ συμβεβηκός*). Each sense, he asserts more generally, perceives extrinsically what is intrinsically (*καθ’ αὐτά*) perceptible to another sense exclusively (*ἴδια*), when they are jointly focused on a single object.³² But we can perceive much more than sensible qualities through extrinsic perception.

30. Notice that both examples also work equally well with the stronger principle, (P[†]), mentioned in n. XX above, since in both cases it is plausible that every particular that exemplifies them can be perceived.

31. [[This may be what Cashdollar ({%Cashdollar, 1973, #29093}, 157–58) has in mind when he says that this sort of view “trivializes” the theory.]]

32. *DA* 3.1, 425a30–b3: τὰ δ’ ἀλλήλων ἴδια κατὰ συμβεβηκός αἰσθάνονται αἱ αἰσθήσεις, οὐχ ἢ αὐταί, ἀλλ’ ἢ μία, ὅταν ἅμα γένηται ἡ αἴσθησις ἐπὶ τοῦ αὐτοῦ.

His most prominent examples, strikingly, are Diare's son and Cleon's son (2.6, 418a20–23; 3.1, 425a25–7). Under the rubric of extrinsic perception, in fact, he even allows that we perceive *universals* after all:

But sight sees the universal, color, extrinsically because the particular color that it sees *is* a color.³³

Note the form of Aristotle's explanation. It rests on a conjunction similar to the one in (A') above: we see the universal, color, extrinsically because (i) we see a particular color, such as white, and (ii) that particular exemplifies the universal, color. He offers the precisely same form of explanation for extrinsically perceiving Dion's son and Cleon's son. Each is something that (i) the object which we perceive (ii) "happens to be" (*συμβέβηκεν*).³⁴ If this form of explanation is meant to be fully general, then *anything* a perceptible happens to be will be perceptible, extrinsically at least, in line with (P'). Perception would then be *maximally* permissive, just as on the purely extensional view we first considered. Any true description of the object perceived can be substituted for *F* in (A') without affecting its truth value.

33. *Metaph. M* 10, 1087a19–20: ἀλλὰ κατὰ συμβεβηκὸς ἢ ὄψις τὸ καθόλου χρῶμα ὄρα ὅτι τὸδε τὸ χρῶμα ὃ ὄρα χρῶμά ἐστιν.

34. Dion's son: "this is perceived extrinsically, because that which is perceived happens to belong to [= is an extrinsic characteristic of] the white thing" (κατὰ συμβεβηκὸς γὰρ τούτου αἰσθάνεται, ὅτι τῷ λευκῷ συμβέβηκε τούτο, οὐδ' αἰσθάνεται, *DA* 2.6, 418a21–23). Cleon's son: "... we would not perceive [them] in any other way than extrinsically, as when for example we perceive extrinsically Cleon's son, not because he is Cleon's son, but because he is white and this happens to belong to [= is an extrinsic characteristic of] Cleon's son (... οὐδαμῶς ἂν ἀλλ' ἢ κατὰ συμβεβηκὸς ἤσθανόμεθα οἶον τὸν Κλέωνος υἱὸν οὐχ ὅτι Κλέωνος υἱός, ἀλλ' ὅτι λευκός, τούτῳ δὲ συμβέβηκεν υἱῷ Κλέωνος εἶναι, 3.1, 425a24–27). In the last quotation, the same conjunctive structure will be present even if we render both occurrences of ὅτι with 'that,' instead of 'because,' as some prefer (going back to Themistius XXXX): "with regard to Cleon's son, for example, we do *not* perceive *that he is Cleon's son*, but only that he is pale; and this happens to belong to Cleon's son." But that rendering has Aristotle *denying* that we perceive extrinsic characteristics, which is out of keeping with his other remarks about extrinsic perception, as well as construing perceiving as a propositional attitude, which should be unwelcome to object readings in any case. [[CHECK Hicks XXXX also translates it in this way, he acknowledges in his notes, 431 *ad loc.*, that the reading I have given above is "more probable." CHECK IRWIN & FINE) [[CHECK HICKS ON τούτῳ IN LAST LINE]]

I shall argue below that Aristotle is not in fact permissive about perceptual reports. But for the present, we can put that to one side. For it is clear that Aristotle's *theoretical* statements about perception in *De anima* and elsewhere are not permissive. Consider again the example of bile. Aristotle wants to make the following theoretical claims about it:

- a.* I see something yellow intrinsically.
- b.* I see something bitter extrinsically.

But he would not allow the following substitutions of 'yellow' and 'bitter,' even if the bitter flavor and yellow color in bile were completely coextensive throughout nature:

- a'*. I see something bitter intrinsically.
- b'*. I see something yellow extrinsically.³⁵

If Aristotle were permissive here, it would quickly land him in contradiction. Flavors, on his theory, are intrinsically perceptible to taste exclusively (*ἰδία*). But if bitter is intrinsically perceptible to sight, as (*a'*) claims, it would not be exclusive to one sense, but shared by both

35. Someone might object, with reason, that Aristotle does not generally allow substitutions of the above sort, but regards them as committing the so-called "fallacy of accident" or extrinsic characteristics. Even if the bitter and the yellow were "one and the same in number" in general, according to Aristotle it does not follow that what is truthfully said of one is truthfully said of the other, unless they are also the "same in being" (which in this case they are not, since they are extrinsic to each other). This point is entirely correct. But it only further reinforces the inappropriateness of using purely extensional locutions in conjunction with "thick" particulars, which exemplify many characteristics, intrinsic and extrinsic, to express Aristotle's perceptual notions.

Two responses are possible here: abandon thick particulars as the objects of perception, or abandon a purely extensional reading of perceptual locutions. On the first approach, objects of perception would be thinner particulars of the sort favored by so-called "kooky objects" views, put forward by {Lewis, 1982, #6623} and {Lewis, 1991, #22983}, {Matthews, 1982, #47482}, and {Cohen, 2003, #33778}. On this view, extrinsic characteristics such as yellow and bitter constitute distinct particulars in their own right, which merely "coincide" with each other in a thick, concrete particular like bile. Since they are nonidentical, the substitutions above would be blocked from the outset, since they no longer involve coreferential terms, but merely coincident ones. In this way, extensionality can be preserved. But to the extent this is still an object reading, it will face the difficulty I pose in the next section, concerning the "strictness" of such readings. If I am right, we have to abandon a purely extensional reading in any case, regardless of whether the objects of perception are thick or thin.

(κοινόν). Similarly for colors: on Aristotle's theory, they are intrinsically perceptible to sight. But they would not be if, as (*b'*) claims, they are extrinsically perceptible to sight.

The truth of such theoretical statements, then, is sensitive to how objects are described. The senses detect different types of perceptible in different ways, and whether a sense perceives a particular intrinsically or extrinsically depends on which of the types it falls under is in question. Aristotle's distinctions here presuppose that perception is *selective*.

Nor are these distinctions used solely for the taxonomical purposes, for classifying the different types of perceptual reports we make in ordinary language. The distinction between intrinsic and extrinsic perception forms a key part of the explanatory framework Aristotle employs in his theory of perception. Characteristics that are intrinsically perceptible to a single sense exclusively are what are principally (*κυρίως*) perceptible and thus what each sense is principally sensitive to, and it is in relation to such qualities that the being or essence (*οὐσία*) of each sense is determined.³⁶ This helps to explain, he believes, why sight is authoritative (*κυρία*) when it comes to colors or taste when it comes to flavors (*Metaph. Γ 5, 1010b14–17*). Aristotle thinks, in fact, that a sense cannot be mistaken about the perceptibles exclusive to it, or least of all when contrasted with our perception of other types of perceptible, namely, those which are shared by more than one sense and those which are extrinsically perceptible.³⁷ The distinctions on which Aristotle's theory of perception rests cannot be captured by a purely extensional notion, even when it comes to the perception of extrinsic perceptibles.

36. *DA* 2.6, 418a24–5: τῶν δὲ καθ' αὐτὰ αἰσθητῶν τὰ ἴδια κυρίως ἔστυν αἰσθητά, καὶ πρὸς ἃ ἡ οὐσία πέφυκεν ἐκάστης αἰσθήσεως.

37. [[ADD REFS on fallibility and infallibility.]]

