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Article Title: Aristotle’s Infallible Perception

Abstract: In the *De Anima*, Aristotle claims that the five senses are infallible about their proper objects. I contend that this claim means that sight is infallible about its proper object in its most specific form, i.e. sight is infallible about red or green and not merely about color in general. This robust claim is justified by Aristotle’s teleological principle that nature does nothing in vain. Additionally, drawing on Aristotle’s comparison of perception and one’s understanding of the essences, I defend a conception of the senses in which the structure of their contents is simple rather than predicative and show how this coheres better with the rest of my interpretation.

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## I. Introduction

In a few mysterious *De Anima* passages (II.6 418a11-17, III.3 428a11-12, III.3 428b18-19) Aristotle apparently asserts that the five senses of animals always deliver true judgments about external objects.<sup>1</sup> Is Aristotle really committed to infallible perception by animals?

When Aristotle claims that the five senses are infallible, he is clear that they are only infallible regarding their proper objects. The proper object [ἴδιον] of a sense cannot be perceived by any other sense, so color is the proper object of sight, sound of hearing, flavor of taste, etc.<sup>2</sup> Aristotle contrasts the proper objects of a sense with the common objects [κοινὰ] (e.g. shape, movement, number), which can be perceived by more than one sense and which can be mistaken.<sup>3</sup> For an example of a common object of perception, if I feel something moving over my feet and look down, I can both see and feel that it is slithering. While both the proper and common objects of perception are perceived *per se* [καθ' αὐτά],<sup>4</sup> Aristotle distinguishes a third group of perceptibles, which are perceived *per accidens* [κατὰ συμβεβηκός].<sup>5</sup>

In this essay, I answer this question: what, for Aristotle, are the five senses infallible about? According to one interpretation, sight infallibly judges that what it sees is color even if it can be mistaken about which color it sees.<sup>6</sup> I contend that Aristotle is committed to the stronger

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<sup>1</sup> For this paper, I assume that for Aristotle our perceptions (at least normally) are about external objects rather than internal impressions. Given the *caveat* that perception might be of impressions or at least we might seem to perceive internal impressions under abnormal conditions, this assumption is fairly unobjectionable. For criticism of a Sense-Datum Theorist reading of Aristotle, see Everson, *Aristotle on Perception*, pp. 18-20. For relevant passages in Aristotle, see 460b28-31, 1010a19, and 1010b3-9.

<sup>2</sup> *De Anima* II.6 418a11-14

<sup>3</sup> *De Anima* II.6 418a17-20

<sup>4</sup> *De Anima* II.6 418a8-9

<sup>5</sup> *De Anima* II.6 418a20-24

<sup>6</sup> Aristotle speaks of the senses as if they were the subjects of these perceptions, but this is not his preferred way of speaking (see *De Anima* I.4 408b11-15). Rather the animal itself is the subject of these perceptual acts, and it perceives by means of its senses.

claim that the senses infallibly judge about the specific sort of proper sensible they are perceiving (e.g. sight judging that it is seeing green).<sup>7</sup>

Closely related to this question is the more perplexing issue: what is the structure of the content of a perception? Do perceptions deliver propositions or is their structure simpler and more akin to our understanding of simple items like essences? I argue for the latter interpretation, which I call the ‘Simple-Object Account’: perceptions are *veridical* rather than *true* (insofar as ‘truth’ involves predication and opposition to ‘falsehood’). This question bears on infallibility because a perception’s structure is relevant to what it means for it to be veridical.

Finally, I consider what justifies Aristotle’s infallibilism and speculate about the three main answers to this question. I argue that Aristotle’s optimistic teleology justifies his infallibilism (in what I call the ‘Teleological Justification’). Then, I show why the five senses must be infallible if they are to be reliable by considering what distinguishes them from the common sense: their incorrigibility.<sup>8</sup> Since only one sense can judge about its proper object, any mistakes made by that sense about that object cannot be corrected.<sup>9</sup> Given how fundamental perception is to Aristotle’s epistemology, perceptual infallibilism is necessary to avoid strengthening a skeptical challenge to the whole edifice of knowledge, and it is necessary for the optimal functioning of each animal species. To be clear, the problem is not so much answering the skeptic’s doubts about the reliability of perception, but not furnishing them with a good

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<sup>7</sup> For this essay, ‘X is infallible about Y’ means that X cannot be mistaken about Y. In Section III, I show what the senses’ being mistaken about their proper objects would consist in. Then in Section IV, I show how Aristotle qualifies this claim restricting infallibility to normal conditions.

<sup>8</sup> For this essay, ‘Power X is incorrigible about Y’ means that X cannot be corrected about Y either by X itself or by some other power Z.

<sup>9</sup> Could we not correct one misperception by just looking again, perhaps under different conditions? (This is Robert Audi’s suggestion in private correspondence). I think this objection fails for a few reasons. First, how do we know that it is one and the same thing that we are looking at in either case? Second, if we do know that it is one and the same thing, how do we know that this thing has not changed in the time between our two perceptions of it? Third, even if we know that it is one and the same thing and that it has not changed, how do we know which of our two perceptions is the incorrect one? This final problem is the most pressing because we have to remember that there is no problem in the perceptual medium or sense-organ that we can point to in the one case, but not the other.

reason to doubt perception's reliability. If it were possible for perception of proper sensibles to make mistakes under normal conditions, these errors would be impossible to correct, and since these are normal conditions there's no possibility of discovering some defect in the organ or medium that would undermine the perception. If there were infeasible errors that could not be corrected in a faculty that plays an integral role in all of our knowledge, this would give a skeptic good reason for his doubts.

Specific Infallibilism is hardly an original thesis on my part, and others have used teleological arguments to defend Aristotle's infallibilism (although only David Charles has explicitly defended Specific Infallibilism with a teleological argument).<sup>10</sup> Indeed, is my critique of Generic Infallibilism as an interpretation of Aristotle a straw-man argument, since Anna Marmodoro—its most prominent recent defender—demurred in ultimately endorsing the view? Specific Infallibilism does seem to be the more common interpretation,<sup>11</sup> although many translations of 418a15 better accord with Generic Infallibilism (by translating it 'that there is a color')<sup>12</sup> and D.W. Hamlyn and Iakovos Vasiliou explicitly endorse the interpretation.<sup>13</sup> Moreover, many commentaries on this passage seem unaware of the question and speak so unclearly about what the senses are infallible about that they could be taken in line with either interpretation.<sup>14</sup>

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<sup>10</sup> Charles, pp. 122-123 (including n. 24)

<sup>11</sup> For clear expressions of support for Specific Infallibilism by modern commentators: Gaukroger, p. 78; Charles, p. 123, n. 4; Johnstone, p. 314; Turnbull, pp. 4-5. Among the ancient commentators: Themistius, p. 77; Simplicius, p. 156 (although the attribution of this commentary to Simplicius is doubted); also apparently Alexander of Aphrodisias, p. 84. For modern commentators who seem to assume Specific Infallibilism: Modrak [1987], pp. 78-79; Block, pp. 7-9; Gregoric, p. 30; Spruit, p. 40; Ben-Zeev, p. 120; Everson, p. 268, n. 7; Cashdollar, pp. 163-64; Siwek, p. 196; Hicks, pp. 469-70; Polansky, p. 253.

<sup>12</sup> Wallace, p. 93; Hamlyn, p. 25; Polansky, p. 251; Marmodoro, p. 85

<sup>13</sup> Hamlyn, p. 106; Vasiliou, p. 123

<sup>14</sup> Some seem slightly more in line with Generic Infallibilism: Theiler, p. 161; Beare, p. 235. Others either provide no elaboration on Aristotle's text or write too ambiguously to tell: Ross, p. 138; Trendelenburg, p. 302; de Haas, p. 331.

Yet I suspect that the debate about Generic Infallibilism has less to do with the direct textual evidence for and against it and more to do with the inadequacy of the sort of teleological justifications given for Specific Infallibilism.<sup>15</sup> Although he endorses Specific Infallibilism, Terence Irwin is so critical of Aristotle's motivations for the view that one wonders if it wouldn't be more charitable to accept a Generic Infallibilist interpretation instead.<sup>16</sup> Thus my aim in this essay is not only to shore up the textual evidence for Specific Infallibilism, but also to attempt the more crucial task of providing an improved teleological justification of the view (and one I claim Aristotle himself suggests in a crucial passage in *De Anima* III.12).

