

Was Aristotle a Naïve Realist?  
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A thesis submitted in partial fulfillment of the  
requirements for the degree of Bachelor of Arts  
with Honors

Department of Philosophy in the University of  
Michigan

2016

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## Contents

1. Realism and Naïve Realism
2. Aristotle's Theory of Perception in *De Anima*: how do sensibles cause perception?
3. Contrary Appearances and *Metaphysics* Gamma V: is the world as it appears to be?
4. Conclusion

## Introduction

### Realism and Naïve Realism

In the *Assayer*, Galileo advocates a mathematical approach to scientific inquiry that leads him to striking conclusions about the relationship between the world and our perceptions of it. Considering the concept of heat, for instance, he says: “I suspect that people in general have a concept of this which is very remote from the truth. For they believe that heat is a real phenomenon or property, or quality, which actually resides in the material by which we feel ourselves warmed.”<sup>1</sup> In this vein, Galileo makes a paradigmatic statement of what is called, in the philosophy of perception, eliminativism:

Hence I think that tastes, odors, colors, and so on are no more than mere names so far as the object in which we place them is concerned, and that they reside only in the consciousness. Hence if the living creature were removed, all these qualities would be wiped away and annihilated. (Galileo, *The Assayer*, p. 274)<sup>2</sup>

Galileo thinks that a number of the qualities that figure most prominently in our experience of the world are merely subjective. Qualities such as taste, odor, color, sound, heat, and cold depend on perceivers for their very being – without them, they would be ‘wiped away and annihilated.’ This statement, repudiating the dominant scholastic tradition of his time, seems to provide a particularly clear contrast to the views of Aristotle, whose work shaped the foundations of that tradition. Consider this passage from the *Categories*:

... if animal is destroyed perception is destroyed, but there will be something perceptible, such as body, hot, sweet, bitter, and all the other perceptibles ... Hence the perceptible would seem to be prior to perception. (7b15)<sup>3</sup>

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<sup>1</sup> Galileo, *The Assayer*, in Drake Stillman, *Discoveries and Opinions of Galileo*, New York: Doubleday & Co., 1957: pp. 231-280.

<sup>2</sup> Ibid.

<sup>3</sup> J.L. Ackrill, Aristotle’s *Categories* and *De Interpretation*, Oxford: Clarendon Press, 1963.

Aristotle is a perceptual realist. He claims that sensible qualities are mind-independent qualities of objects: they are features of bodies like shape or size, present whether we perceive them or not.

Galileo's eliminativism stems from a picture of the world that departs radically from the Aristotelian worldview. For Aristotle - mathematics and physics are different inquiries - physics describes the world of experience, while mathematics describes the ideal.<sup>4</sup> But for Galileo, mathematics is at the foundation of physics. He writes:

Philosophy is written in this grand book, the universe, which stands continually open to our gaze. But the book cannot be understood unless one first learns to comprehend the language and read the letters in which it is composed. It is written in the language of mathematics, and its characters are triangles, circles, and the other geometric figures without which it is humanly impossible to understand a single word of it.<sup>5</sup>

Galileo's position may seem intuitive, even familiar. According to the contemporary scientific picture of the world, color, for instance can be explained in terms of an object's spectral reflectance properties, which can in turn be explained in terms of an object's atomic structure. Similar explanations can be given for sounds, flavors, odors, heat, and so on. Many scientists would agree with Galileo that the aforementioned qualities are, in some sense, not real. In early modern philosophy, the rough list of qualities Galileo discusses in contrast to 'real' qualities are called 'secondary qualities'<sup>6</sup> (although Galileo himself does not use this terminology).

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<sup>4</sup> See Matthews' introduction to Galileo in: Michael R. Matthews, *The Scientific Background to Modern Philosophy: Selected Readings*, Indianapolis: Hackett Pub., 1989.

<sup>5</sup> Galileo, *The Assayer*, p. 237-238.

<sup>6</sup> For a brief overview of the history of the primary and secondary qualities distinction Lawrence Nolan, "Introduction," in (ed. Lawrence Nolan) *Primary and Secondary*

For Galileo, ‘real’ qualities are defined more by what they are *not*, than by what they are. As the passage above shows, Galileo distinguishes between the mathematical ‘language of nature,’ involving what might be called quantitative features, and our perceptions of nature. Galileo reasons that, when he thinks of a material substance, he must think of it as having a boundary, shape, size (relative to other things), location, movement or rest, number, and contact or lack thereof with other bodies. Galileo thus argues that the ‘real’ qualities of an object are those which we cannot conceive of it without – the aforementioned list. He excludes most of the qualities that feature prominently in our perception – color, odor, taste, heat, etc. – from this list. It is a key assumption of Galileo’s view that we *can* conceive of objects without features such as color.

Aristotle does in fact draw a distinction between primary and secondary qualities, but not on the same grounds as Galileo. The ‘special’ and ‘common’ objects of perception, described in *De Anima* II.6<sup>7</sup>, are distinguished on the basis of which senses they affect. The special objects – color, sound, flavor, odor, and tangible qualities (hot, wet, cold, and dry) each act exclusively on one of the five senses – sight, hearing, taste, smell, and touch respectively (418a11ff). The common-objects – movement, rest, number, figure and size – can be perceived by all senses (418a16ff). The notable difference between Aristotle’s distinction and Galileo’s is that Aristotle’s is not drawn between subjective features and objective features which ground or explain them<sup>8</sup>. The

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*Qualities: The Historical and Ongoing Debate*, New York: Oxford University Press, 2011.

<sup>7</sup> D.W. Hamlyn, *Aristotle’s De Anima Books II and III*, New York: Oxford University Press, 2002.

<sup>8</sup> Cf. Mi-Kyoung Lee, “The Distinction between Primary and Secondary Qualities in Ancient Greek Philosophy,” (Nolan ed.), *Primary and Secondary Qualities*.

qualities which Galileo eliminates from objects are real, but only in the mind, and depend on the ‘real’ [primary] qualities for their existence.

For Aristotle, the common and special objects of sense are both objective. It is worth noting, however, that a subset of the *special-objects*, the tangible qualities hot, wet, cold, and dry, are the most fundamental features of the universe (*Gen. and Corr*, II.2)<sup>9</sup>. They are elemental qualities, which, through different pairings, produce the four elements, earth, water, air, and fire, from which all bodies are composed (*Gen. et Corr*, II.3). In this vein, Aristotle would not think that that we can conceive of objects without any sensible qualities, as he defines them, because the tangible qualities, at least, are part of the definition of body. As he states in *DA* II.11, “it is the distinctive qualities of body *qua* body, that are tangible” (423b27-28).

So, to reiterate, Aristotle’s realism means that sensible qualities such as colors, sounds, flavors, odors, and tangible qualities are among the physical features of objects<sup>10</sup>. The tangible qualities are in fact the most basic features of bodies. Another important feature of Aristotle’s realism is that sensible qualities are causally potent. As he explains in *De Anima* II.5, they are the agents which cause perception to occur:

“Actual sense-perception is so spoken of in the same way as contemplation; but there is a difference in that in sense-perception the things which are able to produce the activity are external, i.e. the objects of sight and hearing, and similarly for the rest of the objects of perception” (417b19-24)

Aristotle believes that instances of perceiving, unlike contemplating, cannot occur without interaction with the outside world – it is caused by agents that are external to

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<sup>9</sup> H.H. Joachim, Aristotle’s *On Generation and Corruption*, (ed. J. Barnes) *The Complete Works of Aristotle: The Revised Oxford Translation* v. 2, Princeton, Princeton University Press, 1984.

<sup>10</sup> Aristotle’s realism concerns both the ‘special-objects’ of perception and the ‘common objects,’ but when I speak of sensibles and Aristotle’s realism with respect to them I will be primarily concerned with his realism concerning the ‘special-objects.’

the perceiver. The sensible qualities, for Aristotle, fill the role of causal agents.<sup>11</sup> For Galileo, however, all of the causal work falls to the ‘real’ qualities which roughly correspond to Aristotle’s common-objects, and qualities such as color are qualities of the mind, the effects of this causal action. Aristotle, in fact, pointedly rejects any reduction of the special-objects of the sense to common-objects, criticizing Democritus in *De Sensu* 4.<sup>12</sup>

Sarah Broadie argues that Aristotle’s view should be characterized as *naïve* realism. She says, for instance:

... [Aristotle] never doubts that the objects composing the world really are as they present themselves to us in sense experience: pungent, fragrant, warm and cold, soft and hard, full of sounds and colors, just as we perceive them to be.<sup>13</sup>

Perceptible objects “just as we perceive them to be.” This is a substantive addition to realism, a fact which is illustrated by the contrast between Aristotle and Galileo.