A causal distinction?

One could try to salvage the spirit, if not the letter, of an extensional reading by further modifying our schemas to reflect the difference between intrinsic and extrinsic perception. On one recent suggestion, this difference is best understood as due to an underlying *causal* difference in the objects of perception. Anything that is perceptible, on Aristotle's view, is able to cause a sense to perceive it, and this remains true no matter how the object is described. But it is an *intrinsic* cause of perception only in so far as it is a certain sort of thing; in so far as it has other characteristics, it will be an *extrinsic* cause (*Phys.* II 3, 195b9–12). The sweet on the counter, however it is described, is a cause of my seeing it. But in so far as it is sweet, it is only an extrinsic cause of this; it is an intrinsic cause of my seeing it only in so far as it is something visible, say, green and striped. As sweet, it may of course be an intrinsic cause of my tasting it. But that just shows that whether something is an intrinsic or an extrinsic cause of perception is relative to a given sense modality.³⁸

The present suggestion, then, is that a certain type of thing is intrinsically perceived just in case it is, as such, an *intrinsic cause* of being perceived by a given sense modality, and it is extrinsically perceived just in case it is, as such, only an *extrinsic cause* of being perceived by that modality. Aristotle would then be committed to every instance of the following schemas (where '*F*' is replaced by some general term):

- (A₁) *S* intrinsically perceives an *F* with a sense modality *M* iff there is an *x*
such that

38. Some things, like sweet, will be intrinsic causes of perception for one sense modality, and extrinsic causes for all the rest. But it is not the case in general that a perceptible must be an intrinsic cause of perception in one modality: some, like shape, will be an intrinsic causes for two or more modalities, such as sight and touch; others, like Cleon's son, will not (as such) be an intrinsic cause for any modality.

- i.* S perceives x with M
 - ii.* x is F
 - iii.* x is an efficient cause of (i) in so far as x is F .
- (A_E) S extrinsically perceives an F with some sense modality M iff there is an x such that
- i.* S perceives x with M
 - ii.* x is F
 - iii.* x is an efficient cause of (i), not in so far as x is F , but in so far as it is G (for some G).

As should be apparent, the differences from (A') are relatively minor. The principal modification is the addition of a third clause in each schema. The first two clauses are the same, apart from the relativization to a given sense modality. Perceptibles can then be defined in terms of these schemas. Something will be intrinsically perceptible to a given sense modality just in case it is the sort of thing that can be intrinsically perceived by that modality, and extrinsically perceptible just in case it is the sort of thing that can be only extrinsically perceived by that sense.

These schemas are not purely extensional, since they include the locution 'in so far as x is F ,' which is opaque to substitution. But as with our earlier schemas, they are still concerned primarily with particular objects and their external, objective characteristics. In this case, the essential reference to types concerns causal characteristics. Neither of these schemas says anything about what objects are perceived *as*, or indeed whether they are recognized at all. Moreover, they preserve the maximal permissiveness of the earlier schemas. For while the third clause in (A_I) introduces a narrowing constraint, by limiting it to types that intrinsically produce perception, the third clause in (A_E) is correspondingly expansive. *Any* type a particu-

lar exemplifies can be perceived, if not intrinsically, then at least extrinsically, so long as *some* of its types are perceived intrinsically.³⁹ These schemas thus allow an object reading to retain (A) for perceptual reports in general, while tracking Aristotle's theoretical claims by using (A_i) and (A_e). This version does have to concede that intrinsic perception is selective. But it hopes to account for this by appealing exclusively to objective causal differences in the world outside the subject.

5. Perception is prone to error

But even this patch is not enough. So far, our concern has been the permissiveness of object readings, with the fact that on these readings *any* true description of a object can be used in a perceptual report without affecting its truth value. But the converse also poses a problem. On these readings, *only* true descriptions of the object can be used in perceptual reports without affecting truth value—the only types that can figure in such statements are types that the object actually exemplifies. And this seems too strict. For then object readings *exclude every case of misperception* from the outset. Yet it seems that we often perceive an object as exemplifying some type, *F*, which it does not in fact exemplify. Object readings thus fail to capture one of the more salient features of perceptual experience.

Although Aristotle thinks that the most basic form of perception is immune from error,

39. Thus we arrive, by a slightly different route, at the biconditional that tempts Everson ({%Everson, 1997, #31390}, 192; cf. 36–37):

$\forall x \forall s (x \text{ is perceived accidentally by } s \leftrightarrow x \text{ is an accidental cause of } s\text{'s perceiving some proper sensible}).$

What worries Everson is the lack of explicit evidence for the right-to-left direction of the biconditional (which is what makes it permissive, since it states that any accidental cause will be accidentally perceived). As we will see in the next section, though, it is the left-to-right direction that is more problematic.

he believes that perception in general can be mistaken. It is especially prone to error when characteristics like being human or large are concerned: we do not always perceive such things clearly (*ὅταν μὴ ἐναργῶς αἰσθανώμεθα*, *DA* 3.3, 428a12–15), and the object can appear other than it is.⁴⁰ Even with sensible qualities like color or flavor, where intrinsic perception cannot be mistaken (2.6, 418a12–14)—or, as he says once, “has the least possible falsehood” (*ὅτι ὀλίγιστον ἔχουσα τὸ ψεῦδος*, 3.3, 428b19)—it still must be intelligible to *raise* the question of whether it can be mistaken, if only to answer it negatively. The very notion of perceptual accuracy presupposes that perception presents objects a certain way, as being certain sorts of things or as having certain characteristics. If I did not perceive an object *as* anything, *a fortiori* I could not perceive it *as other* than it is.

This liability to error is something that Aristotle attributes to *the activity of perception itself* (*τῆς ἐνεργείας τῆς αἰσθήσεως*), moreover, and not just to the representations (*φαντασία*) that subsequently arise from them, much less the perceptual judgements formed on their basis.⁴¹

40. Aristotle’s claim is even more explicit in the words immediately following at 428a15, as they occur in most of the mss: either ‘in those circumstances there is both true [perception] and false [perception]’ (*τότε καὶ ἡ ἀληθὴς καὶ ἡ ψευδής*, H³VXM) or ‘in those circumstances [the perception will be] either true or false’ (*τότε ἢ ἀληθὴς ἢ ψευδής*, EL).

41. As Everson appears to think (Everson, 1997, #31390), 190–93, though see 19–20). But when Aristotle assigns falsehood to certain perceptions, he clearly distinguishes between them and the representations produced from them: “The perception of exclusive [perceptibles] is true or has falsehood to the least possible extent. Second is [the perception] of that to which these belong. At this point already it is possible to be in error. For [the perception] that it is white is not wrong; it is wrong about whether what is white is this very thing or something else. Third is [the perception] of shared features which follow on these extrinsic characteristics, to which the exclusive [perceptibles] belong. I mean, for example, motion and size, which belong to perceptibles, and about which *eo ipso* one perceptually errs the most. *The change which is produced by the activity of perception differs for each of these three perceptions.* The first is true when perception is present, but the others can be false both when the perception is present and when it is absent, and especially when the perceptible is far away. If representation is nothing else other than what has just been mentioned, and this is as has been described, then representation will be a change produced by actual perceiving.” (*ἡ αἴσθησις τῶν μὲν ἰδίων ἀληθὴς ἐστὶν ἢ ὅτι ὀλίγιστον ἔχουσα τὸ ψεῦδος. δεύτερον δὲ τοῦ ᾧ συμβέβηκε ταῦτα καὶ ἐνταῦθα ἤδη ἐνδέχεται διαψεύδεσθαι: ὅτι μὲν γὰρ λευκόν, οὐ ψεύδεται, εἰ δὲ τοῦτο τὸ λευκόν ἢ ἄλλο, ψεύδεται. τρίτον δὲ τῶν κοινῶν καὶ ἐπομένων τοῖς συμβεβηκόσιν, οἷς ὑπάρχει τὰ ἴδια: λέγω δ’ οἶον κίνησις καὶ*

The content of perception in general, therefore, must leave room for the possibility of error, however any of these errors are ultimately to be explained.⁴² The structure of perceptual content must itself make clear where error can creep in, what in general perception can be mistaken about, independent of the causal mechanisms that are responsible for it.