One of the most novel aspects of this paper is my explicit combination of the three theses: Specific Infallibilism, the Simple-Object Account, and the Teleological Justification. What I hope to show is that these three form a coherent, mutually enforcing package. Once one accepts Specific Infallibilism, one should also accept the Teleological Justification because it is the best defense of it, and once one accepts the Teleological Justification, one should accept Specific Infallibilism because only this sort of infallibility guarantees reliable perception for animal survival and human knowledge. On the issue of the contents of perception, defenders of Specific Infallibilism and the Teleological Account are free to accept either the Simple-Object Account (which is more plausible) or its opposite (what I call the 'Predicative Account'). Defenders of Generic Infallibilism, though, may have more difficulty accepting the Simple-Object Account because their account of perception of proper sensibles seems to involve more advanced cognitive machinery capable not only of recognizing particular colors but color *in general*. This account fits better with the more complex contents associated with the Predicative Account. In

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<sup>15</sup> I will present and criticize some of these justifications in Section IV 'Justifying Infallibilism'.

<sup>16</sup> Irwin, pp. 314-15

this essay, I hope to show then that my trio of views is superior to its opposite trio: Generic Infallibilism, the Predicative Account, and the Formal Justification.<sup>17</sup>

## II. Generic vs. Specific Infallibilism

The first question facing Aristotle's infallibilist thesis is whether the five senses are only infallible about their proper objects at the greatest level of generality. On the one hand, there is Generic Infallibilism:

The senses are infallible about their proper objects only in their most generic form.

On the other hand, there is Specific Infallibilism:

The senses are infallible not only about their proper objects in their most generic form, but also at a level of greater specificity.<sup>18</sup>

According to the Generic Infallibilist, sight can mistake orange for white, but according to the Specific Infallibilist this sort of mistake is impossible. Which of these two positions is Aristotle committed to?

To begin with *De Anima* II.6 418a11-17 (particularly lines 14-17), we find Aristotle introduces his infallibilist thesis in the context of distinguishing the proper objects of perception:

I mean by "proper" [object] that which cannot be perceived by a different sense, and about which it [i.e. the sense] cannot be mistaken, e.g. sight of color, hearing

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<sup>17</sup> Ultimately, though, if one prefers the Predicative Account, this would also be compatible with Specific Infallibilism and the Teleological Justification (but I claim the opposite trio cannot claim the Simple-Object Account).

<sup>18</sup> Does the Specific Infallibilist think that the senses are infallible at the greatest level of specificity (e.g. even about the very shade and hue of magenta it perceives)? Insofar as some level of specificity is perceived under normal conditions (as opposed to not being perceived at all), it is perceived correctly. Yet different animals have more precise senses than others, so how specific the objects of their perception can be will vary across species (*De Anima* II.9 421a9-26).

of sound, and taste of flavor, but touch has more differentiae. But each [sense] judges concerning these [i.e. their proper objects], and it [i.e. sight] is not mistaken that color<sup>19</sup> nor even [hearing] that sound, but [it does mistake] what or where the colored thing is or what or where the heard thing is.<sup>20</sup>

At first glance, this passage is compatible with either Generic or Specific Infallibilism, since Aristotle merely speaks about color and sound rather than any specific color or sound.

Although *De Anima* II.6 418a11-17 does not clearly commit Aristotle to Specific Infallibilism, two other passages suggest this interpretation. First, later in the *De Anima* at III.3 428b21-22, Aristotle writes, ‘For it [i.e. the sense] is not mistaken that white, but it is mistaken whether the white thing is this or something else’.<sup>21</sup> This sentence has a highly similar grammatical construction to the one at 418a14-17, which suggests that this later sentence is another statement of his infallibilist position. Each passage describes the senses’ not being mistaken (using ‘ψεύδεται’ or ‘ἀπατᾶται’) about something using the same ‘ὅτι+accusative object’ construction without providing any further structure. Each also contrasts the senses’ not being mistaken about these proper objects with what they do make mistakes about. Thus in the one passage they make mistakes about whether the white thing is this or something else [‘εἰ δὲ τοῦτο τὸ λευκὸν ἢ ἄλλο τι’], and in the other their mistakes are about what or where the colored thing is [‘τί τὸ κεχρωσμένον ἢ ποῦ’]. The former construction is a rephrasing of the latter ‘what’ question such that the two options for what the colored/white thing is are provided (‘this or something else’). What the parallelism between these two passages suggests is that Aristotle was

<sup>19</sup> This is not fully grammatical as a translation, but I wish to leave open the issue of how to translate ‘ὅτι χρῶμα’ and similar phrases until Section III ‘What is the Content of a Perception?’.

<sup>20</sup> *De Anima* II.6 418a11-17 ‘λέγω δ’ ἴδιον μὲν ὃ μὴ ἐνδέχεται ἑτέρα αἰσθήσει αἰσθάνεσθαι, καὶ περὶ ὃ μὴ ἐνδέχεται ἀπατηθῆναι, οἷον ὄψεις χρώματος καὶ ἀκοὴ ψόφου καὶ γεῦσις χυμοῦ, ἢ δ’ ἀφῆ πλείους [μὲν] ἔχει διαφορὰς • ἀλλ’ ἐκάστη γε κρίνει περὶ τούτων, καὶ οὐκ ἀπατᾶται ὅτι χρῶμα οὐδ’ ὅτι ψόφος, ἀλλὰ τί τὸ κεχρωσμένον ἢ ποῦ, ἢ τί τὸ ψοφοῦν ἢ ποῦ.’ I use my own translation throughout.

<sup>21</sup> *De Anima* III.3 428b21-22 ‘ὅτι μὲν γὰρ λευκόν, οὐ ψεύδεται, εἰ δὲ τοῦτο τὸ λευκὸν ἢ ἄλλο τι, ψεύδεται.’

not restricting himself to Generic Infallibilism in 418a14-17, but that he was leaving unspecified ‘ὅτι χρῶμα’ so that it might be further specified by any color as in the phrase ‘ὅτι λευκόν’.<sup>22</sup> Thus, color [χρῶμα] is functioning as a variable that is filled in by white [λευκόν] in the later passage.

Another passage in *Metaphysics* Gamma also supports the Specific Infallibilist interpretation. There he uses typical infallibilist language<sup>23</sup> to describe one’s attitude towards the sweet [τό γλυκύ], ‘But one is always right about it [i.e. the sweet]’.<sup>24</sup> Again in the preceding passage, Aristotle contrasts the fallibility of the perception that something is sweet (in this case, some wine) with our infallible perception concerning the sweet.<sup>25</sup> Despite this passage’s obscurity, Aristotle clearly states that taste is infallible about the sweet when according to the Generic Infallibilist he should only say that it is infallible about flavor.

Finally, both *De Anima* II.6 418a14-17 and III.3 428b21-22 contrast what the senses are infallible about with what they make mistakes about in a way that tells against Generic Infallibilism. In both cases, the sense is infallible about color or some particular color, but mistaken about what is colored or where the colored thing is. If Generic Infallibilism were true, we would expect him to make the point that whereas the senses are infallible about color, they are mistaken about red or white or green. This seems like the more obvious contrast (genus vs. species) rather than bringing in entirely different sorts of questions. A related point against Generic Infallibilism is that it is so weak a thesis as to be totally uninteresting. It doesn’t further Aristotle’s theory of perception and tells us little about the external world. Why would Aristotle

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<sup>22</sup> Hamlyn understands these two passages as making different claims: 418a14-17 is Generic Infallibilist whereas 428b18-19 rejects Specific Infallibilism and accepts what we might call ‘Specific Reliabilism’ (p. 135). The two passages’ parallel structures (418a14-17 and 428b21-22) militate against this interpretation.

<sup>23</sup> In 428a11-12, he describes perceptions as ‘ἀληθεῖς ἀεί’ drawing as always a contrast with some other faculty (in this case imagination) that often makes mistakes. Similarly, 428b21’s ‘οὐ ψεύδεται’ corresponds to ‘ἀληθεύει’.

<sup>24</sup> *Metaphysics* Γ.5 1010b24-25; ‘ἀλλ’ ἀεί ἀληθεύει περὶ αὐτοῦ’.

<sup>25</sup> *Metaphysics* Γ.5 1010b20-23



bother to mention it more than once and include it in his initial characterization of the senses in *De Anima* II.6?

The textual evidence directly in favor of Specific Infallibilism is fairly robust, but there may be other commitments Aristotle holds to that might affect our confidence in this conclusion. Therefore, in the next section, I consider what bearing the contents of perceptions of proper sensibles might have on their infallibility.