Galileo’s position, the qualities such as colors, sounds, and even heat refer to something that resides only in the mind might best be called subjective eliminativism. His claim is to the effect that what we pick out with a word such as color actually subjective feature of the mind, but one which we use to ‘name’ other qualities out in the world, which in some way or another reduce to real qualities.

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<sup>11</sup> Aristotle states in *De Anima* II.5: “Actual sense-perception is so spoken of in the same way as contemplation; but there is a difference in that in sense-perception the things which are able to produce the activity are external, i.e. the objects of sight and hearing, and similarly for the rest of the objects of perception” (417b19-24).

<sup>12</sup> 442a29-b26. Cf. Victor Caston “Perception in Ancient Greek Philosophy,” Mohan Matthen, *The Oxford Handbook of the Philosophy of Perception*, Oxford: Oxford University Press, 2015; note. 67.

<sup>13</sup> Sarah Broadie, “Aristotle’s Perceptual Realism,” *Southern Journal of Philosophy* 31, no. S1 (1993): 137-159. doi: 10.1111/j.2041-6962.1993.tb00697.x  
“Perceptual Realism,” p. 137



A better way of stating this is perhaps in terms projective error theory. This is a view advocated most recently by the contemporary color theorists Paul Boghossian and David Velleman, who take inspiration from Galileo's view.<sup>14</sup> Color, according to the projectivist account, is best understood as a feature of the 'visual field.' Our experience represents 'colored' objects by *projecting* qualities of the visual field onto the world. This projection is mistaken, according to this view, because colors are *just* properties of the visual field. Contemporary physics does not include color among an object's properties. It is for this reason that Projectivists like Boghossian and Velleman advocate a form of error theory. They convict experience of systematic error, and argue that, insofar as we use color concepts, we should be eliminativists. At any rate, it's not my goal to endorse their argument in favor of eliminativism, but their projective account of experience provides a useful tool for distinguishing between realism and naïve realism, and for summing up the weight of Brodie's naïve realist interpretation of Aristotle.

Realists do not take it to be true that the qualities Projectivists pick out as belonging to visual, auditory, etc. fields belong to objects themselves. There is not substantive disagreement over whether, according to physics, objects possess such color qualities so understood. Rather, the divergence between realists and eliminativists is conceptual, as Bohossian and Velleman point out:

The question is rather about the correct understanding of colour concepts as they figure in visual experience: how do objects appear to be, when they appear to be green? Galileo seems to have found it very natural to say that the property and object appears to have, when it appears to have a certain colour, is an intrinsic

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<sup>14</sup> Paul Boghossian & David Velleman, "Color as a Secondary Quality," in (ed. Byrne, A.) *Readings on color*, Cambridge, Mass.: MIT Press, 1997: pp. 81 – 103; see esp. p. 84 – 85 for their summary of projection.

qualitative property which, as science teaches us, it does not in fact possess. (“Color as a Secondary Quality,” p. 81)

Boghossian and Velleman take a specific stand on what it means to “appear to be” a certain color. To appear to be red is to appear to have a quality, a quality that in fact belongs to visual field. They note that Christopher Peacocke, on the other hand, a contemporary dispositionalist, argues that colored objects “are as they appear to be,” but that a color such as red is a disposition to appear to have the intrinsic qualitative property red.<sup>15</sup> Boghossian and Velleman argue that this rendering is wrong – experience systematically misrepresents objects, because a red object, for instance, does not ‘appear’ to have a certain disposition, but appears to have an intrinsic qualitative feature of the visual field.<sup>16</sup>

The difference between a naïve realist and a projective eliminativist is not a dispute over on how to render the phrase “is as it appears to be,” used to describe an object with respect to its color properties, or any other sensible qualities. For a naïve realist, objects really do appear to have qualities which the projectionist considers to belong to experiential fields. But this appearance is accurate. Robert Pasnau describes a position he calls “Veridical Projection”:

Ordinarily, Projection is understood as an error theory in the philosophy of perception: it is the view that we erroneously project characteristics of our sensory experiences out onto the external world. But the Scholastics are often charged with holding Projection as an affirmative thesis: that we rightly project features of experience out onto the world, because the world really does possess the various phenomenal characteristics of our sensory experiences. (“Scholastic Qualities,” p. 52)<sup>17</sup>

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<sup>15</sup> Boghossian and Velleman, “Color as a Secondary Quality,” p. 91

<sup>16</sup> Ibid, p. 93

<sup>17</sup> Robert Pasnau, “Scholastic Qualities, Primary and Secondary,” (ed. Nolan) *Primary and Secondary Qualities: The Historical and Ongoing Debate*.

In fact, Pasnau thinks that this is a position which is *falsely* attributed to Scholastic Aristotelians, because they think that the secondary qualities are objective, and that “all cognition involves a likeness between cognizer and cognized.”<sup>18</sup>

So, to bring the threads together, Aristotle’s realism is the view that sensible qualities (in particular, the special-objects of sense) are physical features of objects, and are casually potent. Naïve realism invokes something like veridical projection. If Aristotle is a naive realist, sensible qualities just are those qualities which projectivists locate in subjective experience. Broadie doesn’t describe Aristotle’s view in any such terms, but veridical projection seems to be the clearest way to bring out the sense of what it means for an object to be “as it appears to be,” when it appears red, bitter, and so on. I take it that Broadie doesn’t mean, in a trivial sense, that an object which is red “is as appears to be” because it is red, but not brown or any other color. She doesn’t seem to be making a statement about the infallibility of the senses. She says that “the objects composing the world really are as they present themselves to us ... full of sounds and colors, *just* as we perceive them to be” – this is a “familiar” view which “hits off our actual experience of the world.”<sup>19,20</sup>

Perhaps the most crucial element of the naïve realism that Broadie attributes to Aristotle is a *casual* thesis. According to Broadie, Aristotle thinks that it is *in virtue of*

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<sup>18</sup> Ibid., p. 52: Pasnau takes issue with this because likeness is a feature of causal interactions more *generally*

<sup>19</sup> “Perceptual Realism,” p. 137

<sup>20</sup> I should qualify that I don’t take it to be Broadie’s position that Aristotle *himself* believed that there are certain qualities of experience, such as red\*, which resemble real world qualities such as red. <sup>20</sup> “Veridical projection” is not meant to be a recreation of a naïve realist’s own favored way of presenting her position, but rather a way of describing naïve realism from the perspective of a Projectivist. It’s not clear if, on its own terms, naïve realism could be described in such a way that clearly distinguishes it from realism, which is why I have rendered Broadie’s position in terms of veridical projection.

*being* “just as we perceive them,” that objects act on us at all. Naïve realism involves, in addition to the commitment about what sensibles are, a commitment about how sensibles act on perceivers – they act in virtue of being as we perceive them to be.

Broadie says:

“Red,” on this view, does not denote a mere power in the object – a power with who knows what “categorical basis? – to cause a suitably placed perceiver to perceive it as red. Rather, the word denotes the very basis itself of any such power. And that basis is nothing other than the object’s familiar red color itself. (“Perceptual Realism,” p. 138)

Such a position would seem quite alien from a contemporary perspective. Colors, if we include them in our conceptual vocabulary at all, do not act on us in virtue of being *as* we perceive them. If anything color terms are just a shorthand for the atomic features of an object which cause particular color perceptions. This brings to the fore the question of relevance. If Aristotle is a naïve realist, can we take more than a historical interest in his theory of perception? Does the study of Aristotle have a place in contemporary philosophy of mind? These are the questions that Broadie asks.