On Aristotle's view, perceptual error is an error of a specific kind. Whenever we misperceive things, we still get something right, even as we are getting something else wrong. Aristotle draws this distinction explicitly in the first chapter of *On Dreams*:

Misseeing and mishearing are what occurs to someone who sees or hears something real, though not what he takes this [to be].⁴³

μέγεθος (ἃ συμβέβηκε τοῖς αἰσθητοῖς), περὶ ἃ μάλιστα ἤδη ἔστιν ἀπατηθῆναι κατὰ τὴν αἴσθησιν. ἡ δὲ κίνησις ἡ ὑπὸ τῆς ἐνεργείας τῆς αἰσθήσεως γνωμὴν διοίσει ἢ ἀπὸ τούτων τῶν τριῶν αἰσθήσεων. καὶ ἡ μὲν πρώτη παρουσίας τῆς αἰσθήσεως ἀληθῆς, αἱ δ' ἕτεραι καὶ παρουσίας καὶ ἀπούσης εἶεν ἂν ψευδεῖς, καὶ μάλιστα ὅταν πόρρω τὸ αἰσθητὸν ᾖ. εἰ οὖν μηθὲν ἄλλο ἔχει τὰ εἰρημένα ἢ φαντασία, τοῦτο δ' ἐστὶ τὸ λεχθέν, ἢ φαντασία ἂν εἴη κίνησις ὑπὸ τῆς αἰσθήσεως τῆς κατ' ἐνέργειαν γιγνομένη, *Soul* III 3, 428b18–429a2, esp. 26–8).

42. I have argued in previous publications that error is made possible where *phantasia* is involved as part of the causal mechanisms (CITE): memory and experience, both of which depend on *phantasia*, are arguably always involved in extrinsic perception; and to the extent that error is possible with regard to exclusive perceptibles, it is plausible to think that *phantasia* is again involved (). The only point on which I have modified my views concerns the shared perceptibles: although *phantasia* is surely involved in some errors concerning them, it is not clear to me that it need be in all cases.
43. *On Dreams* I, 458b31–3: τὸ γὰρ παρορᾶν καὶ παρακούειν ὁρῶντος ἀληθές τι καὶ ἀκούοντος, οὐ μέντοι τοῦτο ὁ οἶεται, following mss LSUM (accepted by Ross, Drossaart Lulofs, and Siwek). I take τοῦτο to be a predicate nominative with the verb 'to be' understood: the error consists in the fact that the real thing one perceives is *not in fact* what one takes it to be. This reading is required even more directly by the variant οὐ τοῦτο δὲ ὁ οἶεται, found in ms P, as well as Ps.-Themistius' paraphrase and the early editions (accepted by Biehl and Mugnier). But this reading is probably just a later correction of the awkward οὐ τοῦτο δὲ οἶεται found in mss EY and so may not constitute a better authority, even if it gets the general sense right. It is in any case unnecessary. Michael of Ephesus (*In Parv. nat.* 64.33–65.3) preserves the μέντοι of LSUM, but gives the same sense: "for I see something real, since what I see is not a non-being, but a real being of some sort; yet it is not what I take it to be, but something else. For although I see Plato, it seems to me as though I see Socrates; yet the one I take myself to be seeing isn't Socrates, but Plato" (ὁρῶ γὰρ τι ἀληθές· ὁ γὰρ ὁρῶ, οὐκ ἔστι μὴ ὄν, ἀλλ' ὄν τι καὶ ἀληθές, οὐ μέντοι ἐκείνο, ὃ οἶμαι, ἐστίν, ἀλλ' ἕτερόν τι ὁρῶν γὰρ Πλάτωνα φαίνεται μοι Σωκράτην ὄρᾶν, οὐ μέντοι ἐστὶ Σωκράτης, ὃν οἶμαι ὄρᾶν, ἀλλὰ Πλάτων). On Michael's view, we do in fact see something real before us, namely, Plato; it is just not the person we take ourselves to be perceiving.

Several recent commentators have understood the verbs 'see' and 'hear' as implicit in the final clause

For Aristotle, misperceptions are still genuine cases of perception, in so far as one perceives a real object that is in fact bringing that perception about. In this respect, misperceptions are to be contrasted with dreams, where one is not seeing *anything real* (τὸ μὲν μὴ ὁρᾶν μηδὲν ἀληθές, 458b33–459a2).⁴⁴ The error in misperception is more specific. One *takes* (οἶεται) the real object perceived to be something other than it is—one literally *mis*-takes it as something else.⁴⁵ One thus can succeed in perceiving an object, even when the content of perception is mistaken. The content can be out of line with the character of the object perceived.

6. Perception is *de re*

On Aristotle's view, then, perceptual content essentially exhibits a certain complexity. It not

of 458b33 rather than the verb 'to be,' to yield something like "but one does not see or hear what one thinks *one sees or hears*" ([Everson, 1997 #389], 191; see also [Siwek, 1963 #718], 209 and [van der Eijk, 1994 #717], 18, who both supply verbs of perception in the relative clause). That is, we *take* ourselves to be seeing something, but we are *not* actually *seeing* it. On this reading, we do not have a mistaken perception, so much as a mistaken judgement, a *second-order* mistake about whether we are actually perceiving something at all. In context, though, the sentence should concern a *first-order* mistake, about the character of the object itself. This is clear from the use of μέντοι, which introduces a qualification to the emphatic ἀληθές τι immediately preceding. Even though one sees something real or genuine, it is a case of misseeing precisely because what we perceive this real object *as* is not in fact what it is, as the argument in the larger context demands. (Everson in fact treats it as a first-order mistake later on: [%Everson, 1997 #389], 209.)

44. Compare this with Plato *Tht.* 157E1–158A3, which classes "mishearing, misseeing, and any other kind of misperceiving" (παρακούειν ἢ παρορᾶν ἢ τι ἄλλο παραισθάνεσθαι) together with dreams, delusions and insanity as "false perceptions" (ψευδεῖς αἰσθήσεις) where "nothing that appears is" (οὐδὲν ὧν φαίνεται εἶναι). On the most charitable reading, Socrates is only claiming that in all of these states what appears *to be the case* is not in fact the case, and so they are false. But Aristotle still would not class them equally as perceptions, since dreams and delusions are not merely false: in their case, there is not a real object that is concurrently bringing about a dream or delusion about itself—if there were, they would be perceptions, and not dreams (CITE).
45. [[Note on verb οἶσθαι. is often used in Aristotle for what we take to be the case, in contrast with what we know, understand, or otherwise apprehend to be true. But it does not presuppose any form of reflective commitment or act of judgement, just that the subject takes things a certain way. As such, I take it to be an open question whether the subject possesses the relevant concepts. I will argue it does not: see below, pp. XXX.]]

only concerns (1) *which* object a subject perceives, but also (2) *what* the subject takes it *as*. Perception is still relational to the extent that it requires a real object, the object that actually brings about the perception of it; and for this reason hallucinations and delusions do not count as genuine perceptions, even if they are in some phenomenological sense just like them. But this is not enough to block all forms of error. The fact that perception involves a relation to an actual object does not guarantee that we perceive the object *exactly* as it is, just as it does not guarantee that we perceive an object in *all* the ways that it is: there is no reason to think that perception in general is infallible any more than to think that it is omniscient. Perception essentially involves the way in which the subject *views* the object, and the subject may get things wrong. But then perception cannot simply be construed relationally, as object readings would have it. It must be construed “notionally” as well, to include *the aspect under which* the subject views the object as part of the perceptual content.

We can express these two requirements, (1) that there always is a real object which is perceived and (2) that one always perceives it *as* something, in terms of the following schema,

(A*) S perceives x as F

where ‘ S ’ is to be replaced by expressions for the subject, ‘ x ’ by expressions for the object, and ‘ F ’ by adjectives or noun phrases for the aspect the object is perceived under.⁴⁶ So understood, perception is a *de re* attitude to a given object. The expression in the ‘ x ’ place is supposed to pick out the actual object the subject is perceiving; so long as that reference is secured, it does not matter how the object is described. The ‘ x ’ place is entirely extensional, allowing the substitution of coreferential terms *salva veritate* and existential generalization.

46. There is a question here as to whether this should include proper nouns as well, such as ‘Callias.’ See below, n. XX.