### III. What is the Content of a Perception?

The most challenging question concerning Aristotle's infallibilism is a more basic question about the structure of the content of perceptions of proper sensibles. Most thoughts involve some complexity: terms come together to form propositions involving subjects and predicates. The content of a thought lends itself to linguistic representations, e.g. the sentence 'Snow is white' represents my thought that snow is white. Certain perceptions are like this too. I can see that the son of Diates is white or that the red thing is moving. Since these sorts of perceptions have complex structures, it is not mysterious how they can be true or false just like sentences, thoughts or propositions.<sup>26</sup> These mental attitudes are clearly both truth-apt and falsehood-apt. Are sight's or touch's perception of their proper objects similarly complex? At no point in his biological works does Aristotle consider these perceptions complex or give any

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<sup>26</sup> In the next sections, I will speak about the common sense and how my interpretation can explain its fallibility, but another issue is whether the common sense has complex or simple perceptual content. Since the common sense cannot operate without one of the five senses' perceiving one of its objects (425b5-9), the base case of common sense always involves perceiving some proper sensible *as* something, and hence it has complex contents. Thus in introducing the common sensibles at 418a16, he describes it as perceiving where the color or colored thing is. This is a reasonable view because it's hard to conceive of what it would be to see a motion or shape all on its own without perceiving it as belonging to some color or sound.

indication of what this complexity would consist in; indeed, he even compares perception to understanding (νοῦς) in lacking a subject-predicate structure.<sup>27 28</sup>

The question about the structure of perceptual content is related to the question of whether perceptions are truth-apt and falsehood-apt. An alternative proposal is that rather than saying that my perceptions of proper sensibles are ‘true’ or ‘false’ in the same sense that sentences or propositions are, they are true in some other sense. We might describe this other sense of ‘true [ἀληθής]’ as *veridicality*.<sup>29</sup> I believe Aristotle marks the first sense of truth with the expression ‘ἀληθής ἢ ψευδής’, while the second sense of truth (i.e. veridicality) corresponds to ‘ἀληθεῖς ἀεί’.<sup>30</sup> While sentences, perceptions of common sensibles, imaginings, and thoughts involving predication are true in the first sense (i.e. in opposition to falsehood), our understanding of non-composite items and our perceptions of proper sensibles are true in the second sense (i.e. not in opposition to falsehood). As we shall see, Aristotle opposes the truth attained by our understanding of non-composite items to ignorance [ἄγνοια]. Given that truth in

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<sup>27</sup> *De Anima* III.6 430b27-30

<sup>28</sup> I describe the contents of perceptions of proper sensibles as ‘simple’ in contrast to ‘complex content’, which I gloss as predicative or propositional. In my account, ‘simple content’ means that a) only one accident is perceived; b) this accident is not perceived as predicated of something; and c.) it does not posit something’s existence or non-existence. Thus the contents of perception of proper sensibles are non-propositional and non-predicative. This doesn’t mean that the white that sight perceives doesn’t belong (as a matter of fact) to any subject, but it does mean that insofar as it’s engaged in perception sight sees white without seeing it *as* belonging to something. This use of ‘simple’ and ‘complex’ to describe perceptual contents departs from Marmodoro’s usage, who uses ‘complex perceptual content’ to mean ‘content comprising multimodal input’ (e.g. content coming via both sight and smell) (pp. 156-57). This usage makes sense within Marmodoro’s project of giving a metaphysical understanding of common sense and how it makes many inputs into one perception, but it does not serve my end of showing the connection between νοῦς and perception of proper sensibles in terms of their contents.

<sup>29</sup> I use the English word ‘veridical’ primarily to keep the two distinct senses of truth clear for the purposes of this essay, but it does not correspond perfectly to Aristotle’s second sense of truth. First, while one can describe perceptions as ‘veridical’, it is awkward to say that our understanding of something is ‘veridical’. Second, when we describe perceptions as ‘veridical’ we do not generally distinguish between perceptions of proper and common sensibles. It would be equally good English to describe both my seeing something moving and my seeing the color red as veridical. I also worry that by allowing that propositions are true, while our understanding is only veridical, I am unduly privileging the former over the latter. Thus, there is good reason to prefer Aristotle’s more ambiguous expression ‘always true’ to ‘veridical’.

<sup>30</sup> *De Anima* III.6 430b27-30. Why did Aristotle not just use a different word to mark this distinction in sense? First, there is no good alternative word. As shown in the previous footnote, our word ‘veridical’ suffers from two problems: 1) it lacks the range of meanings that ‘true’ has; 2) it lacks the grandeur of ‘truth’. No substitute word is as good as the true article. Second, using a different word suggests too stark a difference in the two senses.

one case is opposed to falsehood and in the other to ignorance, this indicates that ‘truth’ has two different senses, since as Aristotle sets out in *Topics* I.15 using the example of ‘sharpness’, this is one of the means to distinguish different senses of a word.<sup>31</sup> Thus, there are grounds for distinguishing two senses of truth, which Aristotle marks by the expressions ‘ἀληθῆς ἢ ψευδῆς’ and ‘ἀληθεῖς ἀεί’.

We have seen then that there are two opposed accounts of perceptual content and corresponding to each an account of whether perception is apt to be either true or false or is veridical or not. Each assimilates perception to a different mental power: thought (διανοία) vs. understanding (νοῦς).

<i>Account</i>	Predicative Account	Simple-Object Account
<i>Content’s Structure</i>	Subject + Predicate	Simple Object
<i>Relation to Truth</i>	True or False	Veridical or Not
<i>Similar Mental Faculties</i>	Thought (also Common Sense and Imagination)	Understanding

Aristotle distinguishes between these two different structures for a cognitive faculty’s content in his discussion of νοῦς.<sup>32 33</sup> In *De Anima* III.6 430b26-30, Aristotle contrasts affirmation [φάσις] and denial [ἀπόφασις] with understanding [νοῦς] and sight of its proper object [τὸ ὁρᾶν τοῦ ἰδίου] in two regards. First, the former two attitudes are always bivalent (i.e. an affirmation is either true or false), whereas the latter two attitudes are always true. Aristotle contrasts a case of seeing the proper sensible (i.e. color) with a case of seeing whether the white thing is a man, and this contrast, together with his claim that this latter perception is not always

<sup>31</sup> *Topics* I.15 106a9-22

<sup>32</sup> *De Anima* III.6 430b26-30

<sup>33</sup> When I speak of νοῦς in this section, I mean νοῦς in the narrowest sense, i.e. theoretical νοῦς or the νοῦς of essence (430a27-30), which Thomas Johansen contrasts with general νοῦς or thinking (pp. 222-24). We might also draw this distinction in terms of ‘simple or direct apprehension of undivided objects’ vs. ‘discursive thinking’ which involves the ‘conceptual combination of single thoughts or notions’ (Spruit, p. 43). I deal with the former mode of thinking in this section.

true, suggests that sight of its proper sensible *is* always true. Thus we have, on the one hand, affirmation and denial (which are either true or false), as well as perception of whether some sensible property is an accident of some subject, and, on the other hand, we have understanding of what something is essentially (which is true for every such act) and sight of its proper sensible (which is also always true).

The second aspect of the contrast between the attitudes' structures is supposed to entail this distinction between the bivalence of affirmation/denial/perception of accidents and understanding/perception of proper sensibles' always being true. Affirmation and denial have a subject-predicate form [‘τι κατά τινος’], and so too does the perception of accidents in the example he gives (‘whether the white thing is a man or not’).<sup>34</sup> These two kinds of attitude also each have an attitude with contrary content. So I can affirm whiteness of the man or deny it, and similarly I can see that the white thing is a man or that it is not.<sup>35</sup> Since there is the possibility of contrary contents, there is the possibility that a statement be true or false. This does not hold for understanding or perception of proper sensibles.

Aristotle makes this connection between the subject-predicate structure in propositions and the simpler structure of our understanding of essences (and by analogy perceptions of proper sensibles) in *De Interpretatione* and in *Metaphysics* Theta. For example, in contrasting full sentences and individual words, he writes, ‘For there is the false and the true with regards to composition and division’.<sup>36</sup> A statement can only be false if it involves either composition or division. He also distinguishes between two kinds of meaningful sentences [λόγος]: those which assert something [ἀποφαντικὸς] and those that don’t.<sup>37</sup> Only the former sort of sentence involves

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<sup>34</sup> *De Anima* III.6 430b29-30 ‘εἰ δ’ ἄνθρωπος τὸ λευκὸν ἢ μή’.

<sup>35</sup> *De Interpretatione* 6 17a26-34

<sup>36</sup> *De Interpretatione* 1 16a12-13 ‘περὶ γὰρ σύνθεσιν καὶ διαίρεσιν ἐστὶ τὸ ψεῦδος τε καὶ τὸ ἀληθές’.

<sup>37</sup> *De Interpretatione* 4 16b34-17a2

both being true or false [τὸ ἀληθεύειν ἢ ψεύδεσθαι].<sup>38</sup> The two kinds of apophantic sentences are affirmation [κατάφασις] and denial [ἀπόφασις].<sup>39</sup> He describes each one's structure as either 'τινὸς κατὰ τινός' or 'τινὸς ἀπὸ τινός'.<sup>40</sup> We see here the same structure as he mentions in *De Anima* III.6 430b26-30 where he is describing denial [ἀπόφασις] again and affirmation [φάσις].<sup>41</sup> Thus the distinctive features of affirmation and denial are their subject-predicate structure and their ability to be false. Then in *Metaphysics* Theta, Aristotle considers the case of simple objects and what truth or falsity would be for them.<sup>42</sup> <sup>43</sup> Understanding 'cannot be mistaken concerning these things, but either one understands or does not'.<sup>44</sup> He explains this claim later by contrasting how subject-predicate statements are either true or false with how understanding of simple non-composite objects is not mistaken [οὐδὲ ἀπάτη], but one is merely ignorant in such cases [ἄγνοια].<sup>45</sup>

How do these considerations relate back to perception of the proper sensibles? We should see two aspects of the analogy between perception of proper sensibles and understanding as notable.<sup>46</sup> Perception of proper sensibles is similar to understanding insofar as:

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<sup>38</sup> *De Interpretatione* 4 17a2-3

<sup>39</sup> *De Interpretatione* 5 17a8-9

<sup>40</sup> *De Interpretatione* 6 17a25-26. These are difficult to translate into English, but only the subject-predicate structure is relevant for my purposes.