At any rate, my goal is not so much to respond to Broadie’s view tat-for-tat. Rather, I want to better understand the contrast between Aristotle’s realism and an early modern view such as Galileo’s, who in his eliminativism is often taken to be starkly opposed to the Aristotelean tradition. If Aristotle is a realist, but not a naïve realist, as I will argue, then this difference is perhaps not so great, and the relationship between Aristotle and his predecessors can be seen in a new light. In this sense, Aristotle’s realism is not so odd alien as it may seem.

In the first chapter of this thesis, I will examine the reasons for Aristotle’s realism, primarily from *De Anima*, and argue that they do not support the causal component of Broadie’s naïve realism. I will draw on recent work establishing that

perception *does* involve physiological change, and argue that this undermines the causal story that sensibles affect us simply in virtue of being as we perceive them to be.

Having argued Aristotle's theoretical account of perception in *De Anima* does not support the causal component of naïve realism, in the second chapter of this thesis I will argue that Aristotle likewise does not endorse the naïve realist picture of sensibles captured by veridical projection, by looking to a place where we might expect to see such as conception put to use – Aristotle's account of contrary appearances in *Metaphysics* Gamma V. In this chapter, which appears to have been influenced by a similar discussion in Plato's *Theaetetus*, Aristotle defends a realist account of perception against various skeptical objections arising from contrary appearances. Despite this chapter being a defense, in part, of Aristotle's realism, Aristotle's explanation of contrary appearances, I will argue, relies on a rejection of transparency, the notion the the nature of the world is disclosed to us by our ordinary perceptions of it.

This leads Aristotle to striking conclusions about the nature of sensible qualities. In Gamma V Aristotle chastises his opponents for confusing sensibles with the things-that-are (1010a1-3), and later calls sensibles affections of the perceivers, which may not exist without perception (1010b30). This may seem puzzling in light of Aristotle's statements in *De Anima*, but I will argue that this is not a repudiation of Aristotle's realism. Rather, it represents an indictment of *naïve* realism.

## Chapter 1

### Aristotle's Theory of Perception in *De Anima*

#### I. Aristotle's Realism

I will begin by examining the passages that Broadie cites in order to support her interpretation of Aristotle as a naïve realist. She primarily relies on *DA* II.5<sup>21</sup>, where Aristotle states that perception is caused by the activity of an external sensible. Here are a few key excerpts:

416b33-35: Perception consists in being moved and affected, as has been said; for it is thought to be a kind of alteration.

417a10-11: It is clear, then, that the faculty of sense-perception does not exist by way of activity but by way of potentiality only; for this reason the perception does not occur, just as fuel does not burn in and through itself without something that can burn it.

417b19-24: Actual sense-perception is so spoken of in the same way as contemplation; but there is a difference in that in sense-perception the things which are able to produce the activity are external, i.e. the objects of sight and hearing, and similarly for the rest of the objects of perception.

412b23-28: [comparing perception to contemplation] For this reason it is open to us to think as when we wish, but perceiving is not similarly open to us. ... objects of perception are particular and external things.

In the last chapter I glossed Aristotle's realism as the view that sensible qualities are mind-independent and part of an object's physical nature, as well as causal agents. These passages reveal in particular how that relates to Aristotle's conception of the senses. The activity of the senses cannot occur, like contemplation, at any moment without external stimuli. Aristotle thinks that perception is by definition an interaction with the environment. There *must* be objects of perception present and acting on perceivers in order for it to occur. These objects of perception, Aristotle goes on to explain in *DA* II.6 include the 'special-objects' of sense – color, sound, flavor, odor, and

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<sup>21</sup> "Perceptual Realism" note 4

tangible qualities (418a11ff). These are causal agents in their own right, not reducible to any more primary qualities.

It is not Aristotle's realism, but his naïve realism that I wish to question. I outlined two components of Broadie's naïve realism in the Introduction. The first concerns the nature of sensible qualities, and the second concerns how they act on perceivers. The first is that insofar as objects have particular sensible qualities, they are "just as they appear to be." This I took to relate something like veridical projection. Second, it is in virtue of being "just as we perceive them" with respect to their sensible qualities that objects cause color perception. Broadie says "the red thing causes me to perceive it as such by acting upon me *as a red thing*, and not as anything else that might be truly said of it."<sup>22</sup>

From the passages quoted above, there seems to be little reason to think that perceptible objects are as we perceive them to be. Certainly, Aristotle thinks that a ripe tomato is red, "as we perceive it to be," if this is meant to mark a contrast between the tomato being red and being green. If it were green, it would affect our sense faculty in a different way, because green is a different causal agent than red. But to say that a perceptible is "just as we perceive it to be" seems to place an emphasis that is not there. Aristotle's characterization of the nature of sensible qualities is much more focused on their being causal powers, than their being like we perceive them to be. To see this, a good place to begin is a passage in *De Anima* III.2. Aristotle says:

But the earlier philosophers of nature did not state the matter well, thinking that without sight there is nothing white nor black, nor flavor without tasting. For in one way they were right but in another wrong; for since perception and the object of perception are so spoken of in two ways, as potential and as actual, the statement holds of the latter, but it does not of the former. But they spoke

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<sup>22</sup> "Perceptual Realism," p. 138

undiscriminatingly concerning things which are so spoken of not undiscriminatingly. (*DA* III.2, 426a15-27)

Although Aristotle does not give much detail here about who the ‘earlier philosophers’ were or what their views are, the nature of his criticism is clear. It is incorrect to claim, in an unqualified sense, that sensible qualities such as color or flavor do not exist without perceiving subjects. Nonetheless, insofar as objects have these qualities prior to perception, they are *potential*, but not actual qualities.

According to a commonsense notion of potentiality, Aristotle is simply stating that objects have the power, prior to being perceived, to bring sensible qualities into existence, but do not have any ‘real’ sensible qualities. This would indeed seem antithetical to a realist view. In his paper “What’s Wrong with the Aristotelian Theory of Sensible Qualities,” Todd Stuart Ganson pushes back against such an interpretation. Ganson, however while maintaining that Aristotle is a realist, resists a reading that would support naïve realism.

Ganson cites C.C.W Taylor as a representative of a ‘usual view’ that he thinks is seriously mistaken<sup>23</sup>:

...the specific nature of a given colour or taste is just that it is the content of a perceptual act: red is what you see when you look at a poppy with normal vision in normal conditions, sweet is what you taste when (subject to the same qualifications) you taste honey, and so on. So if the objective feature is just what is realized in the perceptual act, all that is “out there” prior to the act is the potentiality for the realisation of just that feature” (Taylor, “Aristotle’s Epistemology,” p. 140-1.)<sup>24</sup>

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<sup>23</sup> Todd Stuart Ganson, “What’s Wrong with the Aristotelian Theory of Sensible Qualities?” *Phronesis* 42, no. 3, 1997: 263-282.

<sup>24</sup> C.C.W. Taylor, “Aristotle’s Epistemology,” in S. Everson(ed.), *Companions to Ancient Thought: Epistemology* (Cambridge, 1990), Cited by Ganson in “What’s Wrong?” p. 266



This interpretation, Ganson complains, misses the fact that sensibles are the casual agents of perception<sup>25</sup>. Thus they “are out there” and must be “real.” Ganson draws upon the commentaries of Alexander *De Sensu* and Simplicius on *De Anima*, in particular, in order to argue that Aristotle holds unperceived objects to be actually colored, but *potentially* visible. He argues that Aristotle held the Causal Thesis (CT):

Sensible qualities figure in explanations of our sense perceptions: they are causally responsible for our perceptual experiences of them.” (What’s Wrong?” p. 264)

A sensible quality is *defined* by its power to cause perception<sup>26</sup>. Aristotle defines color for instance, as just the power to affect the transparent medium in a certain way. He says “this is just what it is to be color, to be capable of setting in motion that which is actually transparent” (419a9-11; cf. 418a 32-34). This is not just a loose notion of possibility however, but a capacity, which Aristotle counts among the physical qualities of objects. Aristotle’s notion of power is explained in his discussion of levels of potentiality in *DA* II.5.

Aristotle uses the example of a knower of grammar to illustrate *two* levels of actuality, corresponding to two distinct types of change: (a) ‘first actuality,’ achieved by changing from not knowing to knowing the subject grammar and (b) ‘second actuality,’ achieved by changing being an actual knower of grammar (and potential contemplator), to being one who is contemplating. This difference is quite important, according to Aristotle, since it shows that “being affected is not a single thing”: Coming

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<sup>25</sup> “Ibid. p. 264. Note also that this view also assumes Transparency: sweet is what you taste when you taste honey – but uses it to deny that sensibles, so construed, are objective features of reality.