The locution ‘as *F*,’ in contrast, is “opaque” or nonextensional. The only expressions that can be used here, if the report is to be true, are expressions for aspects under which the subject in fact views the object on that occasion. There is no guarantee that truth will be preserved if another description is substituted: a subject can perceive an object under one aspect without perceiving it under another. Finally, there is no requirement that the perceived object actually exemplify *F* either—that can be required only for veridical perceptions, and not all perceptions are. For a perceptual report to be true, what matters is how the subject views things. The truth value of such reports, then, depends very much on the expressions used for ‘*F*.’ It is sensitive to how the subject view things, whether correctly or not.

This revised schema makes types an intrinsic part of perceptual content. They figure directly in the way perceiving itself is characterized, unlike the extrinsic role they played in the various object readings considered earlier. But for just this reason, one might worry that (A*) conflicts with the simple dichotomy from which we started. One might be willing to concede that Aristotle’s theory presupposes that types play such a role, but still hesitate to regard this as his firm, considered view. Is there any evidence that it was a deliberate commitment, that Aristotle explicitly assigned types such a role *in his theory*? And if he did, how can that be squared with his claims that perception is *not* of universals, but particulars?

Aristotle does in fact assign such a role to types in two key passages from the *Posterior Analytics*. The evidence has been noted before by scholars, but never systematically developed.⁴⁷ The first remark occurs just before he states the simple dichotomy of objects in the passages quoted earlier from *Posterior Analytics* 1.31 (p. XXX above). It is surprisingly strong:

47. The most explicit statement of this interpretation I have been able to find is the following sentences from Barnes (Barnes, 1993 #2174), 266, *ad* 100a16), with which I am in full agreement: “... how, then, can the gap between particulars and universals be jumped? Aristotle’s answer is that perception in fact gives

Perception is of the such, and *not* of some this.⁴⁸

Aristotle standardly uses the phrase ‘the such’ or ‘this sort of thing’ (τὸ τοιόνδε) in contrast with ‘some this’ (τόδε τι) to designate something that is common to many things, in short, a type or universal.⁴⁹ So his claim here is that perception is always *of a universal*, and not a particular:⁵⁰

- 1'. S's perception is not of a particular
- 2'. S's perception is of a universal.

But this seems to commit Aristotle to a dichotomy diametrically opposed to the original one from which we started. According to the first dichotomy, whenever a subject *S* perceives, necessarily,

1. *S* perceives a particular
2. *S* does not perceive a universal.

If ‘*S*’s perception is of *X*’ is just an elegant variation for ‘*S* perceives *X*’ (as we would ordinarily expect), these two dichotomies are in direct contradiction with one another.⁵¹

In context, though, Aristotle’s point is precisely that these two dichotomies are *consistent*

us universals from the start (cf. *A* 31, 87b29). He means that we perceive things *as As*; and that this, so to speak lodges the universal, *A*, in our minds from the start—although we shall not, of course, have an explicit or articulated understanding of *A* until we have advanced to Stage (D). (It should be noted that this account is intended to hold for *all* perceivers: it is not peculiar to human perception, nor does it involve the intellect in any way. Even a fly sees an *F*.)” [[ADD REFERENCE TO SCOTT]]

48. 87b28–9: ... ἔστω ἡ αἴσθησις τοῦ τοιούδε καὶ μὴ τοῦδέ τινος.

49. E.g., *Metaph.* K 2, 1060b19–23: “... the fact that all knowledge is of universals and of the such, while a given being is not one of the universals, but rather some this and separate...” (τὸ πᾶσαν μὲν ἐπιστήμην εἶναι τῶν καθόλου καὶ τοῦ τοιουδί, τὴν δ’ οὐσίαν μὴ τῶν καθόλου εἶναι, μᾶλλον δὲ τόδε τι καὶ χωριστόν). When Aristotle wants to speak of a particular as exemplifying a universal, emphasizing that it is a token of a type, he speaks of it as a “this such” (τόδε τοιόνδε, *Metaph.* Z 8, 1033b22–4). For Aristotle’s use of the contrast between “thises” and “suches,” see G. E. L. Owen’s celebrated paper, “Particular and General” (Owen, 1986, #33016).

50. That universals are at issue here is confirmed when Aristotle takes up these claims again at the end of *Posterior Analytics* (2.19, 100a16–b1). See below, p. XXX.

51. As Pellegrin, for example, seems to assume (Pellegrin, 2005, #46622}, 390 n. 1), when he feels compelled to depart from the letter of the text in his translation.

with one another. Consider his remarks again, now taken together from the beginning of the chapter:

It is not possible at all to know through perception. For even though perception is of the such, and not of some this, one necessarily perceives a this at a certain place in the present. It is impossible to perceive what is universal and holds across all cases, since it is not a this or in the present. For that would not be universal. We call “universal” that which holds in every instance and on every occasion. Since, then, demonstrations are universal, and it is not possible to perceive the latter, it is clear that it is not possible at all to know through perception.⁵²

In this passage, Aristotle embraces both dichotomies, but places greater weight on one of them. As stated in the first and last sentences, his overall aim in this chapter is to show that perception is *not sufficient* for scientific knowledge. For these purposes, the original dichotomy we started from, (1) and (2), is the relevant one: perception is always tied to a particular, at a particular place and at a particular time, and so cannot by itself provide the grasp of the universal generalizations required for scientific knowledge, which hold “in every instance and on every occasion.” But his point here is that this dichotomy holds *even though* perception is of the universal and not the particular, that is, despite the fact that the second dichotomy, (1') and (2'), *holds as well*.⁵³ Aristotle could not make this point, however, if ‘S’s perception

52. *APo.* I.31, 87b28–35: οὐδὲ δι' αἰσθήσεως ἔστιν ἐπίστασθαι. εἰ γὰρ καὶ ἔστιν ἡ αἴσθησις τοῦ τοιοῦδε καὶ μὴ τοῦδέ τινος, ἀλλ' αἰσθάνεσθαι γέ ἀναγκαῖον τόδε τι καὶ πού καὶ νῦν. τὸ δὲ καθόλου καὶ ἐπὶ πάσῃ ἀδύνατον αἰσθάνεσθαι· οὐ γὰρ τόδε οὐδὲ νῦν· οὐ γὰρ ἂν ἦν καθόλου· τὸ γὰρ αἰεὶ καὶ πανταχοῦ καθόλου φημὲν εἶναι. ἐπεὶ οὖν αἱ μὲν ἀποδείξεις καθόλου, ταῦτα δ' οὐκ ἔστιν αἰσθάνεσθαι, φανερόν ὅτι οὐδ' ἐπίστασθαι δι' αἰσθήσεως ἔστιν.

53. Some translators render εἰ καὶ with the more noncommittal ‘even if’ (e.g., {Barnes, 1993, #25592}, 42; {McKirahan, 1992, #10951}, 127), as though it were καὶ εἰ. But this runs against the usual contrast between the two expressions: see *LSJ*⁹ under καὶ, B.8; {Denniston, 1950, #50102}, 299–300; {Smyth, 1980,

is of *X*' were just elegant variation for 'S perceives *X*,' even if he uses these locutions indifferently elsewhere.⁵⁴ In the present passage, these locutions are contrasted with one another and mark different relations that we bear to universals and particulars. However we spell out this difference, it is evident that on his view *both* universals and particulars are involved in perception. Even if we always *perceive* particulars, there is a way in which our *perception* always concerns the type of thing perceived as well.

The same locutions are used to contrast these dichotomies again in the climactic final chapter of the *Posterior Analytics*, 2.19. But in this passage Aristotle is concerned to show that, even though perception is not sufficient for knowledge, it is still *necessary*. In particular, he wants to argue that the general concepts required for demonstration issue from a process he

#24075}, §2369, 2375. This contrast is not without exceptions, as both Denniston (300–301) and Smyth (§2378) point out. But the examples they cite can generally be explained as due to anomalies not present here: for example, a verb in a nonindicative mood or an unreal condition, an intensive adverb following *καί*, or even just the author's desire to avoid the hiatus of *καί εἰ*. In any case, there is no question that Aristotle is committed to the antecedent here: *APo.* 2.19, 100a16–b1; cf. *DA* 2.12, 424a21–4. See the discussion below, pp. XXX–XXX.