<sup>41</sup> Whereas in the *Metaphysics*, he explicitly says 'φάσις' and 'κατάφασις' are not the same (1051b24-25) and in *De Interpretatione* he uses them differently (17a17-20), in the *De Anima*, 'φάσις' means the same thing as what 'κατάφασις' means in these other works.

<sup>42</sup> *Metaphysics* Θ.10 1051b17-1052a4

<sup>43</sup> What is the simple object of νοῦς that corresponds to the simple contents of perception of proper sensibles? Commonly, this simple object is taken to be either the infima species or their essence (Shields, p. 298; Modrak [1991], pp. 761-62; Spruit, p. 43). Shields takes the species considered as a collection of individual substances to be the 'broad' sense of νοητόν, while the species' form, i.e. that in virtue of which the individuals qualify as members of that species, is the 'narrow' sense of νοητόν (p. 298). The broad sense corresponds to a 'modal' sense of νοητόν, while the narrow sense is 'factive' (p. 293). There is what's actually understood (i.e. the substantial form or essence) and the kind of object that can be understood (i.e. the species). These correspond to broad/modal and narrow/factive senses of αἰσθητόν (Shields, pp. xxxiv, 293). To take νοητόν narrowly as the essence, there remains the question of how this is simple, but we must look elsewhere to answer this question (e.g. *Metaphysics* Zeta 17 and Eta 6).

<sup>44</sup> *Metaphysics* Θ.10 1051b31-32 'περὶ ταῦτα οὐκ ἔστιν ἀπατηθῆναι ἀλλ' ἢ νοεῖν ἢ μῆ'.

<sup>45</sup> *Metaphysics* Θ.10 1051b33-1052a4

<sup>46</sup> I should note that when I speak about Aristotle's analogy between νοῦς and perception of proper sensibles, I am less interested in the analogy he draws elsewhere in the *De Anima* (429a13-18) between the two in terms of their

1. The object of the cognitive faculty (i.e. what I understand/perceive) has a simple, non-predicative structure.
2. Since the object of the faculty is simple, the faculty cannot deliver a falsehood about the object.

These two similarities suggest that perceptions are not true or false but veridical or not and explain why this is the case, i.e. their lack of predicative structure.

What, then, can be said in favor of the Predicative Account as an interpretation of Aristotle's theory of perception? a.) Aristotle's characterization of perceptual content using 'ὅτι λευκόν' and similar expressions suggest their propositional character. 'ὅτι' introduces indirect speech, which suggests that perceptual content is characterizable in sentential form. b.) The Predicative Account makes better sense of the contrasts he draws with imagination and thought, since the sense in which these are true or false should be the same as the sense in which perception is always true and never false. c.) If perceptions are infallible because they are falsehood-*inapt*, then their never being false is a trivial truth. In response to a.), 'white [λευκόν]' is hardly a sentence on its own. To b.), the senses of 'truth' here are at least analogous, and he is drawing a contrast between sensory powers that never make mistakes in normal cases with other cognitive faculties that do. To c.), while it might be a trivial truth that perception of proper sensibles is never false, it is not trivially true that this perception is always veridical and never makes mistakes (under normal conditions).

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receptivity of (sensible/intelligible) forms. Rather I am interested in the analogy involved in both having simple contents and always being true rather than true or false. These two issues are connected, but it does not affect this section's points that the two faculties seem to have crucial disanalogies that Aristotle mentions in connection to form receptivity (e.g. νοῦς is separate/separable from the body and has no bodily organ). These disanalogies bear on the way in which νοῦς receives the intelligible form, but they have less to do with the complexity or simplicity of their contents.

How would a defender of the Predicative Account represent perceptions of proper sensibles linguistically?<sup>47</sup> For their account to be successful philosophically, defenders of the Predicative Account should be able to represent perceptions as statements with a subject and predicate. First, such an account could begin with Aristotle's 'ὅτι λευκόν' at *De Anima* III.3 428b21. Does this putative sentence lack its subject or predicate, i.e. is 'white' the subject or predicate?<sup>48</sup> On the one hand, one would expect him to say 'the white thing [τὸ λευκόν]' if he meant it to be the subject. Moreover, he is more likely to leave the subject implicit than the predicate. On the other hand, if this sentence is meant to be parallel to the subsequent one ('whether the white thing is this [εἰ δὲ τοῦτο τὸ λευκόν]') then 'white' is the subject in both.<sup>49</sup> I expect that if the Predicative Account were true, then 'white' would be the predicate and not the subject. Now how do we fill in the blanks for my seeing 'that...is white'?

The first option for representing the content of a perception is 'I see that there is something white'. 'Something' might suggest too much though, since it implies that the whiteness I am seeing belongs to a single subject. Instead, we might render it less naturally as 'I see that *there is* white'. Unfortunately, both these representations falsely suggest that the content of my perception is *my seeing that...* when really it is what I see and not that I am seeing it that is the proper object of sight (the common sense would have *my seeing that...* as its content). This applies for any representation that includes 'what I see' or 'the object of sight' as either subject or predicate. Thus the content of my sight is not 'what I see is white' because it is merely accidental to my perception of the white thing that it is the object of my sight. I don't see that the white thing is what I see except insofar as my common sense tells me that I am seeing, just as I

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<sup>47</sup> As Christopher Shields puts the question in his commentary on the passage, 'About what precisely can we not be deceived? Something propositional or non-propositional? That we perceive colour? That colour is present?' (p. 225).

<sup>48</sup> Here, 'predicate' merely means the grammatical predicate, since I am speaking of the linguistic representation.

<sup>49</sup> *De Anima* III.3 428b21-22

don't see that the son of Diares is white except insofar as I know that the thing over there is Diares already.

Another option for the content of perception on the Predicative Account is simply 'there is white' or 'something is white'. However, these statements are too broad because my perception is not merely making an existential statement with the whole universe as the domain of quantification. 'There is white' is true even if I am not seeing any white or if I am mistaken (e.g. my eyes are shut, but I am dreaming about sheep), but these would be cases in which my sight is mistaken or I am not even seeing at all.

A third option for the Predicative Account is to represent the perception as 'there is white', but to restrict the domain of quantification to the perceiver's field of vision. This is not right either though because such a perception would be verified in cases in which I don't actually see the white thing. For example, there might be a white goose in front of me that I don't see because I am hallucinating about a white elephant.

The Predicative Account may have other options for representing perceptions of proper sensibles linguistically, but it is difficult to see how these options would avoid the sorts of objections I raise to the three options outlined above. If the Predicative Account fails to give a plausible way of representing these perceptions linguistically, then this account not only has serious interpretative problems, but also needs more work philosophically to be defensible. Hence, there is good reason to prefer the Simple-Object Account.

Before considering how these two accounts fit into the debate between Generic and Specific Infallibilism, I want to consider where some other commentators fall on the debate between the Simple-Object and Predicative Accounts. My distinction between the Simple-Object and Predicative Accounts has been drawn by a few other commentators, but in many others it is



difficult to tell whether they ascribe a Simple-Object or Predicative view to Aristotle.<sup>50</sup> Hence, it is helpful to provide a few criteria to determine which account a given interpreter may hold to:

1. How does the interpreter translate ‘ὅτι λευκόν’? The Predicative Account prefers ‘that there is white’ or ‘that it is white’, while the Simple-Object Account opts for something like ‘that white’.
2. Does the interpreter describe perception of proper sensibles in terms of seeing something ‘as’ something? The Predicative Account would approve of this sort of language.
3. Does the interpreter see perception of proper sensibles as constituting a distinct module in the perceptual process or is it merely a way of describing one of the tasks that the perceptual faculty as a whole can do?

Of these three criteria, the second is the most critical for determining if an interpreter holds to the Predicative Account, since it is the most essential feature of that view. The first criterion is not entirely reliable, since many authors hold to a Simple-Object Account in their commentary, but translate the phrase in line with the Predicative Account. The third criterion opens up another set of difficult issues about the relation of the different perceptual powers to the perceptual faculty as a whole. Yet if perception of proper sensibles is not a distinct module in the perceptual process, then how could it have its own contents that were simple, while the other more advanced parts of the perceptual process had complex contents?