<sup>26</sup> Aristotle makes an important distinction in *De Anima* II.6 between extrinsic and intrinsic sensibles. The extrinsic sensibles are only perceivable via the intrinsic sensibles, and thus are not what Ganson singles out here. They are not properly speaking causal agents.

into first actuality “is a kind of destruction of something by its contrary,” while coming into second actuality is “rather the preservation of that which is so potentially by that which is so actually” (417b2-5). In (a) one learns grammar and undergoes an internal change by gaining a capacity – the capacity to think about grammar. This new capacity ‘destroys’ its contrary, the *lack* of the capacity to think about grammar, i.e. not knowing grammar. But in (b), there is no internal change in one’s capacities – this is why it is a ‘preservation’ of a potentiality. One does not lose one’s knowledge of grammar when one thinks about grammar. Second actuality is instead a type of *activity*.

Aristotle directly applies this to perceiving, which he says is equivalent to contemplation, i.e. second actuality (417b19-20). The crucial difference is that agent which causes perception is the *external* sensible (417b20-24). This means that both the perceiver and the perceived object are simultaneously actualized<sup>13</sup>. It involves no gain or loss of capacities, merely the activation of preexisting capacities (417b16). This, on Aristotle’s view, means that they are a part of an object’s physical nature, and this brings out the sense in which sensibles are ‘real’ for Aristotle that Ganson captures with CT. Aristotle is a realist because according to his physics, potentialities are physical features of objects.

On this basis, the distinction between the object of perception in potentiality and actuality that Aristotle makes in *DA* III.2 can be readily understood. Aristotle does not state that his predecessors are wrong, but that criticizes them for “not speaking carefully enough,” (426a21-24), and recognizes a sense in which they were right and a sense in which they were wrong. Prior to perception, the sensible qualities of an object are ‘potential’ only insofar as they are not in activity, not at the level of second actuality. So it is true that there are no ‘actual’ sensible qualities prior to perception. But that does

not mean they aren't *real*, but that they are not *active*<sup>27</sup> They have to be, since they are the qualities which initiate perceiving by acting upon the perceivers.

It does not seem that Ganson would agree that Aristotle is a naïve realist, however. He argues that Aristotle probably did not subscribe to the Transparency Thesis:

The natures of sensible qualities are disclosed in ordinary perceptual experiences of them; one knows what, e.g. sweetness is just by tasting something sweet. ("What's Wrong?" p. 278)

Ganson draws on historical reasons to make his case. He points to other Peripatetic philosophers who seemed to deny that this case: Theophrastus, criticizing Plato's theory of flavors in *Timaeus*, complains that he focus on the effects of flavors on perceivers rather than seeking out the underlying essences that cause them<sup>28</sup>. The author of *de Coloribus*, in a Cartesian fashion, seeks to empirically investigate the nature of colors<sup>29</sup>. Perhaps it is difficult to come down on just what Aristotle's view is by examining the assumptions of other Peripatetics. It's hard to tell just what Aristotle thought about transparency from the text of *De Anima*. I will argue that Aristotle does not endorse, at any rate, in the next chapter, based on the text of *Metaphysics* Gamma V. But here I will argue that the causal component of Broadie's interpretation of naïve realism, which perhaps leads to the assumption that sensibles are as they appear to be, is mistaken.

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<sup>27</sup> : Mark Calderon makes the same point in his recent book: *Form Without Matter*, Oxford: Oxford University Press, 2015, cf. p. 87-88

<sup>28</sup> "What's Wrong?" p. 281, citing Theophrastus, *de Sensibus* 89

<sup>29</sup> Ibid., citing *de Coloribus* (702b1, b11-13)

## II. Powers and categorical bases

Sensibles are real, according to the position I have just sketched, as capacities, powers to affect perceivers a certain way. Why does Broadie interpret this as naïve realism? The answer is perhaps best illustrated by comparison Aristotle's causal power account of sensible qualities to Locke's dispositional account of secondary qualities, of which it is reminiscent. Locke defines secondary qualities as "*powers to produce various sensations in us by their primary qualities*, i.e. by the size, shape, texture, and motion of their imperceptible parts,"<sup>30</sup>. There is a crucial difference between these views, however, because Locke is explicit that the primary qualities are the categorical bases of secondary qualities, where Aristotle does not name any such bases in *De Anima*.

Aristotle's resistance to explaining powers in terms of categorical bases is the critical juncture at which it becomes tempting to classify him as a naïve realist. Myles Burnyeat notes that it is characteristic of Aristotle to end his explanations at powers:

The power of perception is just one of many examples where a power defines an essence or nature ... for an Aristotelian, reference to an essence or nature is frequently a terminus of explanation ... A true Aristotelian is one who is content with this appeal to a power or potency, who resists the demand for underlying material process to activate the power or a categorical (non-dispositional) base to explain it" ("On Aquinas" p. 150)<sup>31</sup>

According to Broadie, sensible qualities of objects affect us as they do precisely *because* they are out there, as we experience them: red is "not a mere power – a power with who knows what "categorical" basis" but "the very basis itself of any such power."<sup>32</sup> So Aristotle's silence on categorical bases, Broadie implies, indicates that it is just in the

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<sup>30</sup> John Locke, *An Essay Concerning Human Understanding* Book II.viii.

<sup>31</sup> Myles Burnyeat, "Aquinas on 'Spiritual' Change in Perception," in Dominik Perler. *Ancient and Medieval Theories of Intentionality*. Leiden: Brill, 2001, p. 150

<sup>32</sup> "Perceptual Realism" p. 138

nature of color, being as it appears to be, that it has its power. This line of reasoning may be plausible, but I want to nonetheless resist the view that describing a tomato's redness, for instance, is a 'terminus of explanation,' in the sense described above.

Hints for why this is so can be found in Aristotle's explanation of the power of the sense-organ. The longstanding debate that I mentioned in the introduction over whether Aristotle was a "Spiritualist" or a "Literalist" concerns the interpretation Aristotle's characterization of the sense as "that which can receive perceptible forms without their matter" (424a17-b10), and what that means about how the sense functions. According to Richard Sorabji's 'literalist' interpretation, this is a physiological process which makes the eye-jelly literally turn red, for instance, when red-perception occurs<sup>33</sup>. Myles Burnyeat argues perception involves no physiological change, but is nothing more than an activation of the perceptive faculty by the perceptible features of the object<sup>34</sup>. He draws upon the characterization I discussed above of the activity of the sense as a second actuality. Receiving the form without the matter, Burnyeat reasons, is the most basic description of the perceptual process that Aristotle gives, but perception is not an ordinary type of alteration. Burnyeat concludes that it is a mysterious awareness: it is a *physical* process, on Aristotle's terms, but it unmediated by *underlying* material change. He says that for Aristotle "what produces the perception of red of of middle C ... is red and middle C."<sup>35</sup>

But Victor Caston argues that we should not be lead to think that, simply because perceptual awareness is not an ordinary type of alteration, it doesn't involve *any* underlying material processes. Aristotle describes a builder building as a instance of

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<sup>33</sup> Richard Sorabji, "Intentionality and Physiological Processes."

<sup>34</sup> Myles Burnyeat, "Still Credible?"

<sup>35</sup> "Still Credible?" p. 20.

second actuality<sup>36</sup>. Aristotle's point is that the builder does not lose his capacity to build when he builds, nor does he gain any other capacity. Nonetheless, as Caston points out, he does not build while "seated, with his arms folded."<sup>37</sup> Caston argues that there is *more* to Aristotle's explanation of the sense that simply noting that it has a certain power.<sup>38</sup>

Aristotle contrasts the reception of forms with the matter and without the matter via an explanation of why plants do not perceive tangible qualities. Plants are *affected* by tangible qualities like heat, yet perceiving warmth for a human is not the same as *being* warmed is for a plant (424a32-b1).<sup>39</sup> This is because the sense-organ is a *mean* (424a2-9), Caston emphasizes, whereas plants lack a mean (424b1-3).