54. See n. XX above. McKirahan ({%McKirahan, 1992, #10951}, 253) objects that *APo.* 1.31, 88a2 falls into this category, “flatly contradict[ing]” the sort of interpretation I have given of the preceding passage at 87b28–33. It is possible that Aristotle is not keeping to the fine-grained distinction he has just drawn—Barnes and McKirahan both call it a ‘tenuous distinction’ ({Barnes, 1993, #25592}, 193 ad 87b29; {McKirahan, 1992, #10951}, 253)—and sliding back to a looser usage. But it is worth noting that 88a2 is not a general assertoric statement, but is phrased counterfactually as part of a particular hypothetical scenario: “For that reason [that necessarily we perceive particulars, 87b37–38], even if we were on the moon and saw the earth blocking it, we would not then know what is responsible for the eclipse. For we would perceive in those circumstances that it was now being eclipsed, but not in general why, since there would be no perception of the universal.” (διὸ καὶ εἰ ἐπὶ τῆς σελήνης ὄντες ἐωρῶμεν ἀντιφράττουσαν τὴν γῆν, οὐκ ἂν ᾔδειμεν τὴν αἰτίαν τῆς ἐκλείψεως. ἤσθανόμεθα γὰρ ἂν ὅτι νῦν ἐκλείπει, καὶ οὐ διότι ὅλως· οὐ γὰρ ἦν τοῦ καθόλου αἴσθησις, 87b39–88a2) Notice that Aristotle does not appeal to an earlier general claim about universals in the plural, as Barnes' free rendering has it (“... for we have seen that there is no perception of universals”), but a claim about the specific universal in question here. In fact, he even says that we see a certain type of event, the earth's blocking the sun's light, and perceive that there is an eclipse going on. But his point is that we only see what is happening before us *now* (*νῦν*, 88a1; cf. 87b30). We do not have a perception of this type of event as what, in all cases (*ἐπὶ πάσῃ*, 87b31), is responsible for eclipses.

calls “induction” (ἐπαγωγὴ), which is rooted in perception.⁵⁵ And if perception is to play this role, its content cannot exclusively concern particulars as such. Types must somehow figure in its content already.⁵⁶ This is how Aristotle puts the point here:

For in fact, although one perceives the particular, perception is of the universal—of human, say, and not of Callias, a human.⁵⁷

Here again Aristotle emphasizes the consistency of these two claims, which he frames using the same locutions. What we *perceive* is not the same as what our *perception is of*. We perceive a particular, the human Callias, but our perception is not of this. It is of human, a “such,” which Aristotle here explicitly identifies as a universal.⁵⁸

The difference between his point here and in the earlier passage is only a matter of emphasis, which can be explained by the difference in their argumentative aims in context. In *Posterior Analytics* 1.31, Aristotle wants to show that perception is not sufficient on its own for knowledge and so emphasizes that we cannot perceive universals, but only particulars. In

55. See pp. XXX–XXX below.

56. I thus reject the suggestions of both Richard Sorabji ({%Sorabji, 1993, #27640}, 32–33) and Dominic Scott ({%Scott, 1995, #82660}, 152–56) that it is only perception *in general* or perception *as a capacity* that is “of” universals, rather than particular episodes of perceiving. In both their views, on any occasion when we are actually perceiving, it is always and exclusively a particular we are perceiving, which also happens to be of a certain type. To this extent, then, both are committed to an object reading of some sort, like those we have just been considering, and consequently their interpretations face similar difficulties. My point here is that they also fail to offer a satisfactory account of Aristotelian induction: if our capacity to perceive humans, trees, and so on only amounts to our perceiving particulars which happen such things, and we never perceive anything as belonging to any type it all, it will not provide the kind of basis for induction that Aristotle envisages. See pp. XXX–XXX below. [[ANSWER SCOTT’S OBJECTION; CHECK MODRAK]]

57. *APo.* 2.19, 100a16–b1: καὶ γὰρ αἰσθάνεται μὲν τὸ καθ’ ἕκαστον, ἢ δ’ αἴσθησις τοῦ καθόλου ἐστίν, οἶον ἀνθρώπου, ἀλλ’ οὐ Καλλίου ἀνθρώπου. On perceiving Callias as Callias, see below, n. XX.

58. Barnes and McKirahan both call this a ‘tenuous distinction’ ({%Barnes, 1993, #25592}, 193 ad 87b29; {%McKirahan, 1992, #10951}, 253). It is certainly a subtle distinction. But there can be no doubt that Aristotle draws it here and that he regards it as important. My claim is just that good sense can be made of it in terms of his theory as well.

Posterior Analytics 2.19, he wants to show perception is necessary for knowledge, in so far as it provides a source from which universal concepts can be developed by the understanding (*voûs*). He therefore emphasizes the other dichotomy here, that perception is of a universal and not a particular. But he regards both points, rightly, as compatible with one another.

We always perceive a particular, at some particular place and time. But we also perceive it as belonging to a some type, and it is because we perceive things as belonging to types that we can later come to have a grasp of the types themselves under which they fall. Particulars are not presented to us blankly in perception, but *as* certain sorts of thing. It is just this capacity that makes perception *informative* and allows it to serve as the basis for more general knowledge about the world. For Aristotle, perception is essentially a discriminative capacity (*δύναμις κριτική*), which enables us to distinguish one *sort* of thing from another.⁵⁹ It thus necessarily involves both particulars and universals as part of its content.

7. Perception can be nonconceptual

Some readers may worry at this point that if universals essentially figure in the content of perception in this way, Aristotle has thereby made it *conceptual*. And whatever one thinks about perceptual content in humans, it is clear that that would pose a problem with regard to animals, as we have seen. For though Aristotle believes that perception is essential to being an animal,⁶⁰ he also does not think that they have concepts (*νοήματα*). In his view, they lack

59. *APo.* 2.19, 99b35; *DA* 3.3, 428a3–5; 3.9, 432a16; *MA* 6, 700b19–21. Cf. *Top.* 2.4, 111a14–20; *DA* 3.12, 434b3–4; *Metaph.* K 6, 1063a2–3; *NE* 10.4, 1174b34. [[CHECK DE HAAS, NARCY]]

60. *Categ.* 7, 8a7–8; *DA* 2.2, 413b1–4, 8–9; 2.3, 414b3; 3.3, 427b12–13; 3.12, 434a30; 3.13, 435b4–7, b16; *Sens.* 1, 436b10–11; *Somm.* 1, 454b24–25; 2, 455a7; *Iuv.* 1, 467b18–25; *HA* 1.3, 489a17–18; 4.8, 533a17–18; 4.8, 535a4–5; *PA* 2.1, 647a21; 2.8, 653b21–22; 3.4, 666a34; *LA* 4, 705b10, 14; *GA* 1.23, 731b4–5 (cf. 731a30–b4); 2.1, 732a12–13; 2.5, 741a9; 3.7, 757b15–16; 5.1, 778b32–34; *Metaph.* A 1, 980a27–28; *NE* 9.9, 1170a16.

thought and understanding (*νοῦς*)⁶¹ necessary for having concepts, and because of this, they are incapable of forming beliefs, especially universal ones,⁶² and of reasoning and deliberating.⁶³ But then we are back to one of our original worries. If animals perceive particulars without perceiving them *as* anything, how are we to explain how animals pursue or avoid the sorts of things they should?