Of the few commentators who clearly distinguish the two accounts, Stanford Cashdollar and Christopher Shields defend a Simple-Object Account.<sup>51</sup> Stephen Everson seems to draw this distinction when describing the two grammatical forms verbs of perception can take: ‘ I perceive

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<sup>50</sup> Among the ones difficult to tell are Deborah Modrak, Hamlyn, and Ronald Polansky.

<sup>51</sup> Shields, p. 290; Cashdollar, pp. 161-63. Cashdollar seems, though, to go even further and take the Simple-Object Account to apply to common sensibles as well, but it is difficult to see how this is possible.

X' vs. 'I perceive that X is Y'.<sup>52</sup> The former perception does not require ascribing any propositional attitude to the perceiver. In line with the Simple-Object Account, Everson translates 418a12 as 'they are always perceived veridically'.<sup>53</sup> On the other hand, Thomas Johansen seems to be one of the few defenders of a Predicative Account, since he takes all first-order perception, which includes perception of proper sensibles, to have complex content and to be expressible propositionally.<sup>54</sup> Of those who are less explicit on this issue, Hamlyn, Ronald Polansky, and Marmodoro translate in line with the Predicative Account.<sup>55</sup> Marmodoro describes the contents of perception of proper sensibles as 'simple', but this refers to their coming from one mode of perception (e.g. smell rather than smell and sound).<sup>56</sup>

Having considered the debate between these two accounts, we can ask how the question of the structure of perception relates to the specificity of its contents. I take it that the Generic Infallibilist will prefer the Predicative Account, whereas the Specific Infallibilist is free to choose between the two accounts. Considering that the Simple-Object Account is more plausible, this is a point in favor of Specific Infallibilism, which is not saddled with an unattractive theory about perception's structure that Aristotle does not accept.

Why can't the Generic Infallibilist accept the Simple-Object Account? This issue goes to the heart of Generic Infallibilism: it posits proper objects for the senses that are too conceptual to be directly perceived. When I perceive color with my sight, I do not perceive color itself, but some very specific color. The more generic we make the object of perception the more it seems that some conceptual task is being performed by a higher cognitive faculty. I only see color in general insofar as I see red, which is a color. Importantly, I see it *as* red and not *as* color. It is not

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<sup>52</sup> Everson, p. 189

<sup>53</sup> Everson, p. 21

<sup>54</sup> Johansen, p. 193

<sup>55</sup> Hamlyn, p. 25; Polansky, p. 251; Marmodoro, p. 85

<sup>56</sup> Marmodoro, p. 86

sight that sees it *as* color—that is the task of the common sense. Indeed, distinguishing between colors and sounds is the task of the common sense, so it is not one of the five senses that deals with color generically at all. This problem for Generic Infallibilism becomes more acute when we consider that even the lower animals would be aware of something like heat or smoothness *as such* according to their view. A sponge would not only feel some particular heat, but even heat in general, which seems absurdly advanced for such an animal.<sup>57</sup>

This problem leads to Generic Infallibilism's fitting better with the Predicative Account. Since the Predicative Account has a more complex structure for perceptions, this account of the content of perceptions requires a more advanced cognitive power than that needed for the Simple-Object Account. Similarly, Generic Infallibilism requires a more advanced cognitive power than Specific Infallibilism, since the former thesis requires that sight (for example) be able to perceive not only red or green, but also color in general. Thus Generic Infallibilism and the Predicative Account have a better fit, since they both posit that the five senses are relatively advanced cognitive powers. According to Generic Infallibilism and the Predicative Account, the five senses are powers that can not only proceed from the specific to the generic, but can also compose cognitive acts with subjects and predicates.

At this point, we have seen the advantages both interpretative and philosophical of the Simple-Object Account over the Predicative Account and some suggestion of why Generic Infallibilism is less of a fit with the former view. One may wonder, though, why any further justification of Specific Infallibilism is necessary once we accept the Simple-Object Account.<sup>58</sup> According to this view, the very structure of perceptual contents rules out their ever being false.

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<sup>57</sup> It also seems to be useless for a sponge to perceive heat in general, since this awareness would not conduce to its survival.

<sup>58</sup> David Charles (in private correspondence) made this suggestion, which threatens to pit my arguments in Section III against my points in Section IV.

Ergo, isn't perception of proper sensibles infallible? This is not true according to my use of 'infallibility' (see note 7), since a power is infallible if it does not make mistakes under normal conditions. Perception of proper sensibles might never be false, but it could still make mistakes (e.g. by failing to see some color because of a disturbance in the air). In *De Anima* III.3 428b18-19, Aristotle qualifies his infallibilist thesis, 'Perception of the proper [objects] is true or has as little falsehood as possible'.<sup>59</sup> This qualification suggests that Aristotle wishes to restrict his infallibilism in a way that would be superfluous if the Simple-Object Account were meant to justify it. In the next section, I will consider what does justify Aristotle's infallibilism and what the qualification at *De Anima* III.3 428b18-19 suggests.

#### IV. Justifying Infallibilism

Related to the dispute between Specific and Generic Infallibilism is the question of what justifies Aristotle's infallibilism. In this section, I consider Marmodoro's answer to this question, which she gives in terms of the essential nature of the perceptual powers. I object to this account both on interpretative and philosophical grounds, focusing especially on the latter since Marmodoro herself admits that the argument is not supplied by Aristotle. Then I defend a teleological justification of infallibilism, which shows how perception of proper sensibles must be infallible in order for it to be reliable for animal survival and human knowledge. Finally, I consider another rival justification given by Mark Johnstone, who considers perception of proper sensibles to be infallible because it has fewer stages at which error could creep in than the perception of common sensibles.

The account advanced by Marmodoro takes Aristotle's infallibilism to be founded upon the essential nature of each sensory power (what I call the 'Formal Justification'): what it is to be

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<sup>59</sup> *De Anima* III.3 428b18-19 'ἡ αἴσθησις τῶν μὲν ἰδίων ἀληθῆς ἐστὶν ἢ ὅτι ὀλίγιστον ἔχουσα τὸ ψεῦδος'.

the power of sight is to see colors. This is because each sensory power is defined by its characteristic activity. Since this activity (seeing colors) defines the power (sight), it is essential to sight that it be activated by colors and not by sounds. Were some power to be activated by a sound, it would not be sight.<sup>60</sup> Similarly, the sense-organ of sight—the eyes—can only be stimulated by colors. Therefore, if my eyes see something, what they see must be a color, and thus I cannot be mistaken about whether I am seeing color or not.<sup>61</sup> This Formal Justification motivates a Generic Infallibilist interpretation of Aristotle because the Formal Justification only justifies Generic Infallibilism.<sup>62</sup> The Formal Justification cannot support Specific Infallibilism because ‘different colors can stimulate the sense organ of sight, and so the agent can infallibly perceive color, and yet be mistaken about the hue or shade of it’.<sup>63</sup> Yet even Marmodoro admits that it is an argument ‘which Aristotle does not supply’.<sup>64</sup> Thus insofar as an alternative justification for Aristotle’s infallibilism can be found (even if not in the infallibilist passages), we have just as good a reason to accept it as the Formal Justification.

In fact, there is just such a justification, which I call the ‘Teleological Justification’.<sup>65</sup> It is because of how important perception is to an animal’s survival and—in our case—knowledge

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<sup>60</sup> Marmodoro, p. 85. The Formal Justification is clearly the motivation for Marmodoro’s entertaining Generic Infallibilism.

<sup>61</sup> Marmodoro, p. 86

<sup>62</sup> Marmodoro, pp. 85-86

<sup>63</sup> Marmodoro, p. 86

<sup>64</sup> Marmodoro, p. 85

<sup>65</sup> Deborah Modrak [1987] speaks about this Teleological Justification, emphasizing that perception must be reliable because it is so fundamental to all human knowledge (pp. 78-79). Her discussion, though, ignores the issue of the incorrigibility of the five senses, which is needed to understand why the senses must be infallible if they are to be reliable. Irving Block’s earlier discussion of Aristotle’s infallibilism also makes use of the ‘teleological solution’ (p. 7) and speaks of the importance of this solution for protecting ‘the foundation and beginning of all science, which is perception,’ from skeptical challenges (pp. 8-9). Pavel Gregoric and Leen Spruit accept the Teleological Justification and consider the five senses to be more accurate than the common sense because of their higher level of specificity in their objects (Gregoric, p. 30; Spruit, p. 40). This makes the Teleological Justification more plausible and explains partly why the common senses aren’t also infallible, but it still misses the crucial issue of incorrigibility. Aaron Ben-Zeev makes a similar point, but instead of speaking about the specificity of their objects, he emphasizes that ‘the perception of special objects is most naturally adapted to the conditions in which perception takes place’ (p. 120). This is not quite right, though, because Aristotle does not suggest that the common sense is infallible under normal conditions, but this seems to be part of Ben-Zeev’s interpretation. David Charles combines

that the five senses must be infallible in perceiving the qualities of external objects (at least in the normal conditions for such a creature). Other cognitive faculties can afford to make mistakes even in normal conditions because several faculties have access to the same facts, but because each sense has proper sensibles to which only it has access, these senses must not make mistakes or else these mistakes will be incorrigible.