Just as the operation of the sense involves underlying material processes, so too does the operation of the sensible. The sense functions via its ability to take on perceptual opposites Aristotle states:

And that is why it judges the objects of perception. For the mean is capable of discriminating; for it becomes to each extreme in turn the other extreme (424a5-8).

And so, it is hardly surprising when Aristotle suggests that sensible qualities operate via the presences of *ratios* of underlying perceptual opposites.<sup>40</sup> For example, in *De Sensu*

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<sup>36</sup> "Spirit and Letter," p. 265-268 .

<sup>37</sup> Ibid. p. 268

<sup>38</sup> Caston "How to Receive the Form without the Matter" (Draft), p. 4-5

<sup>39</sup> Ibid. p. 4

<sup>40</sup> Caston argues at length in "How to Receive the Form" that Aristotle's statement in *DA* II.12 that to receive the form is to be affected by "that which has color, or flavor, or sound, but by these not insofar as they are what each of them is spoken of as being, but insofar as they are things of a certain kind and in accordance with their principle," should be interpreted to mean that perception does not involve the literal replication of forms, as the Literalist claims, *nor* that it is simply being affected, magically, qua those forms. Rather, it is the replication in the sense organ of certain essential *proportions* which underlie sensibles.

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As the intermediate colours arise from the mixture of white and black, so the intermediate savours arise from the sweet and bitter; and these savours too, severally involve either a definite ratio, or else an indefinite relation of degree, between their components, either having certain numbers at the basis of their mixture and motion, or else being mixed in proportions not arithmetically expressible. (442a13-18)<sup>41</sup>

Although Aristotle doesn't explore the basis of sensible qualities' powers in *De Anima*, this is in part for *methodological* reasons. It is in *De Sensu* that Aristotle proposes to explore the nature of sensible qualities in depth:

Of the sensibles corresponding to each sensory organ, viz. colour, sound, odour, savour, touch, we have treated in *On the Soul [De Anima]* in general terms, having there determined what their function is, and what is implied in their becoming actualized in relation to their respective organs. We must next consider what account we are to give of any one of them; what, for example, we should say colour is, or sound, or odour, or savour; and so also respecting [the object of] touch. (*De Sensu* 3)

In *De Anima* Aristotle's purpose is to explain in a general way how the interaction between sensible qualities and perceivers takes place, while he leaves it to *De Sensu* to explore in more depth what precisely sensible qualities are, such that they have the function outlined in *De Anima*.

### III. Conclusion

Sensible qualities are capacities to affect perceivers, which Aristotle counts among the 'real' qualities of objects, insofar as they are at the level of first actuality. But the causal component of naïve realism, that sensibles act on us in virtue of being as we perceive them to be, seems to rely on the assumption that Aristotle finds it sufficient to indicate that sensible qualities are powers, without providing any more basic mechanism by which they function.

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<sup>41</sup> J.I. Beare, *Aristotle's Sense and Sensibilia*, (Barnes ed.) *The Complete Works of Aristotle: The Revised Oxford Translation*, v. ii

It is true that Aristotle doesn't pick out categorical bases for sensible qualities in *De Anima*, as a modern dispositionalist would, but he nonetheless *does* seek to appeal to underlying features of perceptible objects to explain the powers of sensible qualities. Just as his characterization of the activity of the sensible on the perceiver as a special kind of alteration does not preclude underlying material changes in the sense organ – he uses this characterization to describe the use of any capacities more generally that do not occur without material change – it shouldn't preclude a material explanation of how the sense operates. And this is the type of explanation Aristotle seeks to give in *De Sensu*.

Perhaps the causal thesis of Broadie's naïve realism is what motivates the substantive claim that perceptible objects are as they appear to be. In lieu of any obvious mechanism, perceptible act on us via being just by being as they appear. So sensible qualities are as they appear, and there is no hidden nature which underlies their power. That's not to say that Aristotle couldn't think sensible qualities are as they appear to be anyway. Perhaps sensibles they are but they also have an underlying nature which explains their causal power. In the next chapter I will argue, however, that Aristotle's treatment of conflicting appearances leads him to reject the transparency of experience and distance himself from the affirmative projection that informs naïve realism.



## Chapter 2

### Contrary Appearances and *Metaphysics* Gamma V

#### I. Introduction

The interest of *Metaphysics* Gamma V to my thesis is due in large part to the following passage, occurring at the end of the chapter:

Generally, if the sensible alone exists, nothing would exist if living things did not exist. For there would be no perception. It is perhaps true that neither the sensibles nor sensations<sup>21</sup> would exist (for these are affections of the perceiver), but that the things underlying [*hypokeimena*] not exist, which make perception, even without perception, is impossible. (1010b30ff)

Aristotle appears, much like Galileo, to deny any objective reality to sensible qualities. I will argue that this is not quite what he is doing. His usage of ‘things underlying’ or ‘hypokeimena’ in this passage corresponds to his usage of ‘sensibles’ in key passages such as his expression of realism in *Categories* 7<sup>42</sup>. I will argue that Aristotle develops a notion of ‘sensibles’ in *Metaphysics* Gamma V that picks out qualities of experience or perceptual appearings, a usage distinct from his ordinary one.

*Metaphysics* Gamma V is complex chapter in which Aristotle examines perplexities that arise from contrary appearances. I will spend the first part of this chapter setting up that background. Then I will argue that Aristotle's statement at 1010b reflects a repudiation of the transparency of appearance, the view that our ordinary perceptions of the world disclose its nature to us, which in turn suggests that sensible qualities are not as they appear to be, as is the case according to naïve realism.

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<sup>42</sup> Quoted in the Introduction. See p. 3

## I. The Argumentative Background of *Metaphysics* Gamma V

In *Metaphysics* Gamma V<sup>43</sup>, Aristotle examines and responds to certain perplexities that arise from contrary appearances. In brief: he wishes to show that although things may appear different, contrary ways, this should not lead us to endorse Protagoreanism, which he interprets as the thesis that everything *really is* all the various ways it appears. This fits into a wider goal of defending the Principle of Non-Contradiction against Contradictionism<sup>44</sup>. The discussion is highly dialectical, addressing a range of problems and opponents and not following a particularly transparent logical structure<sup>45</sup>. Aristotle's concern with 'appearances' extends to thoughts and beliefs in the broadest sense (1009a8-9), but also to particular sensible qualities objects appear to have, such as the taste of sweet (1009b5, 1010b19-30); 'things,' likewise, extends to states of affairs, which may or may not seem to be the case, such as *where* one is located (1010b10-11), as well as particular objects such as wine and the sensible qualities that they may or may not bear (1010b19-30).

Aristotle explains that there are two types of people who subscribe to Contradictionism – those who argue for argument's sake, and those who are in the grip of genuine perplexities, and each must be confronted in a different way (1009a16-21). It is a difficult task to address the former – how can you argue with someone who rejects the basic principle of argumentation? – and not one Aristotle seeks to take on here. His

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<sup>43</sup> Christopher Kirwan, *Aristotle's Metaphysics* Books Gamma, Delta, and Epsilon, Oxford: Clarendon Press, 1993.

<sup>44</sup> This is the usage of Mi-Kyoung Lee, who offers an invaluable analysis of the argument of G.5 in: Mi-Kyoung Lee, *Epistemology after Protagoras: responses to relativism in Plato, Aristotle, and Democritus*, Oxford: Clarendon Press, 2005.

<sup>45</sup> Ibid. p. 118-132. Lee attempts to model this chapter in terms of a 'ring structure,' drawing in particular on its relation to Plato's *Theaetetus*.

concern here is with the latter, those in the grip of genuine perplexities, and his strategy is to examine source of those perplexities. It is in this vein that he is concerned with perceptual appearance, and Protagoreanism.

Protagoreanism and Contradictionism go hand in hand, Aristotle argues, and “both either are or or not the case equally” (1009a6-8). If all appearances are true, since “many people have mutually contrary beliefs, and regard those whose opinions are not the same as their own as in error” (1009a11-12), “everything should simultaneously be true and false” (1009a9-10). Likewise, Aristotle argues, if everything is both true and false, since people have contrary opinions “if that is that state of things-that-are, all will have the truth” (1009a12-16).<sup>46</sup>

Important to Aristotle’s argument is that these two theses, Contradictionism and Protagoreanism, as Lee points out, share a common *stem*, which is that “those who find themselves in perplexity derive this opinion from sensibles” (1009a22-23)<sup>47</sup>. In order to undermine these theses, Aristotle will examine the way in which they are supported by a mistaken analysis of contrary appearances.