Aristotle does not share this worry, though, since he does not accept the underlying premise. It assumes that one cannot perceive anything as *F* unless one subsumes it under a general concept, the concept of *F*; and this in turn requires that the subject already possesses the concept of *F*. Aristotle would thus have to be committed to all instances of the following necessary condition:

- (c) Necessarily, if a subject *S* perceives some *x* as *F*, then *S* possesses the concept of *F*.

with the same range of substitutions as before. This leads directly to the feared consequence: since nonhuman animals are never in the possession of any concepts on Aristotle's view, it would follow that they could not perceive anything as *F* either, for any value of *F*. But we know that Aristotle rejects (c) even in the more complex case of human perception, where we both possess concepts and can deploy them in perceptual experience, broadly understood. On his view, each concept is initially acquired only on the basis of prior perceptual experi-

61. *DA* 2.3, 414b18–19 (τὸ διανοητικόν τε καὶ νοῦς), 415a7–8 (λογισμὸν καὶ διάνοιαν); 3.10, 433a12 (οὐ νόησις οὐδὲ λογισμὸς); *Mem.* 1, 450a15–18 (νοητικόν); *PA* 1.1, 641b7–8 (διάνοια); *NE* 1.7, 1098a1–5 (λόγος); *EE* 2.8, 1224a25–27 (λόγος); *Pol.* 7.13, 1332b3–5 (λόγος). For discussion of these passages, and those in the following notes (XXX–XXX), see {Sorabji, 1993, #27640}, 12, 14, 32–34, 38–39, 54–55.
62. *DA* 3.3, 428a19–21 (δόξα, πίστις); *NE* 7.3, 1147b4–5 (καθόλου ὑπόληψιν), where 'universal' here refers back to the belief in a universal proposition (καθόλου δόξα) mentioned earlier at 1147a25 and a31.
63. *DA* 2.3, 415a7–8 (λογισμὸν καὶ διάνοιαν); 3.10, 433a12 (οὐ νόησις οὐδὲ λογισμὸς). Cf. *DA* 1.2, 404b4–6 (ὁ κατὰ φρόνησιν λεγόμενος νοῦς); 3.11, 434a6–7 (βουλευτικὴ φαντασία); *HA* 1.1, 488b24–26 (βουλευτικόν); *Metaph.* A 1, 980b26–28 (τέχνη καὶ λογισμοῖς). Animals are also said to be incapable of action (πράξις): *NE* 6.2, 1139a20.

ence. Before we can possess the concept of a human, to use his example, we must have not only have perceived humans like Callias, but perceived them *as* human—in his words, we must have previously had “perceptions *of* human.” More generally, he is committed to every instance of the following schema:

- (c*) Necessarily, if a subject *S* acquires the concept of *F*, then at some earlier time *S* perceives some *x* as *F*.

Aristotle accepts (c*) because he holds an even stronger causal thesis, namely, that the concept of *F* in some way is *produced* or *derived from* perceptions of *F*. But (c*) is enough for our purposes. For it entails that even perceivers endowed with conceptual abilities can perceive things as *F* at a time when they *lack* the relevant concept:

- (nc) It is possible that a subject *S* perceives some *x* as *F* at a time when *S* does not possess the concept of *F*.

But if Aristotle accepts (nc) even in this more complex case, there should be no principled objection to applying it to animals who lack conceptual abilities entirely. Perceiving something as *F* is independent of having the concept of *F*. In fact, since we do not possess concepts from birth, but must acquire them (*APo.* 2.19, 99b20–100a3), there will be a first concept or set of concepts, which are acquired at a point when we possess no prior concepts of any sort. The fact that humans are capable of still more complex perceptual experience, in which one also deploys concepts that one possesses, does not affect this basic point. Aristotle is committed to the view that perceiving something as *F* can be nonconceptual even in humans.

One might still wonder, though, how *universals* can be involved in perceptual content in the absence of concepts. On this view we are considering, the content of the perception and of the corresponding concept appear to be the same. Just what is the difference between hav-

ing a perception of *a human* and having the concept of *human*? To the extent that the same universal is involved in both, one might worry that Aristotle simply smuggled concepts into perceptual content without the name. One could call them “proto-concepts,” if one liked. But it does not really touch the underlying issue. For the same question remains: how would the contents of these two states differ?

Here Aristotle would accept the premise, but deny that the alleged consequences follow. The content of both states involves universals, and in the example above the same universal. But it does not follow that perceptual content involves concepts, by that or any other name. In holding that perception can be nonconceptual, Aristotle need not commit himself to a peculiar type of content, which is incommensurable with conceptual content and inexpressed in words. On the contrary, it is critical for his views about concept acquisition that there be a *continuity* between the content of these two states: we can explain how the concept of a human arises from previous perceptions *precisely because* the same universal figures in both contents. The fact that the same universals can figure in the content of both states, then, is a positive attraction for Aristotle. What is different is *the way in which we grasp* this content in these two different states. To claim, as (NC) does, that one can perceive something as *F* without possessing the relevant concept is to claim that one can have this content perceptually without grasping it conceptually, even if someone else who has the concept can grasp it conceptually. In the current jargon, Aristotle is committed to a “state view” of nonconceptual content, and not a “content view.”⁶⁴ What makes a state nonconceptual is not a distinctive type of content, but the distinctive way in which that state has its content.

Having a perception of *F* differs from having a concept of *F* in a number of ways. But

64. [[Cite Heck, Byrne, and Speakes. Add Crane too?]]

the most relevant differences are these. Possessing a concept for Aristotle essentially involves generalizations, our grasping a type as something that “holds across all cases” (*APo.* 1.31, 87b30). The ability to grasp things in this way is presupposed by our linguistic ability to use general terms that can be recombined syntactically in ever new combinations, as well as by our ability to articulate in speech alleged differences and commonalities between types,⁶⁵ and consequently on this basis to test and revise such claims, to draw inferences and reason. Perceiving something as *F*, in contrast, does not require that a subject can grasp *F* in this way. Before one has the concept of *F*, a subject may not be able to articulate it at all, much less reason and test claims on that basis. Whether one can depends on what is in one’s conceptual repertoire at a given time, if one even has conceptual abilities at all. Animals that lack such abilities will never be in a position to articulate their perceptual contents. But it will still be possible *for humans* to articulate them accurately precisely because on Aristotle’s view they are the same sorts of content that can be grasped conceptually. Humans, for Aristotle, are in the unique position of being able to grasp a content perceptually and then at a later stage grasp it conceptually and begin to articulate the content of their own experience for themselves.⁶⁶

What is distinctive about perceptual content is its role, not in reasoning or explanation,

65. Humans, in Aristotle’s view, not only have the conventions required for words (*De interp.* 2, 16a19–20), which when combined form true and false sentences (1, 16a11–16), but also the underlying concepts (*νοήματα*) of which they are each signs (*σημεία*, 1, 16a6–9) and combine to form true and false thoughts (1, 16a9–11; *DA* 3.6, 430a26–b6). Animals, in contrast, lack conventions and consequently lack words (2, 16a26–29). Even if some are capable of vocal interaction (*διάλεκτος*, *HA* 4.9, 536a21; cf. *ἦν ἄν τις ὡσπερ διάλεκτον ἐπείειν*, 536b11–12 and 536a32–b3), they still do not have language in Aristotle’s view (*λόγος*, *Pol.* 1.2, 1253a9–18). On the extent and limits of animals’ linguistic abilities, see {Sorabji, 1993, #27640}, 80–81.
66. In his discussion of the Stoics, Sorabji ({%Sorabji, 1993, #27640}, 22) draws a useful set of distinctions between content which is actually verbalized by the perceiver as opposed to being simply verbalizable, and in the latter case between being verbalizable by the perceiver himself or by others; and distinguishing these again from being conceptualized by the perceiver.

but in the *discrimination* of objects and our selective response to them. Being able to perceive objects as *F* allows us to respond to them in so far as they are that sort of thing and not another, as blue rather than gold, or balsamic rather than pungent. Perceptual discrimination can obviously be more sophisticated and refined. What sorts of things an animal can discriminate depends not only on what perceptual faculties that species is endowed with, but also the individual animal's own stock of memories and experience. What nonhuman animals lack, in Aristotle's view, is the ability to generalize on this basis, articulate this in language, and draw inferences. It may be that perception involves some primitive form of "predication," as Richard Sorabji has claimed,⁶⁷ but only if we mean by this *taking* something to be of a certain kind. It need not involve any combination of *concepts*, as occurs in syntactic combinations. As the object of a *de re* attitude, the thing we perceive to be of a certain sort is just the object we are confronted with. There is no need for the perceiver to take it to be anything beyond what it is perceived as, in particular to conceive of it in a certain way, as the subject of a propositional content generally is in addition to the predicate it is taken to satisfy.