The incorrigibility of the five senses about their proper objects is an immediate consequence of Aristotle's characterization of their proper object [ἴδιον] as 'that which cannot be sensed by a different sense.'<sup>66</sup> In contrast, the common sensibles are accessible to multiple senses, and hence the perception of them is corrigible. If the proper objects are only accessible to one sense, then no other sense has access to them and consequently no higher cognitive capacity, since these ultimately derive their information about the external world through the five senses. For as Aristotle states in *Posterior Analytics* I.18 81a37-b9, neither induction nor demonstration can proceed without perception of particulars.

For evidence that Aristotle holds to the corrigibility of the common sense, there is *De Insomniis* II 460b17-27 where he shows how in the cases in which one sense is mistaken about some quality perceivable by various senses (e.g. number), another sense can correct it. In his example, crossed fingers can misapprehend the number of objects being felt and take one object for two, but sight recognizes that there is only one object. Hence, the mistake made by touch about this common sensible (number) can be corrected by sight. Thus the qualities perceivable by various senses do not need to be reliably perceived by any particular sense in order for us to come to have true beliefs about them. This example implicitly contrasts the corrigibility of the

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the Teleological Justification with an account of perception in terms of efficient causation: only when the sensed object is present and 'this controls the nature of the sensation' is error impossible (pp. 122-3). None of these authors (except Charles, p. 123, n. 24) are explicit about whether sight is infallible in perceiving color in general or in perceiving particular colors, but their arguments support the stronger thesis of Specific Infallibilism.

<sup>66</sup> *De Anima* II.6 418a11-12 'ὁ μὴ ἐνδέχεται ἑτέρῳ αἰσθῆσαι αἰσθάνεσθαι.'

common sense with the incorrigibility of the senses about their proper objects when he gives the counterfactual case of touch's being incorrigible in perceiving number were sight to be unable to perceive it also. In this counterfactual case, a person's crossed fingers are feeling a single object, but touch alone exists (i.e. sight doesn't exist or isn't functioning), which means that the person cannot correct touch's false perception.<sup>67</sup> It is because sight also exists and functions that the person can correct this false perception of the common sensible.

Thus the incorrigibility of the five senses means that if the senses are to be reliable, they must be infallible. Why do the senses have to be reliable, though? First, how reliable the senses need to be depends on what we are relying on them for. For all animals, perception is necessary for survival, as Aristotle explains in *De Anima* III.12 434a30-b9. Without reliable perception, animals can find neither food nor shelter nor mates. Yet couldn't individual animals sometimes make mistakes under normal conditions without threatening the survival of their entire species? In reply, first, if these mistakes are not unnatural (on the contrary, the senses on this view naturally make a certain number of mistakes), then nothing prevents these mistakes' all occurring at once, thus putting the entire species at risk. Second, this rejoinder assumes a weaker teleological principle than the one Aristotle endorses in 434a30-b9, since unless there is some reason for it not to possess it, an animal will possess the property better for its survival.

Besides being necessary for animal survival, reliable perception is necessary for human beings because of how fundamental perception is for us to acquire knowledge. Indeed, according to *Posterior Analytics* I.18 81a38-39, 'if any sense is left out, it is necessary that some knowledge too be left out'.<sup>68</sup> The next chapter II.19 provides more details about how perception leads to understanding of the principles that form the basis of our knowledge. Why would

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<sup>67</sup> *De Insomniis* II 460b22

<sup>68</sup> 'εἴ τις αἴσθησις ἐκλείπειν, ἀνάγκη καὶ ἐπιστήμην τινὰ ἐκλείπειναι.'

Generic Infallibilism be inadequate, though, for these epistemological concerns? First, only specific colors are substantively informative about the way the world is. Knowing that there are colors and sounds does not aid scientific research. Second, were perception of proper sensibles unreliable, common sense, which relies upon this perception, would also be unreliable, and hence induction about all perceptual facts would be undermined. Third, not only are the five senses incorrigible, but were they to make mistakes, these would be undetectable, which means we could never know how often they were making mistakes.<sup>69</sup>

Iakovos Vasiliou objects to the Teleological Justification because this interpretation takes Aristotle to be responding to a skeptical challenge by positing an indefeasible basis (perception of proper sensibles) for all knowledge.<sup>70</sup> I am willing to accept Vasiliou's view that Aristotle's infallibilism is not meant to respond to the Argument from Illusion or similar skeptical challenges and that Aristotle has no interest in providing a 'certain, indefeasible method for separating veridical from non-veridical perception'.<sup>71</sup> Yet Vasiliou's criticisms do not apply to my version of the Teleological Justification, since I contend that Aristotle's concern is not with responding to any skeptical challenge, but rather with forestalling further well-warranted skeptical challenges. If perception of proper sensibles could make mistakes under normal conditions, this would mean that its mistakes would be indefeasible. This is because the way perceptions can be defeated is by discovering that the sense-organ delivering them has some defect (e.g. my tongue is insufficiently moist to taste properly) or that there is something amiss in the medium (e.g. heat is disturbing the air making my sight of things at a distance unreliable).

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<sup>69</sup> A fourth concern is that even if perceptual errors were rare, they would undermine confidence in other perceptually-based beliefs because of the problems epistemologists have in fair lottery cases. Such beliefs would not be safe because there is no explanation for why the perception succeeded in the one case and not in the other, and there would be no way (even in principle) to discriminate between one's correct and false perceptions.

<sup>70</sup> Vasiliou, p. 124

<sup>71</sup> *Ibid.*



Yet if we are speaking about normal conditions, the perceptions cannot be defeated by such considerations because these would not happen under normal conditions (by definition). Another way to defeat such perceptions is if another sense has access to the object, which can correct the mistaken perception (e.g. if I see a rod bent in the water, I can feel its straightness with my hands and hence defeat the false visual perception). These sorts of defeat cases also cannot happen with one of the five senses about its proper sensibles, since they are incorrigible by another sense. Hence, if perception of proper sensibles makes mistakes under normal conditions, these mistakes would be infeasible.

This conclusion is much more worrisome than the Argument from Illusion or other abnormal cases that the skeptic raises. If perception of proper sensibles could make mistakes under normal conditions, the foundation of our knowledge might be full of infeasible errors. This really would give the skeptic a good reason to doubt the reliability of perception. Most skeptical challenges involve abnormal conditions, but this one would only involve normal conditions and would be all that much more plausible. Hence, why it is so important for perception of proper sensibles to be infallible. The skeptic might still doubt infallibilism, but at least we would not have given him any premises with which to doubt the reliability of perception under normal conditions.

Why should the fact that in order for human beings and other animals to function well and fulfill their end their senses must have infallible perception of their proper objects entail that they are actually infallible? Here I can appeal to Aristotle's principle that 'nature does nothing in vain', which he himself appeals to frequently in his biological works. Indeed, in the context of explaining why animals possess perception, Aristotle mentions this very principle (*De Anima* III.12 434a31), so it is entirely plausible that were Aristotle to justify explicitly why animals

possess reliable perception (and hence infallible perception of their proper objects), he would appeal to this same principle. To explain why something can do an activity and why it can do it well are explanations of the same sort as *Nicomachean Ethics* I.7 1098a7-12 shows. As Aristotle says in *De Anima* III.12 434a30-b9, ‘But animals must be endowed with sensation, since nature does nothing in vain,’<sup>72</sup> and continues by saying that in order for animals to lack perception this ‘would have to be better either for the soul or for the body’<sup>73</sup> and infers that since it is not better, they do have sensation.<sup>74</sup>

Although Aristotle asserts that the senses are correct ‘always [ἀεί]’ in *De Anima* III.3 428a11-12 and *Metaphysics* Gamma 5 1010b24-25, another statement at *De Anima* III.3 428b18-19 suggests that Aristotle qualifies his infallibilism by saying these perceptions ‘have as little falsehood as possible [ἢ ὅτι ὀλίγιστον ἔχουσα τὸ ψεῦδος]’. In the previous section, I used this qualification to rule out the Simple-Object Account without explaining what sort of falsehood the restriction on infallibilism is supposed to allow. One way to take this qualification is that while Aristotle prefers an unqualified infallibilism, he is willing to consider some weaker thesis that considers the senses fallible, but reliable in normal conditions. I do not think that this is correct, though, for two reasons. First, it would be surprising that Aristotle does not note this skepticism more consistently when discussing infallibilism. Second and more importantly,

<sup>72</sup> ‘τὸ δὲ ζῶον ἀναγκαῖον αἰσθησιν ἔχειν εἰ μὴθὲν μάτην ποιεῖ ἢ φύσις.’