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<sup>46</sup> The mutual entailment relationship that Aristotle proposes between these two theses might seem a bit strong. Even if all appearances are true, there are a finite amount of human appearances – surely not *everything* is true and false. This conclusion, however, is made against the backdrop of the Protagorean view not only is whatever appears true, but that appearance *is* reality, and so, in an important sense, appearances are all that exist (And on all matters that are subject to human appearance, it is assumed, there are contrary appearance). Protagoras says that ‘man is the measure of things, of those that are, that they are, and of those that are not, that they are not.’ Discussing Protagoras in the context of the discussion of conflicting appearances in *Theaetetus*, Burnyeat takes this to be the view that “whatever appearances a person has, they are true for him, and, conversely, *the only things that are real for him are those that appear to him.*” See Myles Burnyeat. “Conflicting appearances.” *Proceedings of the British Academy* 65, 1979: pp. 69 - 111.

<sup>47</sup> Lee, *Epistemology After Protagoras*, p. 120 – 121.

## II. The Argument from Contrary Appearances

Reinforcing the connection between Protagoreanism and Contradictionism, Aristotle notes that people will, “from seeing contraries coming to be out of the *same thing* ... believe that contraries hold good simultaneously” (1009a23-25). If an object appears to have contrary properties, and all appearances are true, then that object must in fact have contrary properties, the argument goes. It is in this vein that Aristotle outlines a set of considerations which in later philosophy inform what is called the argument from illusion<sup>48</sup>:

So, too, from perceptible things some derive the truth of what is imagined. For they consider it inappropriate to judge truth by large or small numbers, but the same thing is thought sweet by some who taste it and bitter by others; so that if everyone were ill or everyone were ill or everyone were out of his mind and only two or three people were healthy or sane, the latter would be thought ill and out of their minds and not the others. Again, [they say] that the same things are imagined in contrary ways by many of the other animals and by us, and even as perceived by each person they are not always thought the same (1009a38-b9)

The key premises that lead people to ‘derive the truth of what is imagined’ – to think that all appearances are true – are three forms of perceptual variation: 1) variation between human and non-human perceivers 2) variation between different human perceivers, such as the healthy and the sick, and 3) variation between the same perceiver at different times.<sup>49</sup> Aristotle’s opponents respond to these types of perceptual

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<sup>48</sup> cf. Anthony Kenny. "The Argument from Illusion in Aristotle's *Metaphysics* (Gamma, 1009–10)." *Mind* LXXVI, no. 302 (1967): 184-97. Kenny offers an exposition of Aristotle’s argument in Gamma focusing on its relation to other variations of the argument.

<sup>49</sup> These correspond to the three types of variation considered in Plato’s *Theaetetus*, during a discussion where Plato also examines the Protagorean doctrine (154a2-8), although he interprets it in an explicitly relativist vein. Considering that the wind feels cold to one and mild to another, Socrates asks “Now on these occasions, shall we say that the wind itself, taken by itself, is cold or not cold? Or shall we accept it from Protagoras that it’s cold *for* the one who feels cold, and not *for* the one who doesn’t?” (152b). Cf. Burnyeat’s introduction in Plato. *The Theaetetus of Plato*. Translated by M. J.

variations with skepticism of whether any particular appearance is, in an absolute sense, true:

Which kinds of these, therefore, are true or false is unclear; for these ones are not more true than those, but both equally. That is why Democritus asserts that there is no truth or at least to us it is unclear. (1009b11-12)

There are least three distinct responses glossed here: a) that which appearance among conflicting appearances is true is “unclear”<sup>50</sup>, b) that conflicting appearances are equally true and c) that none among conflicting appearances is true.<sup>10</sup> If Aristotle conflates these views here, it is because, as A.A. Long notes, his primary interest is examining skeptical lines of argument which lead to the denial of PNC<sup>51</sup>. All three responses accept the core line of reasoning behind the argument from contrary appearances: there is some consequential sense in which the same thing appears differently to different perceivers, such that we cannot privilege one appearance over another. Contrary appearances are accommodated on equal footing, whether they are equally false or equally obscure and this is, as Long argues, a central issue Aristotle wishes to address.

### **III. Aristotle’s Response to Contrary Appearances**

Aristotle’s most explicit response to the skeptical claim that there are no authoritative appearances is as follows:

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Levett. Indianapolis: Hackett, 1990.

<sup>50</sup> For more on this skeptical response, see A.A. Long’s “Aristotle and the History of Greek Scepticism,” 2006, 43-69. Long argues that Aristotle has a place in the history of Greek skepticism as one who anticipated a number of arguments found in the canonical Greek skeptics. In particular, Long notes that the three types of variation mentioned above, found in *Theaetetus*, correspond to the first, second, and fourth modes of Aenesidemus.

<sup>51</sup> Long, “History of Greek Scepticism,” p. 60

Next, one may legitimately be surprised that they should find perplexing the question whether magnitudes and colors are such as they are imagined by those who are at a distance or those who are near, and by the healthy or the sick; or whether what is imagined by the sleeping or waking is true. For it is obvious that they do not really consider it so ... as for the future, as Plato also says, the opinions of a doctor and an ignorant man are surely not equally authoritative, as for instance on the question whether someone is or is not going to be healthy. (1010b4-13)

The example of the doctor, borrowed from the *Theaetetus* (178C-179B)<sup>52</sup>, illustrates a point about expertise. This example functions in the following way<sup>53</sup>: If a patient's state of health appears different to a doctor and a layperson, for instance, there is *verifiable* way to see which appearance is correct. Perhaps the doctor thinks that the patient will recover with the proper medication, the layperson that he is beyond help. The doctor and layperson have both made predictions about the future, so when the future comes to pass, we can see who is right and who is wrong. The doctor's authority to pass correct judgment can be vindicated by experience, and thus we can trust the way things appear to him as reliable indications of the truth.

Aristotle's goal here, as he notes in the beginning of the chapter, is not to provide heavy hitting arguments against Protagoreanism and Contradictionism, but to give broadly satisfying explanations of contrary appearances and why they do not entail these theses. The doctor analogy provides a fairly good explanation of contrary appearances in the broadest sense, where things 'appear' differently insofar as two people think or believe different things based upon their experience. In the doctor analogy, two perceivers *see* the same thing, but *judge* that experience differently.

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<sup>52</sup> John McDowell, *Plato's Theaetetus*, Oxford: Oxford University Press, 2014.

<sup>53</sup> cf. Alexander's commentary: Alexander of Aphrodisias (1989), *On Aristotle Metaphysics*. Translated by Arthur Madigan; London: Duckworth, 313, 4-17.

But Aristotle thinks that this analogy can help understand contrary appearances in a narrower sense – cases where objects appear to have different sensible qualities to different perceivers. As Aristotle proceeds to explain, in line with his doctrine in *DA II.6*, each sense has authority over its proper object (1010b14-18). We should not determine whether or not a substance is sweet by *looking* at it instead of tasting it. Ultimately, however, to confront the skeptical challenge to realism, Aristotle needs to address yet another form of perceptual variation: how do we account for the fact that the same thing may appear different with respect to the *same* sense, between different people or between the same person at different times? An explicit account of this type of variation is conspicuously missing.

Despite recognizing that colors appear differently to the near and far, that wine tastes differently to the healthy and the sick, and so on, Aristotle offers no special explanation of cases such as these, where objects appear differently with respect to their sensible qualities among different instances of perceiving, although viewed by the proper sense. That he begins his diagnosis by saying that “one may be legitimately surprised that they should find the perplexing the question whether magnitudes and colors are such as they are imagined by those who are at a distance or those who are near ... [etc.]” indicates that he doesn’t view the problem of determining which appearances in these cases are true or false as a puzzle at all, but something which is obvious. It is, as Alexander suggests, the human being in its most ‘natural state’ that perceives correctly: The healthy, strong, human being, presumably who is near to the perceptible object rather than far. (312, 21-30)

#### IV. Aristotle's Strategy for Confronting the Skeptical Challenge

Aristotle's response to the skeptical challenge of how we can privilege any particular set of appearances over any other is important to the question of whether or not he is a naïve realist, because, I will argue, it hinges upon a rejection of Transparency. The Transparency Thesis, as I have discussed it with respect to sensible qualities, is the thesis that the nature of sensible qualities is revealed via [veridical] experience. If Aristotle is a naïve realist, who thinks that sensible qualities are as we perceive them to be, then veridical experience is transparent, because it reveals the nature of sensible qualities. Aristotle's response to contrary appearance, I will argue, shows that perception is not *the type of interaction* that involves such transparency.