This basic discriminative capacity is enough for perception to play the role Aristotle assigns it in the genesis of conceptual knowledge. Because universal types already figure in perceptual content, Aristotle believes, we are in a position to ultimately stand in the right conceptual and epistemic relations to them. But perception cannot attain that goal by itself, not even repeated true perceptions of the same sorts of things. It is the understanding that

67. Sorabji argues (Sorabji, 1993, #27640, 17–20) that even apart from a fair number of passages where Aristotle describes the content of a perception using a 'that' clause (18 n. 6), there are many cases which are "predicational," where one thing is predicated of another (19); and that Aristotle's notion of perceptual content is of 'propositional' in this broader sense. Earlier Sorabji stresses that he will not use 'perceives that' locutions in his own discussions "to involve more than perceiving as," where this does not involve anything more than making a predicational connection (12).

does this, on the basis of what is furnished by such perception. In this way, all knowledge for Aristotle depends on perception as the ultimate source of its information. Even demonstrative knowledge must in the end rest on “induction” (ἐπαγωγὴ), which in turn relies on perception for its input (*APo.* 1.18).⁶⁸ Perception furnishes the data or raw materials for scientific knowledge, even though they require significant further processing by our higher faculties.⁶⁹

The process of induction is no doubt complex. It generally involves not just repeated experiences of similar phenomena and their retention in memory, but the collation and sifting of these memories in order to identify features that can serve an explanatory role. Grasping the right universals at the right level of generality for explanatory purposes will not in general be easy, much less automatic. Depending on the case, it can take more or less intellectual effort, as it may involve the action not only of understanding but of reasoning. But however complex our investigations, this process is primarily a matter of bringing into relief *what is already present* in the content of perceptual experiences, by isolating certain features latent within it. That is why Aristotle in summing up can say that “perception *implants* the universal in this way (καὶ γὰρ ἡ αἴσθησις οὕτω τὸ καθόλου ἐμποιεῖ, *APo.* 2.19, 100b3–5).”⁷⁰ Accordingly, he believes that in some cases we can even grasp a universal from a single observation, “not because we know by seeing, but because we *possess* the universal *from* seeing.”⁷¹ It is because per-

68. See also *APo.* 2.19, 99b35–100b5; *Metaph.* A 1, XXX–XXX; *DA* 3.8, 432a3–10; cf. *NE* 6.11, 1143b4–5.

69. Against {Kahn, 1981, #15981}, 403: “[S]ense perception by itself cannot provide us with the raw materials of scientific knowledge.” Kahn is right to emphasize that perception by itself is not sufficient for such knowledge, much less constitute it, on Aristotle’s view. But it is difficult to see how perception does not furnish the “raw materials” for it, given the passages cited in the following paragraph above.

70. I take this passage, with Barnes (XXXX), as describing the process by which we acquire the concepts to be used in subsequent generalizations, and not the formulation of the generalizations themselves. McKirahan (McKirahan, 1992, #10951), 250, 252) appears to take it the same way.

71. *APo.* 1.31, 88a12–14: οὐχ ὡς εἰδότες τῷ ὀράν ἀλλ’ ὡς ἔχοντες τὸ καθόλου ἐκ τοῦ ὀράν. Cf. ἐκ τοῦ αἰσθῆσθαι, 2.2, 90a28.

ception is *of* universals, because types already figure in perceptual content, that subsequent reflections can result in the acquisition and possession of general concepts of the features we perceive particulars as exemplifying.⁷² The objects of understanding are not only present in perceptible forms on Aristotle's view (*ἐν τοῖς εἶδεσι τοῖς αἰσθητοῖς τὰ νοητά ἐστι*, *DA* 3.8, 432a5). Our understanding actually grasps them *in* the representations that originate from perception (*ἐν τοῖς φαντάσμασι νοεῖ*, 3.7, 431b2). The content of our concepts thus depends upon the contents of the perceptions from which they are generated, even if they do not all stand in a simple 1-1 relation.⁷³

8. What can be perceived

If Aristotle understands all perceptions in this way, we are in a position to clarify the various notions he associates with it. Start from the basic schema for perception:

(A*) *S* perceives *x* as *F*

Using this, we can then characterize perceptible characteristics directly in terms of types, which is crucial for the distinction between intrinsic and extrinsic perceptibles; and that, in

72. I thus disagree with McKirahan's view that we come to perceive something as a particular of a given kind only as a result of induction (McKirahan, 1992, #10951, 252, 256). Induction allows us to grasp the universal conceptually. But we must already have a nonconceptual grasp of the universal in perception if the process is to get off the ground in the first place.
73. A 1-1 relation holds, at best, for the most basic or "first" concepts (*τὰ πρῶτα νοήματα*), which Aristotle seems to regard as so close to the quasi-perceptual representations on which they are based (*φαντάσματα*) that he feels compelled to ask how they will differ; and his answer seems to be that while the concepts are not identical, they nevertheless do not occur without the corresponding representations (*DA* 3.8, 432a12–14). Concepts, on the other hand, that involve the negation of other concepts or the compounding of concepts (or both) will not stand in such a simple relation. The resulting conceptual content will still ultimately be based on perceptual contents. But it need no longer be true of the same object as the perception and in many cases will not be. The operations of compounding and negating are the main subject of *DA* 3.6. [[However we construe the opening line of *APo.* 1.18, 81a38–9 (on which, see *e.g.* {Barnes, 1993 #2174}, 167–8), it clearly presupposes that the contents of knowledge depends in some way on the contents of perception.]]

turn, will allow us to characterize intrinsic and extrinsic perception in such a way as to allow for error.⁷⁴

The first thing to do is to revise the notion of a perceptible in light of (A*). That would give us, as a first approximation, the following schema:

- (*) *F* is perceptible *iff* it is possible that there is an *S* and an *x* such that *S* perceives *x* as *F*.

Aristotle would no doubt accept this biconditional as true. But it leaves out something critical in his view, namely, that perceptibles are characteristics that *bring about* perception—they are efficient causes of their being perceived. But this can easily be rectified:

- (P*) *F* is perceptible *iff* it is possible that there is an *S* and an *x* such that
- i.* *S* perceives *x* as *F*
 - ii.* *x* is *F*
 - iii.* *x* is an efficient cause of (*i*).

This formulation is not equivalent to the first, since the causal requirement in (*iii*) might be expected to narrow the class of perceptibles.⁷⁵ But, as we have seen, Aristotle's notion of a cause is quite permissive, since he allows extrinsic as well as intrinsic causes (see p. XXX above). Therefore, (P*) only restricts perceptibles to the characteristics of things that can pro-

74. It seems possible to allow '*F*' in this schema to be substituted with proper noun phrases as well, to cover cases where, for example, I perceive Callias *as Callias*, to recognize him as the particular person he is. It is not clear whether we should regard this second '*Callias*' as expressing a type with only instance, like the sun (*Metaph.* XXXX), or not. The important point is that since '*F*' in any case can be replaced by general expressions, Aristotle is in a position to explain much more directly how types can be regarded as perceptible, and not just parasitically in terms of perceptible particulars (as object readings do).

75. The requirement in (*ii*), that it be possible for such a content to be veridical, is presumably less problematic, since it only requires that it be possible for the characteristic in question to be instantiated. In order for a characteristic to fail that requirement, then, it would have to be impossible for it to be instantiated; and this might reasonably be regarded as not imposing a substantive, new constraint.

duce perception, and Aristotle would not have thought it possible to perceive something as F unless it were possible for some F to bring about a perception of itself or *vice versa*.⁷⁶ So he would accept both biconditionals.

Notice that these schemas are framed in terms of types and what they are capable of, and so makes no commitment about any given token of these types *actually* producing perception on a given occasion (or indeed on any occasion). All that is required is that it be *possible* that interactions satisfying these conditions take place. (P*) is a claim about a causal power, rather than about its exercise. This qualification will prove important below.

We can then easily specify a variant for intrinsic perceptibles, by adding qualifiers about the sense modality in question (see above, n. XX) and modifying the final clause, (iii):

- (P₁*) F is intrinsically perceptible with a sense modality M iff it is possible that
- there is an S and an x such that
 - i.* S perceives x as F with M
 - ii.* x is F
 - iii.* x is an efficient cause of (*i*) in so far as x is F .