<sup>73</sup> ‘διὰ τί γὰρ οὐχ ἔξει; ἢ γὰρ τῆ ψυχῆ βέλτιον ἢ τῷ σώματι.’

<sup>74</sup> Marmodoro (in private correspondence) provides a less demanding interpretation of Aristotle’s optimistic teleology in this passage: things in nature are such that our species survives. Shields may also endorse this interpretation, since he only speaks about the principle that nature does nothing in vain and how the teleological principle requires that creatures have ‘the wherewithal required to engage in an activity necessary for their existence’ (p. 371). This is too modest for Aristotle’s point, though. First, at 434a31-32, he characterizes his principle as having universal application for natural things and that it involves everything that is by nature’s either being for the sake of something or else a (necessary) concomitant of something that is. Second, although Aristotle speaks of the animal’s not perishing he also speaks of its reaching its end [τέλος] and gives this as the function [ἔργον] of its nature. Third, Aristotle’s point at 434b5-7 goes well beyond survival arguing that we can explain why animals have perception in terms of whether it is better for the soul or body of animals to have it. Finally, even if my more involved reading of this passage is incorrect, I also argue that infallible perception is necessary just to ensure animal survival.

Aristotle specifies elsewhere a different qualification of his infallibilism when in his natural philosophy he describes cases in which perception makes mistakes about proper sensibles. These mistakes do not occur in normal conditions, but only in abnormal conditions.<sup>75</sup> Thus the senses are still infallible in normal conditions, and Aristotle does not wish to question this notion. Yet there is still the question of what sort of conditions are ‘normal’. I take it that Aristotle would allow the senses’ infallibility not only in optimal conditions, but even in ordinary ones.<sup>76</sup> The difficulty for any account is characterizing ‘normal conditions’ without mentioning the powers’ functioning or malfunctioning. Thus the following straightforward definition of ‘normal conditions’ fails for our purposes: Normal conditions of sight are defined as the conditions under which sight does not make any mistakes.<sup>77</sup> It is good news then that throughout the biological works which concern perception and elsewhere, Aristotle is interested in specifying the conditions under which perception fails. In *Meteorologica* III.4 374b11-375a1, Aristotle explains how rainbows appear to us by appealing to the fact that seeing an object at a distance or through a reflection makes it appear blacker. The explanation is that sight becomes strained at a distance, and ‘for this reason, all distant things appear blacker because sight does not reach them’.<sup>78</sup> This case involves a mistake not only about what color an object is, but seemingly also what color the

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<sup>75</sup> Gregoric understands Aristotle in the same way in these passages. He is merely referring to ‘the possibility of some disorder in the sense-organ or the rest of the body, commotion in the medium, or disturbance in the soul, all of which may prevent a sense from perceiving its special perceptible correctly’ (p. 30). Charles also defends an account in which perception is infallible, but only with the qualification that ‘the special senses are functioning well’ (p. 124). Block, Ben-Zeev, and Johnstone provide the most sustained engagement with the idea that the five senses are only infallible under ‘normal conditions’. Johnstone’s account is the most comprehensive describing three ‘non-standard’ or abnormal conditions and citing Aristotle’s mention of each: ‘(i) the *sense organ* is defective or damaged, (ii) the *object of perception* is located far away or obscured or (iii) the *medium* is causing disruption or interference’ (p. 317).

<sup>76</sup> Otherwise, animal survival would be threatened just in the ordinary course of events. It is not enough for species to be able to survive merely under optimal conditions.

<sup>77</sup> Johnstone makes a similar point showing that Aristotle specifies ‘normal’ or ‘standard’ conditions in a ‘non-circular, non-trivial way’ (p. 319). First, ‘normal’ is not a statistical notion about what most often happens. Instead, ‘this kind of perception is infallible when nothing is *wrong*’, which consists in the three conditions that Johnstone ascribes to Aristotle.

<sup>78</sup> ‘διὸ τὰ πόρρω πάντα μελάντερα φαίνεται, διὰ τὸ μὴ δικνεῖσθαι τὴν ὄψιν.’

sight sees, which would be an abnormal case in which Specific Infallibilism fails to hold.<sup>79</sup> In *De Insomniis* II 459b1-23, Aristotle details a number of cases of misperception that involve some unusual effect the object causes in the sense-organ whereby that which the organ has previously perceived continues to affect it after the object is no longer actually perceived. For example, after looking at something white for a long time, the next object we look at will appear white also or if we go indoors after being in the bright sunlight everything will appear much darker and be difficult to see. The next section of *De Insomniis* II 459b23-460a10 considers a case in which the sense-organ is impaired—in this bizarre example, menstruation causes a woman’s eyes to be especially inflamed—and this impairment causes mirrors to appear blood-red. These cases of perceptual mistakes help us to discover the conditions that count as normal.

The Teleological Justification and Specific Infallibilism form a coherent package, while the Formal Justification and Generic Infallibilism form a competing coherent package. The Teleological Justification is only plausible with Specific Infallibilism (Generic Infallibilism proves insufficient in this regard) and *vice versa*. Similarly, the Formal Justification is only plausible with Generic Infallibilism and *vice versa*.

I can show this by going through the various options. The Teleological Justification solves certain skeptical problems by showing that perception and the knowledge based on it are reliable, but Generic Infallibilism is insufficient to accomplish this end. Even if sight were always correct about seeing color in general, this would mean that it could be massively unreliable in discriminating between different colors. As Marmodoro admits, even if Generic Infallibilism is true, ‘it will reveal to the perceiver relatively little about the world. It will

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<sup>79</sup> Even if this example is not ultimately about misperception of a proper object, the other examples I cite in this paragraph do seem to involve such misperception.

scarcely tell one anything about the world's furniture'.<sup>80</sup> Moreover, for animals using their perception just to survive, being generically infallible will be next to useless. Only specific infallibility is of much use in navigating their environments and fulfilling their desires. On the other hand, the Formal Justification simply does not support Specific Infallibilism (as I discussed previously in this section and as Marmodoro admits) because while sight is essentially defined in terms of seeing color, it is not defined in terms of seeing any specific color. Hence, the essential definition of sight does not deliver Specific Infallibilism. Thus, if we prefer the Teleological Justification, we must accept Specific Infallibilism, and if we prefer Specific Infallibilism, we must accept the Teleological Justification. I have already provided the reasons to prefer Specific Infallibilism over Generic Infallibilism (in Section II), but I will proceed with two reasons to prefer the Teleological Justification over the Formal Justification.

A decisive consideration against the Formal Justification for Generic Infallibilism occurs in *De Anima* III.3 428b18-19 (a passage I discussed previously in this section) when Aristotle qualifies his infallibilist thesis by admitting that perception of proper sensibles is either true or has 'as little falsehood as possible'. The Teleological Justification can make sense of this as an admission that in abnormal conditions, a perceptual power might make mistakes. For the Formal Justification, though, it is simply impossible for a sense to be mistaken about its proper object. The Formal Justification could only conceive of mistakes of the sort where I smell a color or hear a taste. This is clearly impossible for Aristotle, and so the qualification at 428b18-19 makes no sense if it means that the senses are 'true' or at least minimally 'false' in perceiving their proper objects in general. The statement must be about the five senses, though, which are the most accurate form of perception. Another interpretation would be that insofar as the senses perceive their proper objects in general they are (always) true, but insofar as they perceive their

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<sup>80</sup> Marmodoro, p. 86

proper objects in particular (e.g. sight's seeing red) they admit the least amount of error. Yet what other than the Teleological Justification would justify Aristotle in accepting that the senses are so accurate about particular proper objects? I take 428b18-19 as powerful evidence against the Formal Justification and hence Generic Infallibilism.

Yet there is another reason to prefer the Teleological Justification: the principal argument for the Formal Justification is invalid. According to the Formal Justification, sight is defined as a power to perceive color, and hence it can only perceive color.<sup>81</sup> Yet, while sight is defined in terms of color, this does not entail that necessarily what it perceives is color. The definition of sight can be in terms of its object color, since this is what it primarily perceives. Yet this does not rule out that sight might in some secondary sense perceive things besides color. Indeed, it seems that it does because sight plays some role in my seeing that the white thing is moving. Thus what the senses perceive in common and accidentally (the two other cases Aristotle mentions in *De Anima* II.6 418a11-25) are also perceived by sight. Hence, if sight can see things besides color, then the Formal Justification is wrong in supposing that color's being the only object of sight is what makes it infallible about color.