As I have outlined Aristotle's diagnosis of contrary appearances so far, it is just an appeal to healthy perceivers. This may not seem like a satisfying response to his opponents, because the skeptical challenge Aristotle faces is precisely that appealing to a 'normal' perceiver is problematic. Aristotle's opponents believe that "it is inappropriate to judge truth by large or small numbers" (1009a39-40). Even if we appeal to health, this would be no more than a 'statistical' standard, as Kenny puts it<sup>54</sup>, because, the presumption seems to be, an appeal to 'healthy' perceivers is an appeal to normal perceivers, and normal perceivers are just those who are in the majority. But in a different population, the 'normal' standard could be different. How could the perceptions of any such arbitrarily chosen group of perceivers tell us how an object really is? Aristotle does not give any explicit reason here to rebut the claim that an appeal to health is an appeal to number. In order to understand Aristotle's response here, we have to look back to comments he has made earlier in the chapter.

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<sup>54</sup> cf. Kenny, "The Argument from Illusion, p. 188



At this point, it is worth taking a step back to think about Aristotle's strategy. Aristotle's goal in Gamma V, as I noted at the beginning of the chapter, is to undermine Protagoreanism, the thesis that everything is as it appears to be, which ties into his wider aim of defending PNC against Contradictionism. He *could* respond to the skeptic directly by presenting an argument that supports his criterion of a normal, 'healthy' perceiver whose perceptions of the world are authoritative, and tells us what it means for certain appearances to be true, but he does not do so here. Aristotle's purpose, as he notes in the beginning of the chapter, is to deconstruct perplexities of that motivate the views of his opponents, to offer a diagnosis, rather than a direct argument. His diagnosis is that his opponents confuse the "things-that-are" with sensibles (1010a1-4):

In general, it is because they believe that perception is wisdom, and the former is modification, that they assert that what is imagined in perception is of necessity true. For it is for these reasons that both Empedocles and Democritus and virtually everyone else have succumbed to opinions of this kind; for Empedocles actually asserts that a person's wisdom alters as he alters his state... (1009b12-17)

Aristotle criticizes an assumption about the way perception functions that is implicit in Protagoreanism. The assumption is that ordinary perceptual experience is transparent – it just reveals to us the way the world is – that is why everything is as it appears to be. And in light of contrary appearances, this leads to Contradictionism.

Aristotle seems to have in mind something like the view of perceiving implicit in the discussion of contrary appearances in Plato's *Theaetetus* (*Theat.* 152a-d)<sup>55</sup>.

Theaetetus' first definition of knowledge is that it is perception. To prop up this view for examination, Socrates suggests that, in response to the observation that the wind *feels*

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<sup>55</sup> Notably, Protagoras is tacked with a relativistic view here, where things are as they appear, but only *for* given perceivers, which avoids contradiction, rather than the view that things just are as they appear to given perceivers. It is obvious why Aristotle, defending PNC, would be concerned with the latter.

cold for some and mild for others, we might (drawing inspiration from Protagoras) take it that the wind is cold *for* the one to whom it feels cold and mild *for* the one whom it feels mild. The question at hand of which appearance is true doesn't distinguish between feelings and the way things are: if something *feels* cold and mild, then it must be cold and mild. It is taken for granted that our experience grants transparent access to the world.<sup>56</sup>

But we have already seen in the last chapter why Aristotle would reject such a view. Perception is not simply modification because it is not an ordinary type of change. When a *plant*, which lacks a sense-faculty is warmed, this *does* indicate that the air around it is warm. A plant does not become warmed in response to *cool* air, because a plant being warmed by the sun *is* a form of modification. But perception is not an ordinary change in this sense – your experience does not *become* warm, as a plant does in response to the sun. Rather, perception is a type of detection. Aristotle seems to draw on the intuition that a cold hand, for instance, will sense cold easily, nor a warm hand warmth. The sense, likewise, must be at a mean state between its contraries in order to detect them (*De Anima* 424a2-8)<sup>57</sup>. But it can detect wrongly, for instance, if this mean is disturbed. Aristotle states in *De Anima*, discussing taste:

... the tongue does not perceive either when it is very dry or when it is too wet; for in the latter case there is a contact with the moisture which is there first, just as when someone first tastes a strong flavor and then taste another, and as to sick people all things seem bitter because they perceive them with a tongue full of moisture of that kind. (422b4-10)

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<sup>56</sup> Burnyeat argues at length in “Conflicting Appearances” that Plato is attempting to diagnose a ‘window-model’ of perception, according to which it offers a transparent view of the world, and the same thing cannot be one way but appear another.

<sup>57</sup> The analogy is imperfect, because the hand, unlike the sense-organ, does become warm when it perceives warm, for instance – but for Aristotle, the sense-organ for touch is not the hand or skin, but the heart (442b20-24)

Aristotle's diagnosis of the thinking that leads from contrary appearances to Protagoreanism and Contradictionism is essentially that it falsely assumes that the world cannot be one way and appear another. But the nature of his criticism isn't, taken to its full extent, to claim that wine may be sweet but appear bitter. Rather Aristotle seeks a different understanding of the nature of the perceptual process at large, arguing that it is not transparent. What this means is that the appearance of sweet or bitter, and the sense in which an object *is* sweet or bitter, are two different things. This is reflected, I will argue, in a novel meaning of 'sensibles' that Aristotle develops at 1010b30. Sensibles are used to pick out appearances, as features of perceivers, and are contrasted with the qualities of perceptual objects that Aristotle ordinary calls 'sensibles,' which are instead called 'the things underlying.'

### **V. Sensible Qualities and *Metaphysics* 1010b30ff**

Aristotle makes the following general comments about sensibles in the course of his discussion:

1. "those who find themselves in perplexity derive this opinion from sensibles (1009a22-23)<sup>20</sup>
2. "from sensibles some derive the truth of what is imagined," (1009a38-39)
3. "what caused these people to hold their opinion was that, in searching for the truth about the things-that-are, they believed that the things-that-are are merely sensibles; and in these the nature of indefiniteness, i.e. of *being* in the way that we have described, is an important constituent" (1010a1-4).

In all of these cases, there is a notable ambiguity. The Greek *aistheta* can refer to perceptible things generally, or to sensible *qualities*. Thus Aristotle can be making broad statements to the effect that confusions over how to interpret perceptual experience are the perplexities lead to contradictionism. Or we can read him to be

making a more particular point about *sensible* qualities being confused for objective features of reality, as the third statement seems to imply.

In light of the discussion of the *Theaetetus*, the latter option, involving a distinction between ‘sensibles’ as qualities of experience and underlying features of reality would make sense. In the *Theaetetus*, in order to prop up Protagorean relativism<sup>58</sup>, a notion is developed of perceptual appearances and sensible qualities as ‘twins’ that are produced by perception:

There are two kinds of change, each unlimited in number, the one having the power of acting and the other the power of being acted upon. From their intercourse, and their friction against one another, there come ... pairs of twins, of which one is a perceived thing and the other a perception, which is on every occasion generated and brought together with the perceived thing. Now we have names for the perceptions of the following sort: seeings, hearings, smellings, feelings of cold, feelings of heat; also what are called desires, fears, and others. (*Theaetetus* 156a-b)

In his works on perception, Aristotle, rather than drawing together perceptual appearances and sensible qualities (in his ordinary sense, as physical features of objects), wishes to pull them apart. Because sensibles are the cause of perception, they must come *before* it, not be produced in conjunction with a ‘perceiving’ as a perceptual twin.