A type is intrinsically perceptible if it is capable of not merely getting itself perceived, but getting itself perceived *as such*: it is perceived under the very same aspect or characteristic that is responsible for its being so perceived. In such cases, content and cause converge in a particularly strong way. With all perception, there is a kind of extensional convergence between content and cause, because of the *de re* nature of the attitude. A genuine perception for Aristotle will always be about the real object that brings that perception about. But with intrinsic perceptibles, there is a kind of intensional convergence as well: these perceptibles are

76. The *vice versa* clause is perhaps more striking. But his notion of extrinsic perception commits him to it.

the sort of things that can get themselves taken exactly for what they are.⁷⁷ That is not the case with extrinsic perceptibles. A type is extrinsically perceptible to a given sense modality if it is the sort of thing that *can* be perceived by that sense, but *only* in virtue of *other* characteristics instantiated with it:

(P_E^{*}) *F* is extrinsically perceptible with a sense modality *M* iff

i. *F* is perceptible

ii. *F* is *not* intrinsically perceptible with *M*.

So defined, intrinsic and extrinsic perceptibles are mutually exclusive and jointly exhaustive relative to given sense modality. Anything that is perceptible to a given sense must be either intrinsically or extrinsically perceptible to that sense, and not both. A single characteristic can be both intrinsically and extrinsically perceptible only when different sensory modalities are at issue.

Which category a perceptible type falls in, then, depends on its causal powers. If a characteristic can, as such, bring about a perception of itself in the relevant sense modality, it will be intrinsically perceptible to that modality. But even if it cannot, it can still be *a* cause of perception, since Aristotle allows that it can be an extrinsic cause and so extrinsically perceptible to that modality. He can therefore be very permissive about the class of perceptibles, about what *can* be perceived, even if he is not permissive about what is *actually* perceived on any given occasion. Whether an extrinsic perceptible is perceived on a given occasion depends on whether the subject perceives the object *as* exemplifying that characteristic. And it

77. Not that they *do* get so taken on every occasion, but just that they are the sorts of thing that *can*. This qualification will prove important below. [[Further possibility: consider a property *F* which is intrinsically perceptible to *M*; it is *possible* that *S* correctly perceives *x* as *F* with *M*, satisfying (i) and (ii) but not (iii). In that possible scenario, something else gets *S* to perceive *x* as *F* with *M*.]]

seems perfectly possible to perceive an object as having certain characteristics, without perceiving it as having other characteristics it possesses, much less *every* other characteristic it possesses. What a subject perceives depends on its abilities, its past experience and cognitive repertoire, and, more adventitiously, what it happens to attend to and discriminate on a particular occasion.

By framing things in this way, we also leave room for perceptual error. They must still be perceptible characteristics, of course—according to (P*), the *sort* of thing that *can* get itself perceived, by being an intrinsic or extrinsic cause of its being perceived. But in any given case where we perceive something as *F*, it does not follow that that object actually is *F*. There must still be a real object we are perceiving, which brings about the perception. But we may be perceiving it as something other than it is. Characterizing intrinsic and extrinsic perception in terms of these general classes of perceptibles, then, avoids tying their content to features the object actually exemplifies:

- (A_I^{*}) *S* intrinsically perceives an *F* with a sense modality *M* iff there is an *x* such that
- i.* *S* perceives *x* as *F* with *M*
 - ii.* *x* is an efficient cause of (*i*)
 - iii.* *F* is intrinsically perceptible with *M*.
- (A_E^{*}) *S* extrinsically perceives an *F* with a sense modality *M* iff there is an *x* such that
- i.* *S* perceives *x* as *F* with *M*
 - ii.* *x* is an efficient cause of (*i*)
 - iii.* *F* is extrinsically perceptible with *M*.

On this reconstruction, we can see that the core idea on which Aristotle's theory is founded is still the basic notion of perceiving as, (A*). The different classes of perceptibles are defined in terms of this, by appealing to the general causal powers of different types of things to produce such experiences. We can then mark a difference among these experiences by appealing to this classification of perceptible types, but now solely in terms of the *content* of these acts, rather than their actual causes on a specific occasion. Intrinsic perception is about intrinsic perceptibles, and extrinsic perception about extrinsic perceptibles, whether or not they are brought about by the relevant characteristic in that particular instance. The latter is a separate condition: a perception is actually brought about by the kind of thing it is about if, and only if, it is *veridical*. Aristotle believes that this is always the case (or nearly always the case) for the intrinsic perception of sensible qualities exclusive to a sense, and that it is definitely not always the case for extrinsic perception, since what something is perceived as may have little to do with the qualities of the object which are efficacious in producing perception. But Aristotle also thinks that our perceptions of *shared* perceptibles, like shape, are liable to error, perhaps the greatest error (*DA* 3.3, 428b24–25), despite the fact that they are *intrinsically* perceived and so the sort of characteristic that can, as such, bring about perception of itself. For Aristotle, a perception's being veridical does *not* follow from its being intrinsic, and this is reflected in the schemas above. The claim that intrinsic perception of exclusive perceptibles is always veridical is a substantive claim, requiring further defense.

9. Conclusion

On the sort of reading I have offered here—a content reading, as one might call it—the content of a perception is not exhausted by specifying the object being perceived and the fea-

tures it objectively possesses. It also essentially includes how the subject takes the object in perception (or mis-takes it, as the case may be). In this way, it can avoid all three of the difficulties raised for object readings. (1) In so far as canonical perceptual reports include a reference to what the subject *takes* the object to be, to the types the subject takes the object to exemplify, the substantive psychological generalizations over contents Aristotle makes become possible. (2) A content reading is not inherently permissive or, at any rate, not promiscuous. To take an analogy: even if, potentially, one could be amorously involved with anyone, no one, not even Don Juan, is amorously involved with everyone. In the same way, Aristotle can be generous about the range of characteristics that can be extrinsically perceived, about the class of extrinsic *perceptibles*, without thinking that every type an object exemplifies will actually be *perceived* on every given occasion, even extrinsically. On the contrary, he can take all perception to be selective: on any given occasion, a subject will perceive an object as exemplifying some types, but will not perceive them as exemplifying others. Finally, (3) a content reading is not strict. A subject is not limited to perceiving an object as exemplifying types it actually exemplifies. Perception is *liable to error*, at least when taken more broadly than sensation, the intrinsic perception of qualities exclusive to a single sense.

Now, *phantasia* is likely to be involved in all but the simplest perceptual encounters. And there can be no doubt that in all such cases the subject adopts an “interpretive” stance, if by this we mean nothing very deliberate or sophisticated, but only that the subject *takes* things to be a certain way, regards them *as* such-and-such. But this minimal kind of “interpretation” is not something that is introduced by *phantasia* or is due to its causal involvement. Rather, it is there from the start already in perception. By its very essence, perceiving is taking something to be certain way, regarding it as *F* rather than *G* or *H* (or whatever). Perception, as

Aristotle repeatedly says, is a discriminative capacity. The structure of perceptual content reflects that. *Phantasia* may be responsible on certain occasions for *which* types feature in the content of a perception. It may even be involved, at least in part, on many or most occasions. But it is not necessary for types to feature in the way outlined above. Perceiving an object as belonging to a certain type is an essential feature of perception itself.

On this point, Aristotle differs profoundly from Plato. In the *Theaetetus*, Socrates argues that the senses do not take their objects *to be* anything; that, he thinks, requires something distinct from the senses, the soul, which alone is able to classify things, make predications, or reason. We perceive *through* the senses rather than with them (*Tht.* 184B–186E). Aristotle is not especially worried about whether we perceive with our senses or with our soul. He is concerned more about the resulting structure of perceptual content. If perception is to be regarded as kind of cognition at all, especially in creatures *not* capable of making judgements, it must already involve *taking* things to be a certain way.⁷⁸

78. Burnyeat (Burnyeat, 1995, #32941,) gets the substance of the contrast between Plato and Aristotle right, even though he locates it in other texts: he takes Aristotle's comparison of perception to the impression of a signet ring in wax in *On the Soul* II 12 to be a comment on the wax block discussion in the *Theaetetus* (191C–196C). I construe the signet ring passage differently (see my Caston, 2004, #40374), 300–07 and more extensively in *Aristotle on the Problem of Intentionality*, in progress), and I take the contrast over perceptual content instead to be with the Wooden Horse passage instead at 184B–186E. But we take the broad contrast between their approaches to perception in similar ways.