Indeed, to show that the Formal Justification is invalid, I do not even have to show that sight can see anything besides color. All that is necessary are counterexamples to the inference from a power's being defined in terms of some activity to that power's necessarily doing that activity (if the power is activated).<sup>82</sup> Consider two counterexamples. First, there is the case of digestion, which is defined in terms of eating food where food is something nutritive. Yet, the

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<sup>81</sup> Marmodoro, p. 85

<sup>82</sup> On my view of powers, power types should be defined (at least partly) in terms of their manifestation types, but one cannot determine the manifestation type by simply looking at what results from the power. Rather there will be abnormal cases in which the power causes some result accidentally rather than causing its essential result. This is how I take Aristotle's frequent qualification about things that follow 'always or for the most part': in some few cases, the power might not give rise to its essential result.

body can digest non-nutritive things like artificial sweeteners. Second, in respiration, the activity is breathing in oxygenated air (or cool air, as Aristotle would have it), whereas we can breathe in carbon monoxide (or warm air in Aristotle's theory).

Apart from the Teleological and Formal Justifications, there is a third justification of Aristotle's infallibilism, which Mark Johnstone defends. Johnstone considers the Teleological Justification insufficient because 'this appeal to teleology at most explains why Aristotle might *want* to maintain that our perception of color by sight is less prone to error than our perception of shape by sight, but not why he was entitled to do so.'<sup>83</sup> Some 'principled *psychological* explanation for the difference' between perception of proper sensibles and the common sense is required, which appeals to the difference in the powers.<sup>84</sup> Thus, Johnstone develops a 'Moving Parts Justification' (what I call his view), which shows that the common sense is more prone to error than perception of proper sensibles because common sense is a.) 'less specialized', b.) involves coordination between multiple powers (different senses), and c.) its activity contains more stages of perception.<sup>85</sup>

This explanation can go some way towards explaining why the common sense is more prone to error than perception of proper sensibles, but it is inadequate to explain Aristotle's stronger claim that perception of proper sensibles is infallible and the common sense isn't. The Moving Parts Justification can show how the common sense can originate errors even if perception of proper sensibles makes no mistakes, but it does not explain why perception of proper sensibles makes no mistakes apart from its being more specialized.

Beyond this issue, Johnstone misconstrues the role of teleological justifications. For Johnstone, teleology can explain why a theorist might be motivated to defend a view, but it

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<sup>83</sup> Johnstone, p. 327

<sup>84</sup> Johnstone, p. 328

<sup>85</sup> Johnston, p. 330

cannot explain (even partially) why certain facts obtain. For Aristotle, though, teleology is clearly at least part of the explanation for why certain natural facts obtain.

Given that Aristotle does not give any justification of his infallibilism in the context of presenting that view, any justification interpreters attribute to him will be necessarily speculative, but in this section, I have given some reasons to prefer the Teleological Justification to the Formal and Moving Parts Justifications. First, Aristotle already uses a teleological explanation for the fact that animals have perception in the first place, so it is not incongruous to use such an explanation for why perception of proper sensibles, in particular, is infallible. Second, I have shown how incorrigibility both explains why perception of proper sensibles must be infallible rather than the common sense and why Aristotle's infallibilism is needed for perception to be reliable. Third, I have shown how the Formal Justification cannot account for perception of proper sensibles' mistakes under abnormal conditions and why the argument it ascribes to Aristotle is invalid. Fourth, I have shown why the Moving Parts Justification cannot justify Aristotle's infallibilism, since it only shows why perception of proper sensibles is less prone to mistakes than the common sense. In the following note, I finally remark on how the common sense fits into Aristotle's claims about the infallibility of perception of proper sensibles and show how my trio of views (Specific Infallibilism, the Simple-Object Account, and the Teleological Justification) have the advantage of being compatible with a range of views about the nature of the common sense.

#### *A Note on the Common Sense*

In the course of this essay, I have written as if the nature of the common sense in Aristotle's theory is uncontested and ignored the controversy surrounding it and its relation to the



senses and proper sensibles. Before concluding, I wish to summarize this controversy and consider how it relates to the Teleological Justification of Specific Infallibilism that I defend.

Gregoric and Johansen are two recent prominent defenders of a ‘deflationary’ or ‘revisionist’ interpretation of the common sense, while Marmodoro defends the ‘robust’ or ‘standard’ interpretation.<sup>86</sup> The controversy centers on the question: does each of the five senses perceive *per se* the common sensibles *as such*? The deflationary view responds in the affirmative, while the robust view ascribes this ability to a higher-order perceptual power. For example, according to the deflationary view, if sight were the only perceptual power in the entire soul, it would still be able to see a motion as a motion. This issue in turn relies on an interpretative point—in *De Anima* III.1 425a27, is ‘common sense’ a description of an aspect that each sense has in common (i.e. being able to perceive the common sensibles) or a proper name for a higher-order perceptual power that takes inputs from the senses to form perceptions of the common sensibles as such? For the deflationary view, ‘common sense’ merely describes an aspect of how the five senses perceive, while the robust view considers it a proper name for the higher-order perceptual power.

For the purposes of this paper, I have used the ‘common sense’ as a proper name for a higher-order perceptual power and assumed (in agreement with Marmodoro and the robust view) that this power is what perceives the common sensibles as such. Yet, this assumption has only been for the sake of clarity of presentation, and the Teleological Justification of infallibilism can be used to show why the common sense—on either interpretation—need not be infallible. Indeed, someone tempted by the deflationary view should prefer the Teleological Justification over alternative justifications.

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<sup>86</sup> Gregoric, pp. 193-99; Johansen, pp. 176-79; Marmodoro, Chapters 4 and 5

On the robust view, each of the five senses has a ‘partial grasp’ of the common sensibles, which means they only provide limited information about these common sensibles.<sup>87</sup> For instance, while sight can usually provide the common sense with some information about the motion of an object, if the common sense were to rely only on sight, and, as Aristotle imagines, one lived in an entirely white world (*De Anima* III.1 425b4-6), it would be unable to perceive the motion of objects because all it would see is whiteness. Even if objects were moving, sight couldn’t see this because the object and its background would both appear white. Hence, according to the Teleological Justification, nature has rendered the common sense reliable by providing it with perceptual inputs coming from several different senses each one providing part of the overall picture of the common sensibles.

On the deflationary view, an even simpler story is available for the Teleological Justification. Each of the five senses has two aspects: each one has an ability to perceive its proper object and an ability to perceive the common objects. In regard to the proper objects, there’s no possibility of correction if the sense makes a mistake about these, but for the common objects, there’s a degree of redundancy built into the perceptual system. Even if sight mistakes the position of an object, any of the four other senses could correct it. While the Teleological Justification is compatible with the deflationary view, it’s unclear that any other justification is. It is no coincidence that Marmodoro proposes both the Formal Justification and robust view, since if sight can perceive not only color, but also shape and motion, then there is nothing about what it is to see something that rules out seeing objects other than color. Johnstone’s Moving Parts Justification of infallibilism is also incompatible with the deflationary view, since the common and proper objects would both be perceived by the same power without any additional

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<sup>87</sup> Marmodoro, p. 171

cognitive machinery needed. It is again no coincidence that Johnstone explicitly rejects the deflationary view advocated by Gregoric.<sup>88 89</sup>

## V. Conclusion

Specific Infallibilism is a bold thesis, which may be the reason few have defended it explicitly. Yet the textual evidence of the *De Anima* clearly favors it, and the alternative view Generic Infallibilism does not fit Aristotle's statements well. Specific Infallibilism becomes much more appealing if Aristotle justifies his infallibilism with the Teleological Justification. In the *De Anima* Aristotle does refer to something like this justification in the context of animals and perception, whereas the Formal Justification is more speculative, fails as an inference from the definition of sensory powers, and does not cohere with other parts of Aristotle's theory of perception and his qualification that the senses admit some small amount of error. Finally, Specific Infallibilism works well with Aristotle's account of the structure of perceptions of proper sensibles, which takes them to have a simple object, while Generic Infallibilism requires the sort of advanced cognitive machinery for its relatively abstract perceptual objects that matches better with the sort of subject-predicate structure of perception that Aristotle reserves for more advanced cognitive powers than the senses about their proper objects. Moreover, the *prima facie* implausibility of the infallibility of the senses about their proper objects is lessened when we restrict its applicability to the senses when they are operating under normal conditions. This does not render the thesis trivial because someone might still think that the senses would occasionally make mistakes even under normal conditions.

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<sup>88</sup> Johnstone, p. 326, n. 36

<sup>89</sup> In note 26, I described the contents of the common sense as complex. This assumed the robust view, and it's possible that on the deflationary view the common sense has simple contents. This would threaten the Moving Parts Justification, but not my Teleological Justification.

Thus, there are good textual and philosophical reasons to prefer Specific Infallibilism as an interpretation of Aristotle's theory of perception. Furthermore, the three theses—Specific Infallibilism, the Simple-Object Account, and the Teleological Justification—are not only independently plausible interpretations of Aristotle, but form a mutually enforcing trio of views that are preferable to their rival trio: Generic Infallibilism, the Predicative Account, and the Formal Justification.

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