In the *Categories*, Aristotle argues that sensible qualities and the activity of perception have an *asymmetrical* causal relationship. Perception and sensible qualities are a special class of relative qualities. Relatives like the double and the half are ‘simultaneous by nature,’ meaning that one cannot exist without the other. They “reciprocate as to implication of existence” (*Categories* 13). But to implicate existence in a reciprocal manner is explicitly *non-casual*, at least in the sense of an efficient cause: “the being of each ... involves that of the other, while at the same time neither is

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<sup>58</sup> Protagoreanism is taken to be a form of relativism, here, as I noted earlier (see nt. 61)

in any way the cause of the other's being" (*Categories* 13). Since sensible qualities do cause perceptual activity, they are *prior* to perceptual activity: they do not reciprocate the implication of existence nor does each involve the being of the other (Chapter 14, 14b24).

This leads to the statement that I used to characterize Aristotle's realism in the introduction:

For if animal is destroyed perception is destroyed, but there will be something sensible, such as body, hot, sweet, bitter, and all the other perceptible ... Hence the sensible would seem to be prior to perception. (7b15ff)

The thrust of this passage, I hope I have brought out, is not that sensibles are 'real,' physical features of objects, although that is true, but that they bear an asymmetrical causal relationship to the activity of perception. They are not *twins* that are generated *at the same time* as perception, because this would not allow them to fulfill their causal role.

In *Metaphysics* Gamma V, Aristotle develops a notion of qualities of experience or appearings in order to illustrate this point. But (somewhat confusingly) Aristotle in *Metaphysics* Gamma V uses 'sensibles' to refer to these qualities of experience, and *not* the qualities of objects. At 1010b30 Aristotle states:

Generally, if the sensible alone exists, nothing would exist if living things did not exist. For there would be no perception. It is perhaps true that neither the sensibles nor sensations<sup>21</sup> would exist (for these are affections of the perceiver), but that the things underlying [*hypokeimena*] not exist, which make perception, even without perception, is impossible (1010b30ff)

My reading of this passage is as follows: In the first line, Aristotle, reflecting statement (2) at the beginning of this section (p. 34) attributes to his opponents the view that sensibles are all that exist. This seems to be an interpretation of Protagoreanism which runs like this: to hold that all appearances are true, is to hold, in effect, that appearances

are constitutive of reality – in a Berkeleyan sense, there is no reality beyond them. If sensible qualities so construed were all that existed, Aristotle continues, *nothing* would exist without perception. He explains that sensible qualities, as well as sensations (an activity), are ‘affections of the perceiver.’ Finally, Aristotle makes his central objection to the view he has sketched: it leaves no room for causes!

Sensibles – colors, flavors, sounds, and so on – are not causes, but subjective effects of ‘underlying qualities’ on perceivers. Why the switch of terminology? Why is Aristotle comfortable indicating that sensibles are the causes of perception elsewhere but not here? In Aristotle’s ordinary usage of the term, as I noted in the first chapter, he does not give any obvious indication that a sensible, such as the ‘color,’ of an object should be associated with the way that we experience color. But that usage is implicit in the debate over contrary appearances that Aristotle is engaged in. Colors are closely associated with ‘seeings,’ their perceptual twins, according to the line of thought developed in the *Theaetetus*. But this type of thinking is just what Aristotle sees as leading to Protagoreanism when he says that “what caused these people to hold their opinion was that, in searching for the truth about the things-that-are, they believed that the things-that-are are merely sensibles.” (1010a1-4). The meaning of ‘sensible’ in the views that Aristotle is diagnosing is intertwined with the way things appear to us, and this leads to mistaken conclusions about the nature of reality.

## **VI. Conclusion**

The type of thinking that leads to Protagoreanism does not recognize any distinction between appearance and reality. Appearance is transparent, and simply reveals the way the world is. Aristotle disputes this picture of perceiving. Perception is not “modification,” a sort of impression of the world that cannot be wrong. If perception

is not transparent, this suggests that Aristotle did not hold a naive conception of sensible qualities. If sensible qualities are “as we perceive them to be,” Aristotle would have to outline a disjunctive view according to which this is the case with veridical, but not non-veridical experiences. His chosen course for defeating Protagoreanism is not to do this, but to deny that perception in general is the type of relation that reveals the world as it really is. This point is brought into sharp relief by 1010b30. Aristotle does not even use the term ‘sensible’ to refer to the causal antecedents of perception, but uses the ambiguous term ‘hypokeimena’ instead. He seems to recognize that sensibles are, in the context of Protagoreanism, closely related to perceptual appearances, and that this, in part, mediates the confusion of perception with reality. So here he shirks the term ‘sensible’ altogether for real qualities of objects, and instead refers to *subjective* appearances with the term.

Aristotle’s statements at 1010b30 are not a repudiation of realism. In causal terms, Aristotle makes the same point that he makes in other passages that outline his realism such as *Categories* 7 and *De Anima* II.5: perception cannot occur without antecedent causes. If anything, it does show us that although Aristotle usually calls these causes ‘sensibles’ – i.e. colors, sounds, and flavors – he is able to pull apart these qualities from the appearances that they produce.

## Conclusion

In the Introduction, I characterized Aristotle's realism as the view that sensible qualities such as color, sound, or flavor are physical features of objects. They are there whether we perceive them or not, and are causally potent. This seems to be quite a contrast from the early modern view of Galileo, who defines a very small set of 'real' qualities, whereas colors, sounds, flavors, heat, and refer only to their subjective effects.

A fuller contrast between Galileo's subjective eliminativism and Aristotle's realism would be captured by Broadie's interpretation of Aristotle as a naïve realist, however. The main component of this naïve realism is notion of what sensibles are, captured by veridical projection: they are very same qualities that Galileo takes to be subjective effects in perceivers, and they are out there in the world; sensible qualities such as color, sound, or flavor, are "just as we perceive them to be." The second component of naïve realism is a causal component: sensible qualities act on perceivers in virtue of being "as we perceive them."

In the first chapter, I tried to cast doubt on the causal component story by bringing to attention the fact that Aristotle, contrary to Broadie's assumption, thinks that there *are* features which underlie a sensible's power to affect a perceiver. He views the sense as a mean that discriminates between perceptual opposites, and suggests in *De Sensu* that sensible qualities are composed of ratios of these opposites. If this is the case, then perceptible objects do not act on us simply in virtue of being as we perceive them to be – this is not the ultimate basis of their causal power – but in virtue of these underlying ratios.

If this alone does not cast doubt on the reason to believe that perceptible objects are as we perceive them to be for Aristotle, more explicit reasons come out in his



discussion of contrary appearances in *Metaphysics* Gamma V. There, Aristotle argues that perception is not a type of process that is transparent, revealing to us just how the world is. The lesson is that we should not take appearances to be *ipso facto* true, because appearance is not an infallible impression of the world onto the perceiver. This, I interpret to be entail the rejection of what Ganson calls the Transparency Thesis, the thesis that the nature of sensible qualities, in particular is disclosed within our ordinary experiences. Ordinary appearances are responses to the world, not reflections of it. But more to the point, Aristotle draws an explicit distinction between sensibles – which he, in *Metaphysics* Gamma V, treats in a way distinct from his ordinary usage, as something like perceptual appearings – and the real world. In this usage, it is telling that he does not include colors, sounds, flavors, and other sensibles among the objective features of objects.

This is not, I argue, a repudiation of Aristotle’s realism as expounded elsewhere, but it does reveal the conservative nature of that realism. He insists that the underlying causes of perception must exist prior to perception taking place – perception does not simply happen without external stimuli, as he emphasizes in *DA* II.5 (417a2-7). But despite the fact that he usually calls those causes ‘sensibles’ – colors, sounds, flavors, and so on, that needn’t lead us to assume he was a naïve realist.

Aristotle’s realism *does* differ from Galileo’s, and not only on a conceptual level. That is, Aristotle not only thinks that there are features in the world that we can name ‘color,’ ‘sound,’ and so forth, but thinks that these features, as distinct causal powers, include the core constituents of reality, the elemental qualities. This reveals a commitment about causal powers generally: they are not ultimately reducible to categorical bases, to the features that Galileo calls ‘real’ and that Aristotle calls ‘the

common objects' of sense. But all the same, there seems to be scant indication that Aristotle thought that sensibles are, in a substantial sense, as we perceive them to be.

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